THE

HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE,

DEVOTED TO

IGIENIC MEDICATION, BODILY DEVELOPMENT, AND LAWS OF LIFE.

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M. L. HOLBROOK, M. D., EDITOR.

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JANUARY, 1867.

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General Articles—Hygienic and Miscellaneous.

The Law of Human Development.

BY REV. HENRY WARD BEECHER.

IF there be one fact recognized in modern science it is that the law of the globe, and of all things that dwell upon the globe, is the law of progress; and, applying this rule to the human family, they may be expected to unfold and to go on unfolding. The progress of the present is in accordance with a great primal law of Creation, which has been operating in days past, and raising the world higher and higher. And that great law is working still, and is to carry the world onward and upward.

There are some elements that are not usually taken into calculation, which will yet have great power in securing the elevation of race-character, which are to make man, as a creature of the whole world, unspeakably higher than he has yet been.

The law of selection is yet to become as divine in men's eyes as it is important in its actual results. Thus far our comings together have been mere accidents that almost always followed caprice or mere feeling—seldom judgment; or, if judgment, yet a kind of judgment that was not founded on knowledge—certainly not on a clear knowledge of divine law. We know far more of the law of selection and conjunction in the animal kingdom, strictly so-called, than in the human family. We know how, in the animal kingdom, so to select that, steadily from year to year and from generation to generation, the beasts of the field shall rise in the scale. We know how, by the use of natural law, to breed wool and meat, and the power of bone and muscle and speed. We recognize that there is a divine law that comes up through all the subordinate kingdoms of life till it reaches the human family. There it stops; and if it is known at all, it is known almost wholly as having to do with physical things; almost, not all, as having to do with education; and not at all, I had almost said, as having to do with instruction in the pulpit as in the household. It is thought to be a matter of too much delicacy to be treated of in these places. Whether your child shall be an idiot or not is a matter of some importance; but to teach those fundamental laws which shall enable the community to steer clear of imbecility and brain-rottenness is considered scarcely the thing for the school or for the household, and especially for Sunday, for the pulpit, and for a minister! Yet, I hold that there is to be a day when it will be thought proper to teach these laws wherever an opportunity presents itself. And you never will carry the race up till men learn that there is a law of selection and conjunction, by obedience to which generations shall transmit transmissible excellences.

Now, we gather from analogy nothing that is surer than this: that a tendency in any given direction is transmissible by education. A tendency to good or to evil is transmitted, and becomes a fixed quality if it be educated. But this note, so far as the human race is concerned, is almost never sounded; and it is an accident

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when men heed it. Society is full of results that flow from the violation of this great natural law. Am I not called to see it every day? Am I not made dumb over the coffin every month? Can I, in those cases where ill health has wedded ill health, and where in the children there is produced a double tendency to ill health; can I, when, by reason of low stamina and the violation of the great law which governs hereditary tendencies, I am called to weep with those that weep—for love mourns over those that must die as well as over those that might have been saved; can I, at such times, say, "The child could not but die; you have violated that law, and you suffer the penalty; and the next will die, and the next, and death will reign in this house?" Or, in cases where there is a lack of brain, and the fact is deplored, can I speak of the cause of the evil? And yet, here is this law of the transmission of tendencies, which has its application all through the animal kingdom, and which applies, if possible, with ten thousand times more force to the human race, and it is neither taught by priest or by teacher, nor observed by the common people, that run headlong, by taste, by fancy, by caprice, by interest, and by parental interference, to form connections on which are to turn, not only their own happiness, but that of their posterity to many generations.

Now, if there is a law that determines these things; if there is a power by which right tendencies shall be promoted in this regard, we have a right to demand that it shall come down to us, and not be squandered by the ignorance and disobedience of parents. And if there is in us the power of transmitting such tendencies by knowledge of and obedience to divine law, it is our duty to do it. The world will never go on to its last estate until men have studied to ascertain what God's great law of transmission is. And I stand with awe when I hear it declared that God will visit the iniquities of the fathers upon the children from generation to generation, and that he will send down from generation to generation the virtues and obedience of the parents. That is the key-note of time. It ought also to be the fundamental quality of civilization; but it has not been.

And when the day comes—as it will nearer and nearer—that men are born into this world with auspicious temperaments, with balanced constitutions, with high social qualities, and with moral tendencies that give them power to develop the dormant and imbecile forces in themselves, they will have taken a start, and will be much further along than they are now.

Closely connected with this subject is to be such a knowledge of the relations of our physical condition to our characters, and unfolding, as shall develop manhood, far more easily and largely than is possible now. More and more, hereafter, will it become plain that much of that which is sinful in man is made so by unfortunate physical relations; and that much of that which is moral in man may be easily secured by harmonizing his body and mind through the observance of natural laws. For instance, the observance of laws that relate to our food, to warmth, to occupation, to cleanliness, to primal morality, is just beginning to attract the attention of legislators and educators. It ought to have attracted the attention of moralists long ago. I do not mean that men may not be converted in squallor and suffering. Single instances there may be of men that are converted under such circumstances; but they are converted against every tendency, and not by the help of any. And classes will never be converted when they are at discord with all the physical laws of their being. A man here and there, with more than an average susceptibility, may be raised out of degradation where the conditions are unfavorable; but if you are going to raise men out of heathenism, you must do it by securing, at the same time that you preach to them the Gospel, their obedience to physical laws. I believe I could go to the Five Points and preach the Gospel with hope and assurance that some would be converted; but if any were converted, the first signs that I should look for would be that they would wash and shave. I should expect that the first thing they would want would be another window, that they might get a draught of air into their attics. I do not believe I should be able to make good Christians that would not backslide if they continued in filth and without air. I do not believe you could get saints by the tens and scores without attention to these external matters. Liebig, the great German chemist, says that you can measure the civilization of nations by the relative amount of soap that they use. Although this may be an extreme statement, it is emphatic, certainly. It may be more true in Europe than in America; for I apprehend that we here are cleaner than they are there. We have more water. We also have more room; and uncleanness is apt to exist where people are overcrowded. And attention to men's outward state in this and other respects is essential.

The moral element is the most important; but that works in physical conditions, and must observe those conditions. The attempt to push

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ıe elevation of manhood through all the viola-ons of physical law which are committed on .ery hand, is to attempt to do by the hardest at which can be done a great deal easier. I elieve that in this world we are to be developed according to the law of the world. We are obliged, in this lower sphere, if we would elevate men, to observe their physical conditions; and they are not, except in occasional instances, and that by the hardest, carried up to the highest manhood. And as science, as it develops itself, is the eye of God throwing light on the path of man, and showing us what are his thoughts that have slumbered so long; as the sentences and pictures in the pyramids were unread and uninterpreted till the torch revealed them, so God's sentences, written in the heaven and on the earth, and unread, science is deciphering. And I hail the incoming of science. Although for the present it has some tendencies toward skepticism; although it is to a considerable extent in the hands of men that are rebounding from religion, I have no fear. I believe that with the aid of the revelations of science we shall come to have a deeper and truer faith in religion than we have ever had. I am not afraid of science. If I had not faith in God and faith in religion, I might be afraid of science, but I believe that God and religion are true—so true that all the incursions of science will finally, when it has run round its full circuit, be beneficial.

To this we must add, that the civil conditions of the race are to be improved, so that men shall have liberty, opportunity and incitement. For thousands of years governments have been obstructions. De Tocqueville said that governments would be as rascally as they were allowed to be; and I believe it is as true on this side of the ocean as on the other. And to say that governments have hindered more than they have helped, is not to say the whole. I say that one of the burdens of society, one of the curses of the human race, has been its governments. Men dread anarchy, as if that was the worst thing; but that is heaven compared with governments such as have generally prevailed. Many of the curses of the world have arisen from the laws which governments have made to bind men with, and the bulwarks which they have built across the road to progress. And there is a time to come when governments will spring from the hearts of the people, and will be governments *for* the people. In that day all laws, all civil usages, all customs, will respect the interests of the community, and will not obstruct them. When men have perfect liberty, individually and collectively; when they are not only equal but free—free in the largest sense of the term *freedom*—then society itself will become a nursing mother. We have seen Christian piety manifesting itself in single faculties; we have seen it nourished, as it were, under glass and by artificial heat—we have seen it as a grand partialism; but the day is coming when men, through a full knowledge of the natural law of transmission, will be brought into this world larger-minded and healthier in body; will be brought into this world better adapted to go up in the scale of being; will be brought into this world under such conditions that they will encounter far less obstruction and far more of the unconscious help of justice, purity and truth. Laws, institutions, governments—these will be administered in a higher atmosphere of moral influence. As the world's atmosphere grows purer and purer, the radiance of God's heart will more and more stream into the hearts of the masses of men. And thus, with better conditions from top to bottom, the day will come when it will not be strange to believe that there will be nations of men, millions of men, that will stand all of them higher and better than any single man that has yet lived. Now, our great names are few and far between, like angels' visits; but the day will come when they shall be near and numerous; when no man shall say to his brother, "Know ye the Lord," because all shall know; when "Holiness" shall be written on the very bells of the horses, and there shall be the tinkling of praise in every man's ear; when the atmosphere itself shall inspire holiness; when all things shall tend toward holiness; when kings shall be nursing fathers and queens shall be nursing mothers; when all people shall be lovers and friends. And in that day, lifted out of the animal conditions, and out of the obstructions of ignorance and wickedness in which we now dwell, the whole world shall send up a final shout, not only of deliverance, but of consummated manhood.

Manhood resides in spiritual things. Our higher manhood includes our reason, our moral sense, and our æsthetic and affectional nature. Our higher manhood is to be developed by a wiser use of physical law, as related to the individual and the family; by a wiser use of the economies of civil and commercial life; by a clearer knowledge of the truth of God as it is revealed in science. It will not take place to-day nor to-morrow; but a steady, average development and growth there is to be, which is to carry up the manhood of this world far beyond any thing that we can now conceive of.

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Dental Physiology.

BY DR. J. ALLEN.

AN EXTRACT FROM A PAPER READ BEFORE THE NEW YORK ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND ART, OCTOBER 26, 1866.

AS DENTAL Physiology is a subject but little understood by many people of this country, we claim for it greater prominence among the various branches of science than has heretofore been assigned it. This has become necessary from the fact, which is universally conceded, that the Americans have the worst teeth of any nation on the globe. The cause of this national calamity is a question which claims our earnest attention, for it is attributable either to Him who created all things, or to ourselves in disregarding his laws. If we charge it upon the Creator, we must assume that the teeth are either defective in their structure from their beginning, or that he has committed an error in not providing the proper means for sustaining them in a sound and healthy condition after they were formed. Now let us carefully examine this subject, and see where the fault lies. If it is the result of a defective physical law, it would be universal, and the teeth of all the different nations of the earth would be subject to the same law, and the same result would follow. But in looking over the history of the world and of its inhabitants, we find there are nations whose teeth continue sound and good (with few exceptions) until old age. For example, the teeth of the Asiatic and African nations are generally as free from decay as any of the other organs of the body; and although occasionally a tooth, an eye, or a limb, may be lost by accident or disease, such cases are rare exceptions and not the general rule. Therefore, a frail condition of the human teeth is not a universal defect, but is confined principally to this country and to some portions of Europe where the habits and customs of the people are similar to our own. Consequently the cause of this great destruction of teeth is traceable directly to the fact that we do not take into the system with our food a sufficient quantity of the mineral constituents of which the teeth are formed to sustain them in a sound and healthy condition. This simple fact is well understood by many physiologists, and yet how little has been done to stay the progress of diseased teeth in this country. Notwithstanding all that has been accomplished by physiologists and dentists, the work of destruction still goes on. There are as many decayed teeth this year as there were last, and more dentists are constantly coming into the field to combat with the fell destroyer, and each one is applying himself with vigor to stay the desolating tide that still sweeps irresistibly onward. Why is this? Is there no way to prevent this wholesale destruction of these important organs? Yes; but hitherto our efforts have been directed more to cure them after they have become decayed, or substitute artificial teeth, than to prevent them from becoming diseased. It is an old saying that "An ounce of prevention is better than a pound of cure." In order to apply this truth practically it is important to know whether this evil can be prevented, and if so, how it can be done. Physiology teaches the fundamental principles by means of which it can, to a very great extent, be averted. But the development of a principle is one thing, and the practical application of it is another of still greater importance. For example, the principle involved in steam power was known long before any practical application of it was made. Scientific men had long since discovered the principle of electricity, but it was not until Morse applied that principle practically that communication could be transmitted with lightning speed from one distant point to another. So with many of the well-known principles of physiology; although they are well understood by many scientific men, yet their practical bearings upon our well being has been, by the masses, almost entirely overlooked, and they continue to go as blindly on as if no such knowledge existed. Now let us apply the principles which this branch of science teaches with reference to the human structure, and then we will see how the divine Architect of our bodies has provided the materials for the building up and sustaining of all the various organs which constitute the whole framework of man. These various parts, consisting of about two hundred and forty bones, four hundred and eighty muscles, besides veins, arteries, etc., require some sixteen different substances, in the form of gases, fluids and solids, in order to develop and sustain a good and healthy organism.

But, if any of these substances are deficient in quantity, then the organism will be defective just in proportion to that deficiency. If, for example, the atmosphere we breathe is deficient in the proper quantity of nitrogen or oxygen gases, the whole system would soon perish; or, if the proper quantity of fluids are wanting, the body would famish; or, if any of the solids in our food are deficient in quantity, those parts or organs which require them would be defective. But, in providing the necessary materials for all parts of the system, the Creator has furnished

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these substances in just the proportions required to give strength and utility to the whole structure. Now, in view of these facts, suppose man should conclude that the proportions of these various substances of which his system is formed and sustained are all wrong; and he should change these proportions that are established by divine law, and, instead of using (for instance) one part of oxygen to five of nitrogen, he should use but half that quantity of oxygen in the air he breathed; or, suppose he should change the proportions of the constituents of the water he used, and instead of one part of hydrogen and one of oxygen, of which pure water is composed, he should take but half that quantity of hydrogen; or, suppose he should change the proportions of the mineral matter in his food by bolting or sifting it out of the other constituents of nutrition, and thus reduce the quantity of the mineral element in his system from one-tenth (which is the due proportion) to one-fourth of that quantity; is there any principle in physiology by which these changes could be made with impunity? No; if man violates any of the laws of his being, he alone is responsible for the results. If he fails to use the means provided for sustaining his organic structure in all its parts, he must suffer the penalty; and yet, this is just what has been done to a great extent in this country, with one of the most important articles of food provided for man. I allude to the grain as it comes from Nature's laboratory, duly proportioned with the proper constituents for muscles, fat, bones, teeth, etc. But instead of using all the substances contained in the grain, we change the proportions by bolting or sifting out a very large proportion of the mineral elements, and also some of the gluten, and cast it away as worthless. In doing this we commit an irretrievable error, as shown by the sad results upon the teeth; for although there are traces of the mineral constituents in the various articles of food we eat, yet the grain of which bread is formed has a much larger proportion of this element than the other articles of food now used in this country. This is found deposited for our use in the hull or outer portion of the kernels of the grain, and we should retain this portion of the cereals, as one of the most important constituents in the bread or staff of life. But we are told by some that the system can elaborate whatever it requires from other constituents. Upon this point, let us refer back to fundamental principles. They teach us that the body does not possess the power of converting one substance into another. It can compound and appropriate substances to the various parts of the system, but it can not transmute hydrogen into nitrogen, carbon into phosphorus, or fat into lime-salts. If the mineral element which forms and sustains the hard portions of the teeth is wanting in the food, these organs will suffer just in proportion to the deficiency.

Upon this point Dr. Paul says: "We have been too much in the habit of considering that nature furnished her own materials, and man had nothing to do with her operations. The potter can not fashion the bowl without the clay, neither can bone be formed without earthy matter. The system must be supplied with the various constituents required for the body; some for fat, some for flesh, skin and various other tissues, and some for bones and teeth, which are held in solution and carried away by vessels adapted for that purpose and deposited atom by atom, until they are so compacted together as to become solid bone, or hard, stony formations for the teeth." If we are to expect the stalwart frame of man, or the enduring, firmly-knit, compact and healthy physical constitution of woman, the organic and inorganic or earthy compounds of which that frame is composed must not be denied. Nature must be supplied or nature will fail.

Again, Prof. Johnson says, in his official report upon this subject, that "The whole grain is one-half more nutritious than fine flour." This report also shows the very large proportion of bone material which is contained in the bran.

Prof. Brintz says: "The ordinary weight of offal is from sixty-five to seventy pounds to each barrel of flour. Now, if we estimate the earthy constituents to be two-thirds of the offal or bran, we must consider that there is an actual loss of these important constituents, which might be retained in every barrel of flour of forty pounds. Again, if we estimate that every child shall consume annually one-half a barrel of flour, then we find that by the use of superfine flour, as commonly used in families, the child is deprived yearly of twenty pounds of those earthy substances which are required to form the bones and the teeth. When we speak of a child consuming half a barrel of flour annually, it appears a large quantity, but when we reduce the same to a daily allowance, we find it is but a little over four ounces a day; and every parent must know that this would be a very small amount to limit children, yet we see how large a quantity of the bony material would be added if unbolted flour was used for bread, instead of the present superfine flour."

Now this is a great loss of the most valuable constituents in one of the principal articles of

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food for children. But we have been asked if it was necessary to continue the use of all these constituents in our food in the same proportions after the entire system is fully developed. I answer, Yes; the various parts of the body are composed of fine particles of matter, which for a time possess life or vital force. The vital principle of these minute particles of matter is spent in sustaining the living tissues of the body, both hard and soft. When this has been done, and these particles of matter have become useless, they are cast out of the system by excretion. These must be replaced with fresh materials fitted for use, which is done by the process of nutrition. The food which is designed to nourish all parts of the body, should, therefore, contain all the constituents of which the body is composed.

When the food is taken into the system and converted into blood, it is conveyed to all parts of the body, imparting to each cellular and fibrous tissue a due proportion of fresh material, which takes the place of other spent particles that are being conveyed away through the medium of the respiratory organs, the skin, the urine, and the lower intestines. This change of particles goes on constantly and rapidly; there is an incessant waste and renewal of all parts of the body; and in order to maintain a healthy organism, the supply of materials to these different parts must be equal to the expenditure. During the younger or growing period of life, the reception of matter into the system is greater than its loss, and the body steadily increases in weight. After the whole physical structure is fully developed in all its parts, the teeth included, then an equilibrium is maintained between the amount of matter received and expended, with but little variation until old age, when the waste becomes greater than the supply. The sensations of hunger are simply the silent whisperings of our bodily organs for fresh supplies of food. When nourishment is taken into the stomach and converted into blood, this fluid circulates rapidly through every portion of the system, conveying to the nerves phosphorized compounds, to the muscles sulphurized compounds, and to the bones, teeth, etc., mineral compounds. No one kind of diet contains all the necessary constituents for the different parts of the body. A mixed diet is required in order to provide for all parts of the system, and to effect the proper chemical union of the different elements contained in the food; which is essential for organic structure, that each particle of matter may be of its proper kind and deposited in its appropriate place. If any of these different constituents are wanting in quantity in the food, the equipoise between the waste and supply is not maintained, and the tissues, whether hard or soft, that have not received their full supply of new material, lose weight faster than the food renews it; consequently they shrink, fail, and pass off as effete matter, or close the scene in death. As with the other tissues of the body, so with the bones and teeth, the same general law of waste and supply prevails in all parts of the system.

If there be an abundant supply of earthy matter to fully meet the demands, then instead of soft, chalky teeth as we have now, they will be dense and firm in their texture, and capable of resisting decay, so long as a due proportion of mineral supplies are kept up.

When the teeth have become well developed and densely formed, they will, under ordinary circumstances, maintain their integrity until their supplies are diminished or suspended. But if this is done, then, as particle by particle dies away and no fresh supplies are furnished to take their places, decay is the result.

In conclusion, allow me to urge upon every member of this association the importance of looking more closely into this matter; and let every parent, especially, raise his voice against the discarding of this mineral element from the staff of life. This important substance you will remember, is deposited for our use in the hull or outer portion of the grain; and we should retain it in the bread that we eat, as it contains the requisite constituents with which to form and sustain good teeth.

New York, *December*, 1866.

Cruelty to Children.—Prof. Agassiz has written to the Society for Preventing Cruelty to Animals that turning turtles upside down is extremely painful to them, and prevents their eggs from hatching; also that beef loses its nutritive properties if the cattle are kept long without food before being killed. One of the cold mornings of last week while we were shivering in an overcoat, an elegantly dressed female entered the boat, leading a little boy whose clothes were belaced and beflowered and beflounced in a most fantastic fashion, but whose bare legs were blue, while his knees knocked together, and his teeth fairly chattered from the chill. If the Society for the Prevention of Cruelty to Animals are not entirely engrossed with the sufferings of turtles and calves, it would be well for them to look after these young bipeds whose heartless mothers freeze and torture them for fashion's sake.

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A Glance from the Jury-Box.

BY GEORGE W. BUNGAY.

My first and only experience as a juryman is just passed, and I hasten to make a record of my impressions while they are fresh in my memory. At the New City Hall of Brooklyn I found a "regiment" of men who had responded to the summons to attend the "Court of Sessions," and when the clerk called their names, their answer, "Here," uttered in such a variety of tones, was a subject fit for the study of those who are fond of investigating human character. The gathering might be compared with a huge organ whose pipes had not been tuned, and whose unmusical sounds, at the first touch of the fingers, gave only the note of each individual key, without the symmetry and harmony of tone which arise from scientific combination and artistic execution. There was the timid squeak, the bold bass, the clear metallic ring, as though the tongue was a clapper striking on walls of brass; the soft and musical "Here," sounding like the last word of a song; the sharp, quick response, a word with a sting in it. One man named Gosling answered in a weak voice, as low as the peep of an aquatic fowl when it is chipping its shell, and the ripple of laughter passed over all faces present.

When the Judge invited all who had excuses for the non-performance of jury duty to present them, at least two-thirds of those who were present arose and stepped forward, each in his turn taking the oath and answering the questions proposed by his honor the Judge. Some had served in the Army; some had been firemen; some were indisposed; some were hard of hearing; some were too poor to afford the time; some had engagements out of town; a great many expected sickness in their family—indeed, there is a prospect of a vast increase in the population of Kings County.

There seemed to be almost as many different excuses as there were individuals, and each one had a different way of presenting his claims to a discharge from the unpleasant duty. One had a patronizing air, and swelled up hugely in front of the Court, until his bladder of conceit was pricked with a denial, when he suddenly collapsed and sat down in a shriveled condition; one was so modest he could not lift his eyes to the level of the eyes of the Judge, and he left the impression that a culprit had by mistake been mixed with the jurymen; one was so full of speech and quick of utterance, that he made his statement before a question had been propounded; one stuttered, and with great difficulty made out his excuse. The great majority, however, had the manners and grace of gentlemen, and avoided singularities and angularities in the presentation of their excuses.

This happened on Friday, and there seemed to be a lack of lawyers and a lack of witnesses that day; perhaps they had gone to the jail to witness the tragedy—for two murderers were hanged that forenoon. The Court adjourned until Monday. In the mean time Justice, whose eyes are blindfolded that she may see no distinction of race or color, did not notice the time a large number of busy men had lost. On Monday morning, at 10 o'clock, the inexcused jurymen, or most of them, answered to their names and saved their fines. A considerable number of prisoners were led into the corner of the room nearest the seats of the jurymen, so that I, with others, had an opportunity to see them distinctly. With two or three exceptions, they were young men and boys, such as are found in groceries and grog-shops and on the street-corners late at night. They were not the graduates of our Common Schools—theirs was a sidewalk education. They were familiar with the black-letter literature of the day; could swear oaths unctuous with profanity; know all the scandal of the street, and could tell where to find the cheapest tobacco and the whisky that is lined with lightning. Young as they were, many of them had apparently lost all sense of shame, and the exposure to the public stare, so painful to a sensitive and nicely-balanced nature, made no impression upon them. If they were sorry, it was because they were found out and not because they had committed a crime.

Day after day I listened to the trial of these prisoners, and found that, with rare exceptions, they were either the subjects or the victims of intemperance. At least three-fourths of them were foreigners. Three or four had served in the Army, and the humane and patriotic Judge reduced the term of punishment in such cases, and in every instance he mingled mercy with judgment, addressing the guilty and the unfortunate with the tenderness of a father appealing to wayward children. A bulbous-headed young man, who had been caught by a policeman about daybreak near where a burglary had been committed, was found guilty of carrying concealed weapons. The dagger, which was shown in court, was a fearful weapon in the hands of a man wearing such a villainous face and head as he had. He was sent to the State Prison for four years and a half. The Judge told him frankly that he considered him a dangerous

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man. A nephew of a noted hotel-keeper in New York was sent to Sing Sing for stealing watches. He had been "on a spree" and was "dead broke," and wanted to "raise the wind." A young man, who said he had a wife in England, pleaded guilty of grand larceny, and said he was intoxicated when he committed the theft. He had stolen money from a tavern-keeper. A well-dressed man, who had made some money by keeping a liquor saloon, was sent to the State Prison for receiving stolen goods. A good-looking woman, the victim of an appetite for opium, was sent to the State Prison for pawning the clothing of one of her boarders; and so on to the close of the chapter.

A glance from the jury-box shows distinctly that ignorance and intemperance are twin evils, going arm-in-arm and hand-in-hand from the home of vice and wretchedness to the saloon and the street-corner, and the society of foot-pads and burglars, and the receptacles of criminals and the gallows. In this country, and in all others, the statistics of crime tally with the statistics of intemperance; in other words, the consumption of alcohol corresponds with the number of criminals brought into court and sent to prison. The more lively the business of the distiller and the liquor-vender, the greater the number of judicial sentences. Where there is a great demand for rum, and grog-shops stand out like carbuncles on the body politic, there will be found feeble, mis-shaped and rickety children, idiots, paupers, vagabonds, loafers, beggars, drunkards, and the crimes and vices which accompany drunkenness.

Napoleon lowered the stature of French men, and impaired the physique of the nation, by choosing the tallest and comeliest men, the flower of the nation, for his army; so the men who make and sell intoxicating liquors not only dwarf the race physically, but prevent the development of the brain, the organ of thought; hence the badly-formed heads and ill-looking faces that are seen in the prisoners' box. Liquor lowers the foreheads of its victims and stamps beast on the face of the drunkard.

All the male prisoners here are more or less addicted to the use of fermented and distilled liquors; several are the children of drunken parents, who have bequeathed to them an appetite which burns like a fire in the throat—a fire which nothing but water can extinguish. The appetite for intoxicating drinks will grow with the victim's growth and strengthen with his weakness; the more powerful it becomes the less power and inclination will he have to resist it.

The poor prisoners, standing in the corner of the court-room, remind me of the frozen corpses on the winding stair of St. Michæl's Convent holding outstretched hands under their shrouds, as if beseeching the beholders to look upon the wasting of their lives, and have pity for their wretched end. Looking beyond the court-room into the street, we see scores and hundreds of boys and girls growing up without education, without employment, without good parental example—prospective thieves and drunkards and assassins. In a few years they will be in the great circle of crime, going the rounds of the tavern, the porter-house, the station-house, the court-house and the State Prison. Industrious men will be called from their business to sit as jurors; policemen, constables, sheriffs, lawyers and judges must be employed, and paid by the county out of the public treasury. Bentham said, "The worst use to which you can put a man is to hang him;" to such uses do those who deal in "liquid fire" put their customers.

As the cup of Circe changed the companions of Ulysses into swine, so the cup of intemperance dehumanizes the noblest natures. What, then, must be its effect on those who have inherited an unbalanced organization, and who are allowed to grow up in ignorance under the walls of our free schools?

RAPIDITY OF NERVE FORCE.—It is now shown that though the transmission of sensation is so rapid that the effect seemed to be coetaneous with the cause, nevertheless it is not so, and there is in reality an interval of time between the prick of a pin on the foot and the perception of the sensation—an interval so minute, indeed, as to be inappreciable, for no space of time less than the tenth part of a second can be distinguished by the natural powers of man. By mechanical contrivances and electricity, however, the velocity of nervous agency can be undoubtedly determined. The nerves of a frog recently killed were excited by secondary voltaic currents, and the contraction of the muscle thereby produced was shown by magnifying the effects, so that in one case a small flag was raised; in another arrangement the effect was seen by releasing a trigger, and in a third case lines were stretched on a blackened glass that were afterward exhibited by the electric lamp. In a creature so long as a whale, the fact of a harpoon having been thrust into his tail would not be announced in the creature's brain till a second after it had entered, and it required another second to transmit the force needed to move the extremity of its tail.

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Life's Four Ages.

BY NELSON SIZER.

In *Childhood's* happy morning hours
Thy smile, O Christ, like May-day flowers
Shall gild its opening years.
When *Youth* with headlong passions burn,
Thy gentle, chiding voice shall turn
Him from the path of tears.

When stalwart *Manhood* comes, at length,
To battle in life's mid-day strength,
Tempted and vexed with cares;
Thy godly power, that stilled the storm,
Shall guide his might, his soul inform,
And keep his feet from snares.

In ripen'n *Age*, that golden time,
When hearts, like autumn's laden vines,
Reveal their clusters sweet;
Thy gentle hand shall loose the ties,
Garnering thine own beyond the skies,
Safe at the mercy-seat.

The Sacredness of the Body.

BY REV. O. B. FROTHINGHAM.

Man, we are constantly informed, is a soul. As a soul he is regarded by moralists and divines whose duty it is to ply him with holy thoughts, and to bring all the powers of the world to come to bear upon his reason and his affections. We also believe that man is a soul. In that belief we are strong and glad; we would not forget that truth for an instant. Man is a soul, but he is not merely a soul, he is a soul incarnate; and this body and soul, however much they may differ in essence, are, in union, sympathy and mutual dependence, one. Each without the other is useless, can not indeed be conceived as existing, a soulless form is a corpse, a formless soul is a breath. Religion concerns primarily the body. The healthy mind requires a healthy frame. The regeneration of the flesh must precede the regeneration of the spirit. Many of the demons that torment the poor soul of man are always in the blood. How much of the sorrow, distress, despondency and morbid melancholy, which make our spirits almost wild with anguish, spring from an impeded circulation or a tardy digestion, and could be cured far better by the physician than by the clergyman. How many severe cases of skepticism, infidelity and atheism—cases which the theologians have tried in vain to manage with arguments, and preachers have failed to reach with warnings—might be conducted successfully by a judicious course of diet, or a few runs in the fields; by substituting sleep for sermons, and a gymnasium for a vestry-room. Yes; how much of the vice and the sin, the anger, jealousy, petulance, harshness, which we reckon among the surest and saddest indications of the irreligious mind, are after all, only indications of a disordered body, and could be removed entirely by the timely application of simple and wholesome remedies. Galen, the old Pagan physician, perceiving how closely connected was the sour disposition and the acrid stomach, the feverish blood and the fiery temper, used to tell the philosophers to send their worst subjects to him. And the famous Dr. Johnson, knowing from his own experience how intimate the relation was between dyspepsia and desperation, declared that all men were rascals when they were sick.

We are all familiar with the ancient notion, which originated in the far East and was adopted later in the creeds of the Christian Church, that matter was the seat of evil. From this idea it followed that the flesh was foul, its passions unholy, its appetites unclean; that the body was a dungeon where the soul was confined damp and dark among crawling reptiles and invading vermin. Dreamy fanatics, out of a notion of doing God honor, have treated with contempt and mortification the frame which it pleased him to give their souls for a habitation; and none of those who have violated this holy temple by their sensuality, have done it more grievous and fatal wrong than these. The flesh has been sacredly scourged, starved, tormented, put to continual shame. Christian devotees in the former days and in our own times have undertaken to set the physical laws at defiance, copying in the same spirit, though in milder form, the miserable Yoghees of India, who encircled themselves with fires at noon-day; gazed themselves blind on the sun; rolled through the country doubled up like hedgehogs; buried themselves alive with only holes to breathe through; clenched their hands together till the nails grew through them, or sat in one posture, holding their arms above their heads till they remained so for life and birds built nests on their shoulders. When religious people think so meanly of the body, is it strange that irreligious people think no better? When religious people abuse their bodies by austerities, is it strange that irreligious people abuse their bodies by vices? The one sin is about as mischievous as the other. The pious ascetic unfits his body for its earthly place and service, almost as effectually as the voluptuary. And if

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the voluptuary, by his pleasures, ruins his soul, weakens its powers, obliterates its hopes, drags down its aspirations, darkens and confuses its vision, the ascetic does nearly the same thing; for the religion he awakens and cherishes is dark, atrabilious, dyspeptic, made up of morbid fancies and dismal fears—a nightmare upon his own soul and an affront upon his God.

The soul lives in the flesh, lives all over it, animating it in every part. It looks through its eyes; draws through its ears an infinite variety of sounds; uses all its members for its high purposes; moves with its muscles; thinks with its ganglia; feels with its nerves; breathes through its skin; takes in sustenance from the action of its membranes, arteries and ducts—makes the whole of it, in fact every tithe and particle, every globule and atom, a temple of worship, a study, laboratory, work-shop, pleasure-house, palace, observatory, traveling-carriage and home.

Spiritually regarded the condition of the body is of the first importance, and a more solemn charge can scarcely be delivered to the people than that of attending to it. The well-being of the body is essential to the highest well-being. Without health there is no enjoyment. Nature does not smile upon the consumptive and dyspeptic. The landscape is not lovely to bleared and blood-shot eyes. The singing of birds, the rushing of wind among the trees, the dash and ripple of water, has no charm for one whose animal spirits are clogged and heavy. A frame that is overstrained by excess of any kind, weakened in one part, morbidly excited in another, finds no pleasure in those natural recreations which are ordained to bring it delight. What enjoyment does society give to him who has a headache, or a pain in the side? Laughter is an infliction; conversation is torment; the social game is weariness. Nervous exhaustion reduces the fascinations of friendship to the lowest point, and makes one unhappy amid the smiling of his children and the merriment of his friends. "The longer I live," said Sydney Smith, "the more I am convinced that the apothecary is of more importance than Seneca, and that half the unhappiness of the world proceeds from little stoppages, from a duct choked up, from food pressing in the wrong place, from a vexed duodenum, or an agitated pylorus. My friend sups late; he eats some strong soup, then a lobster, then some tart, and he dilutes these esculent varieties with wine. The next day I call upon him. He is going to sell his house in London, and retire into the country. He is alarmed for his eldest daughter's health; his expenses are hourly increasing, and nothing but a timely retreat can save him from ruin. All this is the lobster; and when overexcited nature has had time to manage this testaceous incumbrance, the daughter recovers, the finances are in good order, and every rural idea is effectually excluded from the mind. In the same manner old friendships are destroyed by toasted cheese, and hard, salted meat has led to suicide. Unpleasant feelings of the body produce corresponding sensations in the mind, and a great scene of wretchedness is sketched out by a morsel of indigestible and misguided food. Of such infinite consequence to happiness is it to study the body." A reader sits down to his books, and finds that his favorite authors give him no pleasure; his mind wanders, he has no power to fix his attention; he can not think; he can not remember; he does not take the sense of what passes under his eye. He becomes alarmed, fears that he is losing his love of knowledge, that his mind may be failing him. But the trouble is in the body. He has eaten too much; smoked too much; slept too much or too little; taken excessive or insufficient exercise; breathed an atmosphere that was too close or hot; he is too tightly laced, or his clothes do not fit. Remedy any of these defects, and the books become once more interesting, the love of knowledge inspires the mind as before. There are states of body which kill aspiration, and make it impossible to contemplate. Even so small a matter as the inaction of the skin hangs a thick veil before God's most heavenly attributes, and effectually hinders the glad outgoings of aspiration.

Nature's ends with us are served by our usefulness. But there is no usefulness without health. How many inestimable days, each with its twenty-four golden hours, are lost yearly by some little ailment or disorder in the blood. How many rarest opportunities are for ever unimproved because we have not at the moment physical spring enough to seize them! How many powers lie unemployed in us because we have wasted on something else the vital force that should wield them! How many duties are never done through some trifling debility in our nervous system, which is the agent of the will. The amount of work, the intensity of work, the character and the quality of work, are all determined by the state of the organization. The clerk throws a house into confusion by a slip of his pen; the cashier by a miscount endangers the reputation of his bank; the salesman fails to dispose of the required amount of goods, and in consequence loses his situation; the lawyer mis-

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lays a paper, fumbles among his briefs, is confused in his argument, and sees his best case going against him; the clergyman sits down to his sermon Saturday morning, finds himself unable to write it, and hears next week some hints that his parishioners are complaining of a falling off in the energy and spirituality of his discourses. How is all this? Why is the measure of labor short, and the performance of it slack and careless? Look into the history of the night before, of the day before, of the preceding days, weeks, or months, and the secret of all this incapacity, heedlessness, uselessness, will be found in some irregularity of life.

Our work, whatever its character may be, even if it be mechanical and muscular, the work upon which depends success and fame, is strangely affected by the physical states. The healthy man, sweet and clean, writes healthy books, paints wholesome pictures, conceives refreshing poems; but the fetid exhalations from an abused body taint all the finest productions of the mind. Contrast Wordsworth and Byron. Wordsworth, orderly in his life, regular in his habits, simple in his tastes, moderate in all his desires and gratifications, a devoted lover of Nature, whose scenery of mountain and lake was his inspiration, whose fields were his study, whose woods were his daily resort—Wordsworth, whose frame was receptive of all Nature's loveliest influences, and whose clear brain, unclouded by fumes of tobacco or steam of punch, comprehended the grand lessons that she taught him in her solemn way, wrote poems pure as brooklets and healthy as the country air—the instruction and the delight of all innocent and good people—he need not regret a line of his maturest works. Byron, irregular in his life, unnatural in his habits—the creature and the victim of a depraved social state—intemperate, licentious, and in every respect an epicurean; surrounded by artificial luxuries and excitements, owing the occasional and transient periods of nervous tranquillity to his doses of Epsom salts, wrote poems which are the delight of the profligate and the passionate, poems which are found in the haunts of low pleasure, and are devoured by the young in their season of impulse, but which the pure and innocent, for the most part, regard with anxiety and terror. Over them is the odor of tobacco, the flavor of strong coffee, and still worse, the reeking scent of the gin under whose inspiration they were written.

The work will savor of the workman, and the finer the work is the more is this truth perceived. Charity and devotion feel the poisonous taint as quickly as thought and imagination; and he who desires for himself a clean heart, affections warm and true, a moral sense bright and unswerving, an insight into spiritual things that is deep and clear, and a calm, steady communion with truth, must look to it that his temple is purged of the vile spirits which make of the house of prayer a den of thieves.

If what we have said be true, and true it is according to the wisest books and the wisest experience, do we use too strong terms when we speak of the sacredness of the body? Is it not sacred? Are not its wonderful and beautiful laws the laws which God has made and decreed, must be observed? We bend in admiration before the majestic forces which hold the universe together, which keep the sun in its place and guide the myriads of suns that circle around it, which heave up the adamantine pillars of the world, which are the strength of the mountains and the rules of the sea; but do we not know that there is not a single one of all these forces, call it by what name we will in our vocabulary of science, that is not active every instant in the preservation of our mortal frames, strengthening the bones, stretching the living cords of nerve and muscle, mixing the chemical fluids and atmospheres, and passing up and down in perpetual movement the golden buckets of life?

We spare the common flower in our path, seeing in its tender leaves a marvel of the Creator's handiwork; and will we not spare those fine essences in our bodies which are the elixir, the last rich extract of all the choicest things that have been assimilated with our vital powers? We will not wound a tree, lest the course of its invigorating sap should be checked or diverted, and blight should touch its foliage; and will we choke the nobler channels through which the river of life pours and rushes, or will we stain the pure waters of that sacred river with our garbage and sewerage? Life is so sacred in our eyes as the awfully mysterious gift of God, that we will not without compunction coolly kill an animal; and will we deliberately, by a slow but fatal process, destroy our own by vicious indulgences, and so record ourselves as suicides? And the soul! That effluence from God himself. With what pain and horror we think of its destruction, and repel the thought of its being shut out from immortal bliss! Will we, then, be the authors of our own soul's condemnation by allowing the decay of an unwholesome body to eat into its substance?

The mind of man, being intrusted to the keeping of the physical laws, is subservient in some great measure to them. But these physical laws are simple, and with what exceeding

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plainness they are written out! There is no child who does not learn them from compulsion. It is willful negligence alone that violates them. The one cardinal condition of man's temporal well-being, a condition which every young man ought to master and make his own by daily practice and meditation, is *Temperance*—temperance in all things. He should be neither an epicure nor an ascetic, nor a fanatic in any sense. The fanatic in one way is the reaction from the fanatic in another. The fanaticism of abstinence is caused by the fanaticism of excess. Moderation is the only rule of healthful life; moderation first, of course, in those indulgences to which the temptation is strongest. No one in these times should need to be reminded of the very great importance of being temperate in the use of intoxicating drinks, or of the necessity of abstaining from them altogether. That lesson, thank God, is pretty thoroughly taught to-day; taught, not only by physiologists and moralists, by preachers and lecturers who have risen up as it were from the tomb, but even more solemnly and impressively by the miserable victims who have sunk into ghastly and premature graves, and by those still more miserable, who wander about examples of living death; forsaken by good spirits, and godless on the earth, and showing their forsakenness and their godlessness by the poverty of their intellectual nature and the atmosphere of corruption which they carelessly exhale. So terrible is the pest of inebriety, so wide, so desolating, that temperance has come to mean nothing else than moderation in this one point.

But we must remember that it is hard to be intemperate in one respect without becoming so in all. Temperance in food is as necessary as temperance in drink. One will as easily kill himself with hot suppers as with brandy. The delights of the table are not for him who sits down to a costly feast, but for him who has the good appetite. The healthy man who dines for a shilling gets more pleasure from his meal than the clogged glutton who must stimulate himself to enjoy the chief delicacies of the market. What we need is not a greater store of luxuries, but a better digestion; and this inestimable treasure, this talisman which changes bread into ambrosia and water into nectar; this matchless gift whose miraculous touch converts vegetables into fruits, the common earth apple into pippins and nectarines; this best privilege of nature belongs to him who lives moderately, who does not poison his appetite by excesses, or undermine his organs by irregularities. He who would accomplish any thing with clear decision and energy must know how to deny his stomach. When Sir Isaac Newton was devoting himself to the investigation of light and color, in order that his faculties might be quick and his attention close, he confinedhimself to a small quantity of bread, with a little wine and water, taking a mouthful whenever he felt his animal spirits flag. He knew that a surfeited stomach comported with an empty head, and so rigidly enforced upon himself that moderate and simple regimen which kept his brain in working condition, and did much, in all probability, to secure to the world those splendid demonstrations which are the glory of modern science.

But the rules of temperance cover more cases than these. We should make it a matter of conscience to be moderate in our labor, and moderate in our rest, and moderate in our exercise. We know more than one young man of fine promise and powers, who has disabled himself for life by excessive indulgence in the games of the gymnasium, sad illustrations of the truth that a too eager pursuit of health may lead most fatally to disease. It is easy to say these things, but hard to do them. Many say "ought," but few practice it. But this melancholy fact does not make the "ought" any the less imperative, nor the consequences of disobedience any the less terrible. Is it a sufficient motive for practicing these rules that is wanting? Find it in happiness, in success, in usefulness, in fame, in power. If these are all too weak to resist the force of appetite, there is the grand truth that we are immortal souls enshrined in the flesh, and that the character of those souls, their greatness, wisdom, purity, blessedness; their fate, in short, here and hereafter, depends very much upon the respect paid to their tabernacles of clay.

We are no materialists, we do not believe that the body is every thing. If we did, we should not speak of it in this lofty strain. We do not believe that health is every thing; if we did, it would not seem so much worth preserving. Only those who value something more than the body, and who believe that they are something more than body, do full justice to the body and its uses. They who respect the flesh; who keep it clean and healthy; who watch its welfare most anxiously; nurse its energies most carefully; husband, develop and task its powers, making it fittest for enjoyment and for labor, are always persons who believe in the soul, and in the soul's divine mastership. They are philosophers. If there is no more worship let the temples crumble. We have no respect for those who consider nothing but their physical estate, and cry up the conditions of right living in the interest

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of materialism and the flesh; people who love themselves better than all the world beside, and love their bodies more than any other part of themselves; people who will not do a kindly deed for fear of taking cold, nor make an extra exertion lest they should bring on headache; who will not go to the lyceum, or take pains to submit themselves to the finest influences, for fear they should wet their feet or over-fatigue their muscles; as if knowledge and virtue were not cheaply earned at the cost of headache and catarrh!

The body is an instrument; the welfare of the body is a means, not an end. There are times when both must be sacrificed to the virtuous purposes of life. That they may be ready always to forward and carry them out, we should preserve them sacredly from all violation; *sacredly*, we say, for in preserving these we preserve every thing; and in violating these, who knows that every thing may not for ages be lost. For not with impunity does one desecrate the living temple. Sins against the heart, and lungs, and brain, must be expiated; their curse being laid not only upon the transgressors themselves, but often upon their posterity down to the third and fourth generations. For these sins thereis no pardon. They are too great for forgiveness. Disease, disorder, insanity are their dreadful avengers, inflicting direful tortures upon the sinner in this world, and sending his pale ghost, blind, trembling, vacant, into the world of spirits.

Words are feeble to speak on this theme. Would men but listen, not to us, but to those silent voices that plead with them through their own experiences and others' woes; through their fears, and yet more through their hopes and affections; they would, by simplicity, temperance, denial and purity, seek the regeneration of the flesh, that the regeneration of the flesh may be the regeneration of the spirit! Let those whose frames are unpolluted, yet thank God heartily for their deliverance from the infirmity that cripples, and from the vice that kills. Let them who have committed the act of desecration in any form, comprehend what that act is in its whole extent; understand its character, weigh its results and be wise in time.

IMPROVEMENT.—When Daniel Webster was a young man about commencing the study of law, he was advised not to enter the legal profession, for it was always crowded. His very truthful reply was, "There is room enough at the top."

Influence of Vegetation upon Health.

THE sun, by its powerful light and heat, is the great creator of animal and vegetable life. Vegetation, during the day, while under the influence of the solar ray, emits oxygen, which is healthy to breathe. It is therefore healthy to be out in the air during the day in the summer, but unhealthy during the night, as then the action of plants is reversed. Carbonic acid is given out and oxygen taken in. It is for this reason that night air is considered injurious and morning air beneficial.

[NOTE.—Night air is injurious because of malarious gases, etc., which emanate then. In healthy regions night air is as wholesome as day air. It is doubtful if, according to the most recent discoveries in botany, plants give off carbonic acid at night, at least in very appreciable quantities.—ED. H. OF H.]

In winter this all ceases. It is only in the summer, then, that we have to do with the effects of plant-life upon our health. The evening air, however, is less deleterious than is generally supposed. The carbon which is given out is but slight when compared to the great atmosphere in which it exists. It is diluted so as to be scarcely perceptible—perhaps not perceptible at all upon the health of the individual. We imagine the air is bad, when it is the body, wearied by labor and reduced in strength by heat and the loss of sweat, that causes the languor and enervation. Even where plants are confined, as in a room, there is no harm, unless the space is mostly cramped by the plants and no fresh air is admitted. No one objects to having plants in a room. On the contrary, all houses have them, and we keep them in the apartments where we sleep. And yet we experience no harm or even inconvenience. Much less is the effect out-door, where the great atmosphere takes up the gas as soon as emitted and dilutes it. The air we expire at each breath has much more carbon, in the same bulk, than the little the plants give it. The transpiration of plants, such as we find it, then, is not to be dreaded. We should rather dread the dampness of the night air, especially as the body then is fatigued, making it the more sensible to the influence of the change which the absence of the sun causes. Should we attempt to avoid it—avoid the carbon which is given out—by remaining in our rooms, we find it there, with our raised windows inviting it in.

The effect, therefore, of plant-life upon the

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human system is over-estimated. Yet there are influences, in certain situations, which it would be well to heed. On a summer night when the air is quiet, the carbon emitted by the plants, being heavier than common air, settles to the earth, gathers in the valleys and there forms a layer, which is somewhat similar to the air of rooms when crowded, the carbon settling to the bottom. In this respect the lungs of animals and the leaves of trees are analagous, and both deleterious; but not always, to even an appreciable extent, so apt are we to over-estimate what becomes an excitement with us. But there is no doubt that valleys densely crowded with vegetation, with no water-courses, on still nights in summer, will produce disquiet and difficulty of breathing, to a certain extent, to those who lodge in them. And this, no doubt, often, and it may be generally, accounts for the deleterious effect of "night air;" for, when there is wind, on a warm night, there is no such experience. This may be explained on the ground of the absence of humidity, which beyond question has its effect, but in another sense, however. We always prefer an upper room, in summer, to sleep in. Not only does it exempt us measurably from the influence of malaria, but from carbonic acid and noxious smells in general. If there is more heat, there is less danger, because more pure air, the expansion absorbing the impurity. Low situations, in quiet summer nights, should therefore be avoided, especially if dampness accompanies. The pernicious gases then settle down. When the air is in motion all places are alike, especially when the air is warm and dry.

During the day in summer all the evils of the night air are avoided. The change of vegetable transpiration gets up a healthful influence—healthful, however, only for the time being—stimulant, and therefore invigorating. This is the effect of oxygen. This, in connection with the augmented strength induced by sleep and rest, and further aided by the cooler atmosphere of the morning, account for the elevated state of the system in the early part of the day. It is not all owing to sleep (rest), or the invigorating state of the atmosphere, each of which has its advocates; it is owing to a combination of them all. It can not be otherwise; if these influences exist, they must all have their effect. In winter this is different. Then there is no plant-life, or but little, as in rooms. The usual oxygen of the air exists, with its modicum of carbon. We have neither an excess of stimulus nor a decrease; only the reduced thermometric condition of the air affects us. We feel the effect of cold, which is a stimulant, and get the benefit of the pure air, which is also more dense, imparting more oxygen to the system, so that we are in a strong, exalted state in the winter. Plant-life, then, does not extend to winter, or only to the few plants which encircle the household. These give us a partial summer: during the day, healthy air; in the night, the conditions of summer night-air. But the effect is little, unless the plants are crowded in a room, which is seldom the case. To counteract the bad effect of plants in winter, a stove is an excellent means. Its draught takes the air from the lower part of the room, where the carbon exists, and effectually carries it off. No fear of harm need be entertained where there is a stove in a room with a good draught. It is better than a fireplace. It *takes* the air and carries it away. In a fireplace the warm air escapes, and the cold air takes its place, leaving, however, the heavy carbon at the bottom. This must be raised by a draught, and there is nothing so good as a stove to do it. This also takes the cold air (not the healthiest) from the room, drawing in from the outside fresh air to supply its place, gradually warming it as it filters into the room.

The only hurt experienced from plants in a room in winter is during the night. Then the carbon is given out, and then the stove is not, or but little, in operation. A room then becomes a summer valley in respect to plants. The remedy here is (and it is observed in well-regulated dwellings) to sleep in another room. This is the more readily done, as the sleeping apartment is required to be cool, and plants necessitate a warm room. We should, during the day, crowd as many plants about us as possible, as they clear the room of the carbon emitted from the human lungs, and give out what is taken by the lungs—oxygen. Here is a great advantage little realized. Here is a remedy for a foul room in winter caused by respiration. Plant-life will purify the air for us. It will do this, however, only when brought in contact with the pernicious gas at the bottom of the room, and there the plants should be put. If set near the ceiling there will be little benefit; the carbon will remain where it is, at the bottom of the room. Set them on the floor, then, or range them near it. No better safeguard can be put in a room in winter than plants thus arranged. The little motion which the occupancy of the room gives to the air in it, will afford the plants ready access to all the air of the room, and plants will grow the better for the carbon which the human lungs give to the room. For

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their benefit it would be better not to have a stove (draught).

Let us, then, surround us with all the plants we can in winter. Let the kitchen have them abundantly, the parlor, any part of the house occupied. Let them be near the student, near the infant, near the window. The nearer the window the more light they will get, and the more oxygen they will give out, while all the more eagerly will they consume the carbon. These plants are living things, with faces and respiration and much that is like ourselves. They are the poetry, the friendship, as well as the real utilitarian health in one's room—children gathered from the fields and adopted in our household. Silent in their language, breathing fragrance, suggesting many beautiful thoughts from the classics, from the past—themselves the greatest beauty of all. Life is made better under their influence. If it is also made healthier, what excuse is there left for ignoring plants, flowers—driving summer out of our rooms? Let us then seek the conservatory, and adorn our winter rooms with these children of health and of beauty. F. G.

Nerve Telegraph.

HELMHOLDTZ and Du Bois Raymond have recently investigated and accurately ascertained the rate of propagation of the nerve force. The latter first proved that there really was something traveling along the nerve; this something we have to conceive of not as an "imponderable," but merely as a pulse through the nerve.

Du Bois Raymond has illustrated the way in which this pulse is transmitted.

A number of double magnetic needles are suspended in a long row, within a glass case, so that the end of each needle was in a line with and close to, but not touching, the needle in front. Pushing the initial needle slightly aside, the attraction it exercised in its new position obliquely displaced the next adjoining needle in a contrary direction. This displaced the next, and that in its turn the next, and thus a zigzag motion ran along the whole row of needles to the far end, where the movement of the terminal one rang an electric bell.

To show the actual transmission of the nervous agent, the Professor took a frog, and from the hind legs of this frog dissected a muscle with its attached nerve; stimulating the free end of the nerve by a feeble electric current, the muscle announced the reception of this stimulant by a violent contraction, rendered visible to the audience by the lifting of a covered disk.

The nerve was now tied in the middle and again stimulated; this time no contraction of the muscle ensued; the ligature had prevented its passage.

This proves that the agent is quite different from electricity, for that force would not have been hindered in its transit by the mere tying of the conducting nerve.

The next problem was how to determine the rate at which this change proceeds along the nerve. A few years ago the solution of this problem was thought to be wholly impossible. Yet it has been done by a method used by M. Poriellet for measuring the velocity of projectiles.

When a current of very short duration is passed through a galvanometer, the deflection is proportionate to the duration, and hence the time taken by any transient phenomena may be easily ascertained, provided its beginning and its end can be made to coincide exactly with the beginning and end of an electric current.

This coincidence in time M. Poriellet accomplished by a most ingenious device, which is in actual use in gunnery experiments. This method has been successfully applied to measure the comparative duration of the passage of the nervous agent.

The result of these investigations on the velocity of nerve force is one which at first sight seems impossible, for the rate of propagation is extremely slow.

The velocity of light is about one hundred and ninety thousand miles per second, and of electricity even more; but the velocity of the nerve force is only ninety *feet* a second, one-twentieth the velocity of cannon ball, about one-thirteenth the velocity of sound in air, and not exceeding, but equal to, the speed of an express train.

A very interesting fact connected with nervous transmission was mentioned by the experimenter. This was the effect of temperature on the velocity of the nerve force; when the nerve was warm the curves drawn on the glass, as we have described, were close together; when ice cold water was poured over the nerves, the curves were widely separated from each other, showing that in the latter case the nervous force had traveled at a slower rate than in the former.

Beside the time, however, required for the transmission of a stimulus through the nerve, the consciousness requires a certain time to appreciate that stimulus.

Then, the passage of a rifle bullet through the brain would not occupy more than the 1.1000 of a second; a stroke of lightning would pass

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through the body in inconceivably less time; and thus a person killed by either of these means would die without consciousness having time to be produced. The placid aspect of those who have thus died, and the testimony of those who have recovered from a lightning stroke, attest this. R. K. R.

Dress and its Relation to Health.

BY MADAME DEMOREST.

MANY people who are most wise, considerate and conscientious respecting the matters of diet, regular hours, work, weather, and their bearing upon health, administer, through a deplorable unconsciousness or unpardonable willfulness, to the various ills of which the human frame is heir, by their mode of personal apparel. The fact of its near relationship to the welfare of the system is not rendered by far so paramount as it should be.

A little observation will prove that it most seriously affects the delicate organizations of women and children; strange to say, they are the most numerous victims to the popular inconsistency.

Happily the imperial goddess of Fashion adheres to some regulations conducive to comfort, and when the warm breath of summer chills into autumn winds, out-door vestures of silk and gauze give place to those of cloth and velvet; scarfs of lace to wrappings of fur.

Meanwhile, under-garments and the covering of the feet lack proper attention.

Here thinness and insufficiency are more often the rule than the exception.

If this results from an idea of retaining shapelines, it is not weighty enough to counterbalance the suicidal exposure entailed by it. Our climate requires the utmost care in protecting the vital parts of the body. There have been women sound and sensible otherwise, who persisted in the wearing of thin-soled shoes, even in the depth of our Northern winters, with the danger of disease and premature death staring in their very faces; with severe storms liable to set in at any moment, and the damp and slush of the pavement soaking through.

A trans-Atlantic notion of wearing thick boots at length attracted attention here and began to receive patronage, until now the majority see what they ought to have seen long ago, before hundreds had perished of such blindness; that insufficient protection for the feet is one of the main causes of lung and throat affections.

We believe that but few now indulge in the former murderous practice, and it is to be hoped they may soon be corrected from their error; but still many who have adopted thick boots are regardless that they are still at fault by retaining for winter-wear the thin cotton hose worn during summer. This leaves a space between the top of the boot and under-clothing, especially with children, where the cold air can attack the tender flesh almost unresisted, and thus a great part of the good effect produced by the warm envelope of the foot is lost. Comfortable hose of merino or wool are as requisite to health as comfortable shoes. The ligature of ribbon or elastic generally used to keep the stocking up in its place at the knee, impedes a free circulation of the blood. This is quite enough of itself to keep the extremities cold and the individual miserable.

It is plead as a cause of the universal neglect to wear the necessary amount of under-clothing, that the weight it imposes upon the hips occasions a fatigue and lassitude which impedes the movements and makes walking a task instead of a pleasure.

We see in the attire of men that a support is lent to the lower garments by straps extending over the shoulders, the upper, stronger portions of the frame, thus relieving the hips and placing the burden where it tends to straighten and erect the figure to an easy, natural position.

Why should not women, the acknowledged weaker sex, avail themselves of the same advantage, and by wearing shoulder braces take the support of the under-clothing from the waist.

The fashion now prevalent of wide-spreading crinoline, demands, for the sake of modesty as well as health, a plentiful supply. Many of the wearers of "tilting" skirts seem to have forgotten this requisition of refinement and good taste, and if this thought proves inadequate to recall them to a sense of their indelicacy, perhaps the warning that rheumatism and other ailings are likely to follow in the train of such unlady-like folly may produce the desirable effect. Clothe the body well about the vital regions—the heart, liver and spinal column, where the soul of its sensitiveness is seated, and you adopt a means of prolonging health and make your days both useful and happy.

Again, where the great arteries and veins branch through the limbs, approaching the skin, spreading out into the soles of the feet, preserve their precious, life-giving contents as far as possible from chill and stagnation, by a plenitude of external protection, and you shut out sickness and suffering from finding its way to the central temple wherein flames the spark of mortal existence.

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How to Train Up a Child.'

BY PROF. L. N. FOWLER.

One of the greatest advantages connected with the science of Phrenology, is, that when rightly understood and applied, it enables the parent to educate the mind of the child to the best advantage. The bud contains all the properties of the flower; when developed, we have the beautiful flower and the delicious fruit. All the elements of the man are in the mind of the child. Time, culture, right development and direction, bring these elem nts into maturity. If we place two buds from the same tree in different soils, one good and the other bad, we shall obtain very different results. The one, surrounded by all the circumstances favorable to growth and development, will expand into the tall, luxuriant, well-formed plant, or the full-grown tree; while the other, in bad soil, exposed to the assaults of rude winds and choking weeds, will only be a feeble, stunted shrub, and will never attain the vigor of the parent tree. So with two children born of the same parents, with equally good physical and mental organizations by nature. If one be surrounded by the refinements of educated life, and the other be uncultivated, neglected and badly governed, the one child will in a few years be very different from the other, and will appear to much better advantage in every respect.

As, in many instances, children are bad in conduct when not in organization, it is of the highest importance that parents should be very particular in reference to the influences that surround them. A servant may be so bad in one family that she is discharged, while in her next situation she is faithful and trustworthy. A husband may be a very good man to-day, while to-morrow, he is cross, irritable and unendurable; in neither case does the head change in conformation. I saw a donkey, not long since, surrounded by ten boys, who teased and pounded him unmercifully, but the more they beat him, the more obstinate he was; when they let him alone, he went along quietly. Rarey can guide the fiercest horse by the law of kindness, so that he is as gentle as a lamb.

It is necessary to understand the nature of children and animals if we would know how to manage them. A piano is perfect as a musical instrument, but if an individual who neither knows one key nor one tune from another attempts to play upon it, discordant sounds grate on the ear. The fault is not in the instrument but in the performer. Let Thalberg touch the keys, and he makes the most delightful music. The mind may be compared to a musical instrument. Those only who understand its nature can bring out a harmonious character. We ought not to condemn a person because he is faulty in one respect any more than we should reject a draught-horse good for service, because he is not a racer. We must learn to estimate character as a whole, and not judge by the manifestation of separate organs.

Children should be carefully guided, trained and developed. Their natures are formed by the impressions made upon their minds in childhood. If it were possible to repeat the impression on a daguerrotype plate, we should have but one visible likeness, whereas every impression made upon the mind of a child remains a distinct picture. Suppose two adults, possessing the same degree of capacity, were placed under different influences for ten years, the one leading the life of a recluse or hermit, the other mingling in the most brilliant society, where new ideas are promulgated, we should see two opposite characters at the end of that time.

The mind expands as well as the body, and when we nourish each properly, we can make the most of our powers. Farmers who bring stock to market, know how to feed their cattle to the best advantage; consequently they have fine animals for sale.

Parents generally are very anxious that their children should be good, great and popular. They spend much time and money upon their education, and strive to govern and discipline them to the best of their ability. The fault is not in the want of interest on the part of parents, but because they are ignorant of the correct means by which the mind can be fully developed.

We deplore the depravity of man, but when we perceive how much of that depravity is needlessly produced, we shall be stimulated to do something to prevent it, as well as to pray, "Make us perfect, even as our Father in heaven is perfect." We approximate to perfection when we endeavor to forsake evil habits and live a true life.

We educate the intellectual and moral powers of our children, and neglect the selfish and social faculties, whereas we should pay special attention to the training of the latter, because depravity arises more from the perversion of the passions and propensities, and the wrong direction of the social feelings, than from any other source.

The frontal region of the brain is educated in the day-school, the coronal in the Sabbath-school, while one-half of the brain receives but

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little attention. We need schools which shall guide the passions and impulses of the child, as well as those which embellish the intellect and cultivate the moral sentiments.

The first faculty in that part of the brain which is generally left uneducated, to which your attention is directed, is *Alimentiveness*. It has its location in the middle lobe of the brain, in front of the ear. By the action of this faculty, we have the desire for food and drink; the front part gives a love of liquids, the back part of the organ gives a love for solids. We need to eat several times during the day in order to supply the wastes of the body; for as every revolution of the wheel in the engine expends a certain amount of steam, so every movement of the body exhausts vitality. It is an absolute necessity that we eat; especially is this the case with children; for beside the daily wants of the system, they commence, in childhood, the foundation for their constitutions. They require to be fed with special care, for the disposition, character, and condition of the body and mind depend very much on the quantity and quality of food taken by the child. Let the diet be plain, simple, but nutritious. A volume might be written on this subject, but I pass to the organ of *Acquisitiveness*, which is located directly above Alimentiveness. This organ gives the disposition to acquire property. We need clothing, food, houses, instruments of various kinds, etc., in order to supply the wants of the body and the mind; hence we have a distinct faculty which qualifies us to appropriate what we require for that purpose. If rightly educated, it exerts a wholesome, balancing influence over the other elements of the brain; whereas, if it be improperly exercised, it becomes morbid in its tone of action, and has a deranging tendency.

No faculty of the mind finds its complete and permanent gratification, for the natural language of each is "A little more, a little more." This is especially true with Acquisitiveness, for if you fill both hands and both pockets, it is never satiated. A person surrounded by more property than he can manage, will still crave houses and lands. When these are attained, his demands will increase, and he never arrives at a period in life or business when he can say that he is perfectly satisfied. The faculty of Acquisitiveness needs special training, so that its proper exercise may harmonize with the other faculties. We have no systems of education at present that give instruction on this point. Stealing is punished, but this does not educate the faculty; it only increases the fear of detection on the part of the child, who afterward steals as much, but is more careful to conceal the theft.

A father wished to teach his children the law of kindness and benevolence. One night he brought home an orange, and handing it to his son John, said, "My son, here is an orange for you. Would you like it?" Of course, he took it joyfully. His father said nothing more, but passed into the next room. He soon heard loud words among the children, but did not interfere. John began to eat his orange, and did not give any of it to his brother and sister. This made them angry, and there was a great noise about it. The second night the father brought another orange to his home, and gave it to Charles, saying, "Charles, you had better divide this, and give John and Mary some of it." Charles took the orange, and his father passed out of the room again, and stopped in the adjoining room to hear what was transpiring. Charles tardily found his knife, cut the orange, and gave a small piece to John, and a very small piece to Mary, grudging what he gave. They were not at all satisfied as to what they received, and there was again considerable disturbance. The third night the father brought home another orange, and gave it to Mary. His little daughter said immediately, "Father, please to let me take your knife." He handed her his knife, and Mary cut the orange into four portions. She gave one piece to father, another to John, another to Charles, and reserved for herself the smallest part. Father sat down by the fireside to eat his share of the orange. Mary sat on his lap, her favorite seat; John hung on one arm of the chair, while Charles was soon on the other side, and they chatted pleasantly and familiarly. The orange was eaten, stories were told, and they enjoyed themselves very much. All at once the father said, "How is it children that we are so happy this evening, when on the two preceding nights, I heard such angry words between you in the drawing-room? John, I gave you an orange three nights since, what did you do with it? there seemed to be discontentment in your party; did you give Mary any of it?"

"No, sir," said John, quite sullenly.

"Well, what was the cause of the quarrelling? What did you do with your orange?"

John began to pull away, for he did not want to answer that question.

"Come back, John," said the father; "tell me what you did with your orange!"

John braced himself as well as he could, and said gruffly, "You gave it to me, and I ate it."

"Well," continued the father, "last night I

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gave an orange to Charles. What did you do with your orange, Charles: did you give John and Mary any?"

"Yes, sir," replied Charles, quite briskly; "I gave them both some."

"But there was dissatisfaction," said the father; "did you give John more than you gave Mary?"

"No, sir, I gave them both just alike."

"What could have made the dissatisfaction?"

Charles began in his turn to pull away.

"Come back," said the father; "tell me what the noise was about."

Charles said not a word, when John spoke: "He gave me such a *leetle stingy piece*, that it only put the taste into my mouth, and I had rather have had none at all."

"Well, Mary, how is it to-night we all appear to be very happy? What have you done with your orange?"

Mary replied, "Father, I love you, I love John, I love Charles; I would much prefer to give away the whole orange than to quarrel over it."

The father said: "Children, the Bible teaches that 'It is more blessed to give than to receive;' and you see how happy we have all been this evening by the course pursued by little Mary."

These children would never forget the lesson taught to them by their father by this simple experiment.

Some persons have a propensity to steal. They frequently take articles which they do not wish to use. Phrenology does not *make* them steal; it only reveals the fact that there is a faculty of the brain which, when perverted, leads to stealing. When the science of geology explains the surface of the earth, geology does not make the earth, but enlightens us concerning it.

The question will be asked, How is the stealing propensity to be remedied? Some will whip and beat their children, thinking to cure them by this method. Others will put locks on to the drawers and closets, so as to remove temptation in every form. What is the result?

Beating the child creates fear of punishment, but does not touch the primitive influence of the faculty of Acquisitiveness. It is but a partial remedy for the time being, while the disposition to steal remains as strong as before, and cunning or duplicity is developed in the child by such treatment. The mother is very desirous to prevent her willful boy from forming this dangerous habit. Suppose he has committed the act, she gives him a good shaking, and, whipping him severely, says, "Let me catch you stealing again; you shall have another beating much worse than this!" The little boy will think, "Oh, but I'll manage that you shall not catch me stealing next time!"

The result is greater scheming in the accomplishment of the act. The second plan, "to lock up" every thing, is no better than the first. We know that the ingenuity of the rascal is generally equal to that of the man who attempts to circumvent him. The more curious and difficult the lock is, the greater the effort to understand it. Bars and bolts are easily broken by the determined thief.

How shall we prevent children from stealing? By educating the faculty, by gratifying it in some legitimate way, and balancing it by calling into exercise some other faculty of the mind to produce harmony. Suppose you have a child who has stolen, I will tell you how to proceed. Take your child into a room where you can converse alone with him. I would say, "James, look at me, and tell me if you would like for me to know every thing that you have done within two or three days. Shall I write an account of your actions on a piece of paper, and take it to your teacher to have 'him read it aloud to his scholars? If you have done right, you would not, I am sure, object to having it known. Come my boy, tell me what to write." The child would say, "Oh no, father, I don't want you to write what I have done." "Perhaps you have been doing wrong, and would not like to have it published; is that the case? What have you done?" If you speak kindly, and the boy feels that he has a friend in his parent, he will generally confess his evil way. Your duty, as a parent, will then be to appeal to his moral sense to show the wrongfulness of the action, to explain that his unhappiness arose from this fault, which must be corrected; that if he continued in the same course, he would come to a dishonorable end. In this way, the influence of the parent over the child would be powerful. In nine cases out of ten, the child would become its own moral monitor. Then say, "I do not intend to whip you for what you have done; I shall not tell the scholars in school about it, but I will help you to overcome the inclination to do it again. I see you need more assistance, strength, courage, judgment and presence of mind to help you. I shall not lock my desk, because I want you to be able to resist the temptation of taking money when you see it." As soon as the child perceives that you intend to assist him in overcoming his besetting sin, he will then endeavor

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to regulate himself. But suppose you say to the child, "You naughty thing, I intend to whip you," and act accordingly, the child will soon think, "Mother or father will look after me; if I get caught they will whip me, and then we shall be square."

A mother brought to me her little girl one day, and said, "Can you tell me how to prevent my child from stealing and lying?"

I replied, "In the first place, you should not have told me in the presence and hearing of the child that she steals and lies; it destroys her self-respect; but as you have done so, I will tell you what the remedy is. First, do not suspect her. Secondly, put confidence in her, and allow the faculty of Acquisitiveness some gratification; let her have certain things to possess as her own."

"Ah," said she, "I see that I have not pursued the right course. The other day, I had invited company, and fried some cakes for tea. I selected twelve, and put them carefully into the pantry, locked the door and hid the key. As I was going out I said, 'Susan, you must not touch any of those cakes in the pantry, I want them for the company to-morrow night. When I returned, I went to the pantry and there were only ten of the cakes. I called Susan, and said, 'Susan, you have been here and taken two of the cakes.' 'No, I haven't, mother.' 'Yes, you have, you naughty girl; there were twelve when I left, and now there are only ten. Come here, and let me whip you.' Finally, Susan confessed that she had found the key and eaten the cakes."

I asked the mother "If there were not some in a pantry where there was no key or lock?"

"Yes," said the mother, "and that is why I am so surprised at her conduct; I can not understand it."

"I will tell you the reason. The fact that you put them out of her sight, and suspected her of dishonesty, increased their value in her estimation. Whereas, if you had told her that she must take care of them for you, she would have felt an interest to do so." The mother saw her mistake, and said she would endeavor to remedy it. Servants frequently manage to eat as many sweetmeats and preserves by stealth, when they are entirely deprived of them, as they would if they should be allowed occasionally to have a taste of them.

A young lady once had the inveterate habit of stealing. Her parents tried in vain to cure her. She was invited to spend some time with a friend, who knew that she possessed this unfortunate trait. The lady met her at the door, and after giving her a friendly greeting, said, "Let us go up-stairs, for I want to show you where I keep all my things, as I expect you will be of great assistance in helping me take care of them. In this drawer I always have my money; in this snug place I keep my jewelry; and here are my clothes." When she had showed to her every nook and corner, she said, "It will be your duty my dear, to see that every thing is in its right place; and, as I have no locks or keys, you can come to my drawers whenever you wish, to put them in order." Said the lady of the house to me afterward, "I never missed an article during the many months she remained in my house." The faculty of Acquisitiveness was the same in her head, but she was proud to prove that she could be trusted when confidence was placed in her. We must recognize human nature as we find it in the organization, if we wish to diminish vice and crime.

Passing from the organ of Acquisitiveness, we next come to *Secretiveness*, which gives fullness to the head directly over the top of the ear, reaching backward on each side. By the action of Secretiveness we have a desire to conceal and avoid exposures. It is well that we have a power to enable us to keep our feelings to ourselves, to husband our mental and physical resources, to restrain the full expression of our emotions. We need not tell falsehoods; at the same time it is not always necessary to amplify and unfold every subject under consideration.

Secretiveness with Aquisitiveness gives the desire to save, to take care of property; it also induces shyness. Sometimes a person will go into a corner and carefully take out of his pocket what he wishes to pay you; while another will thrust his hand into his pocket, bring out a handful of money, and pick from it the right change, regardless whether you see what he has or not. Some will carefully put away their money in a safe hiding-place, while others will leave it exposed to the gaze of every body, and tempt the weak without being aware of so doing. The former have large Secretiveness, the latter have the organ small, or deficient. The rabbit has no Acquisitiveness, and it does not provide for the future, while the squirrel will hoard nuts in the hole that he has dug for that purpose. He will do this slyly, jump about on the trees as though nothing had happened, but when he is hungry he will find his own food, snugly stowed away in the ground. The horse has Alimentiveness, but not Acquisitiveness.

When Secretiveness is not controlled by the moral sentiments, it will lead to lying and deception. Some have two faces, will act worse

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than they really are; while others, who are intriguing and double-tongued, will manage to conceal their true characters.

Parents should not differ with each other, but harmonize in their method of managing children. If the father believes in punishing or governing the child in one way, and the mother in an opposite, it would be better for one to govern it than both.

A gentleman came to be examined, and he was told that he had great Independence and large Combativeness, which gave him the disposition to act the manly part, and at the same time to resist any interference with his own way of doing things; whereupon he narrated the following anecdote of his early life. "He and his brother Charles went to school together. His brother was older than he, and had a pair of skates. When going home from school one night, Henry asked Charles to let him take his skates and use them while he was doing something else. Charles replied that he should not have them because he had not helped him out of a difficulty which he had during the day with another boy. Charles then put the skates away in their place. As soon as he had gone about his work, Henry, knowing where they were, closed his eyes, went to the spot, got the skates, and keeping his eyes closed, went up-stairs, found a barrel, turned it over, put the skates under it, and went off whistling. When Charles looked for his skates he could not find them, and charged Henry with stealing them. Henry replied in a bold manner, "I have not *seen* your skates since you brought them home from school." But Charles knew very well that Henry had some knowledge of them, and went to mother, telling her that "Henry had got them." Henry spoke boldly to the mother and said, "I told him that I had not seen them since he brought them home from school, and I say so still; I have not seen his skates." The father came home, and Charles told father that Henry had got his skates. The father being anxious to settle the matter at once, spoke rather positively to Henry, and insisted that he should tell where the skates were. Henry spoke equally bold and confident to the father, and said "that he had told Charles he had not seen his skates, he had told mother the same, and he now for a third time said that he had not seen them since they were brought from school." The father, thinking this answer sufficient, said no more. The subject came up next morning, and it appeared quite evident that Henry knew where the skates were. After breakfast the father told Henry to come to him. When he had done so, he took hold of his shoulders and began to shake him violently. After whipping him severely, he demanded that he should tell where the skates were. Henry looked up coolly and defiantly, saying, "I told Charles last night I had not seen the skates since he brought them home from school. I told mother the same, and likewise you. I repeat it again, I have not seen the skates since he brought them home from school." His father, not knowing what else to do or say, let the matter drop. But the mother, having thought it over during the day, said very kindly to Henry in the afternoon, "Henry, you have bothered Charles long enough; you ought to tell him where the skates are. You know well enough where they are and you should tell." Henry, overcome by her kindness, said very meekly, "I think he will find them up-stairs under the barrel." So the mother told Charles to look under the barrel up-stairs; Charles went to the place and found them there. Father was told that Henry had hid them under the barrel, and knew all the time where they were. So he punished him again for not telling where the skates were in the beginning. But said Henry to me, "Father might have shaken me till my teeth dropped out, and I would not have told him where they were when he spoke so positively; but when mother, in a kindly tone, said 'Henry, you have bothered Charles long enough, tell him where the things are,' I could not refrain telling where they were, for she called it right out of me."

Another little boy was about as shrewd as Henry, and managed to get many pennies from his parents; he would ask his mother for a penny when father was away, and then in the absence of the mother, would ask the father for one. Finally the parents found out his game, and they agreed between themselves that only one should give him pennies. It was left to the mother to give and to the father to deny. William, not knowing their plans, asked his father one day for a penny. The father said, "You must go to mother for the pennies, she will give you all that you are to have. It is an understanding between us that she is to give them to you." He went to mother for a penny, and she replied, "You shall have one when I think you need it, but not now." "But," said William with great emphasis, "I want one *now!*" The mother calmly spoke and said "You can not have one to-day." William replied, "I want it, I must have it; and if you do not give it to me *now*, I will go and throw myself out of the window and break my neck." Suiting the action to the word, he went to the

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window, thinking that mother would really give him a penny rather than have his neck broken. But she remained firm, and in order to bring her to terms he put himself out of the window in a hanging position and threatened to drop. The mother coolly looked at him and said, "William, you may drop and break your little neck if you like, but I shall not give you a penny till I get ready." He seeing that she was cool and firm, and that no penny was to be given to him, pulled himself into the house, went out of doors, and did not ask her for a penny for a long time after that.

Cultivate this faculty of Secretiveness in your children, and direct it into legitimate channels. If it is naturally small, help them to conceal their feelings, to control their impulses, to save property for future wants. If too large, curb and restrain it.

A little girl, constitutionally honest, became habitually addicted to lying. Her mother would shake a rod over her head, and say, "Don't you tell me a lie, you know the consequences of doing so!" The child, almost frightened out of its senses, would begin to speak, when the mother would say, "Take care, I'm watching you! there—you have not spoken the truth; now I have caught you!" Often the child was so confused that she would stammer, forget the circumstances that had transpired, and equivocate without intending it.

Some children are so frightened under such treatment that they do not know whether they are telling a lie or not. But, take away all fear and restraint. Say in a calm and moderate way, that they may have time to think, and that if they are not ready to give you information then, they can come to you the next day. Children will, in a majority of cases, feel uneasy till they have unburdened their minds, and will be much more likely to do so than if they were threatened with punishment in case of failure.

Make no promises to your children that you do not intend to fulfill; be truthful with them; do not say that you have put an article that they desired into the fire, when they can easily find it in the next room. Do not tell them that you will throw them out of the window, when you would not think of doing so. Children readily perceive who speak the truth or who are in the habit of prevaricating, and know by experience what threats to heed.

Parents should encourage general frankness and candor, and command the respect of their children by strictly adhering to truth in all their dealings with them.

Sometimes too great strictness on the part of parents leads to cunning and duplicity in the children. It requires great judgment to know the golden mean.

The next organ of which I shall speak is *Cautiousness*. It is located over Secretiveness and is the side organ of the head. This organ exercises a restraining influence on both body and mind. It checks the secretions of the body, and those persons who have it large, can not resist disease as well as others who have it smaller in development. They can not get rid of physical impediments as easily, for the blood does not circulate as freely. If they take cold, it lasts longer. There is a restraint upon the entire system, and there is a greater danger of internal congestion and derangement of the heart. When Cautiousness is small, the circulation is free, the person seldom faints, is not often frightened, and when ill, speedily recovers.

This organ affects the mind. It will not allow the young orator to express his sentiments freely. He repeats and stammers, for fear that he has not said the right thing at the right time, and in the right place. If Veneration is large, when Combativeness, Destructiveness and Self-Esteem are small, large Cautiousness will make the person hesitate and forget half he wishes to say. Unless he overcome its restraining influences, he will never succeed as a public speaker, however gifted and talented he may be.

Presence of mind is one of the great causes of success in life. Those who have not self-control are in danger at almost every step they take. Many accidents occur from no other cause than simply the want of coolness and calmness.

In a certain school in New York city there were four stories, each accommodating about one hundred scholars. The highest story was allotted to the little children, who were under the care of a nervous woman who had large Cautiousness and rather small Causalty. One day, while a class of little girls were reciting their lessons to her, another teacher yawned, and being subject to paralysis, could not shut her mouth. This terrified the scholars, and it was in vain that the teacher attempted to restrain them, for she had never thought of doing so before, and they began to scream and rush for the door. At the same time an alarm of fire was given outside of the building. The children thought that the school-house was on fire, and the panic became so great that they ran down the stairs pell-mell, in the wildest confusion. The children on the other stories hearing the noise above, also rushed into the

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hall, and there were 400 children endeavoring to get out; some fell over the banisters, which gave way, breaking their bones; others were choked and crushed to death in their frantic efforts for release. Mothers came to look over that mass of bruised children for those who had left them in health that morning. Thirty children were killed, and many more considerably injured. This accident would not have occurred if the teacher had had presence of mind sufficient to control her scholars. There was another large school in an adjoining city, Brooklyn. The master knew how to call into exercise the faculties of the children. He said to them one day, "Boys, suppose that this schoolhouse should be on fire, what would you do?"

One of the boys exclaimed, "I'd run; you would not catch me staying here if the building was on fire."

"But," the teacher replied, "suppose you should all run, you would soon block up the stairs, tumble over each other, and perhaps some of you would be crushed and killed." The boys readily perceived the force of this argument.

"Let me tell you what to do if there should ever be a fire here. If you remember my advice you can all get out of the building without harm. When you hear the alarm of fire, take your books on your arms, put on your caps, step out into the hall, one row at a time in good order, and 'forward march' will be your signal, till the building is entirely cleared." In the course of the winter, the boys had an opportunity to put this advice into practice, for a stovepipe that passed through the wall became overheated and set fire to the timbers, when there was in reality a cry of "Fire!"

"Boys, remember what I have told you, put your books on to your arms, and step into the floor in order." Before the fire had advanced, the boys were outside, and no confusion ensued.

Parents, present as high a motive to your children for a guide as possible. The young man who becomes a Christian because he feels that God is his best friend, is much more faithful in his life and actions than one who repents through the motive of fear to avoid future punishment. So the child who obeys its mother because he loves and desires to please her, is much more sincere than one who preserves an outward obedience, while the heart is cold and rebellious.

There are two other organs which will be described at the present time, viz. *Combativeness* and *Destructiveness*. They are located in the base of the brain directly over and behind the ear. Destructiveness gives width to the head from ear to ear, while Combativeness gives breadth at the back of the top of the ear. These organs produce energy and force of character. As the steam to the engine, so are these faculties an aid to man, in every department of life. The engine may be good, but if the engineer does not understand his business, destruction is inevitable.

If children are educated so that they can regulate the propelling element, on which depends all their success in life, it will be of more value to them than a thorough knowledge of Latin and Greek without such instruction. Some regret that their children have so much life and animation, because it makes them mischievous and difficult to curb while young; but, if only rightly guided, such children make their mark in life's history; while the dull, moping, quiet child sits in the corner and becomes the tame man who is known only as one to fill out the census. The restless, uneasy child who tears his clothes and breaks the furniture, should have some work to do, by which he can give vent to his executive powers.

"But I can not find any thing for my child to do!" cries a despairing mother, whose head aches because her boy is so noisy from morning till night.

"It can do mischief; surely, then, you can invent something useful to employ its faculties!"

Some parents attempt to beat spirit and force of character out of a boy. You might as well say to the wind, "Cease blowing." A father asked me one day, "Shall I not break the will of my stubborn child?"

"No," I replied; "how could you expect your child to have a meek, quiet spirit, when you and your wife have Firmness so largely developed? The child came by it honestly. You should guide it, and by-and-by it will give him a decision of character that will be of great service."

The executive nature of children should have gratification even at some expense. Buy tools, a hammer, a little saw, pencils and paints, and give them something to do. Allow them to paint the pictures in the old books, to make flowers out of paper, to try experiments with soap-bubbles, and do not tell every body who visits you "that your children are so naughty that you have no peace and comfort." Let them feel that they are of service. Speak kindly, act judiciously, and you will not so often be troubled by their disobedience.

I visited a school one day, when the teacher requested me to examine some of his children,

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point out their peculiar dispositions; especially to advise him how to manage one boy, the most mischievous in the school. I acceded to his proposition.

"Bob," said he to a rough-looking youth, "come here." Bob came.

"In the first place, you ought not to call him by a nickname, for that only lowers him in his own estimation," I replied. I put my hand on to his head and said, "This lad has a broad, heavy base to the brain; the executive part is strong; he has large Combativeness, Destructiveness, and the perceptive intellect. His heart is large, and there is a great flow of blood to the head, especially to the base of the brain. The restraining qualities of mind are not strong, while Firmness, Self-Esteem, Combativeness, and Destructiveness are large. He is bold, restless, uneasy, full of mischief after he has been in school for a little while; will tear his books, throw bits of paper at the other boys, very likely put bent pins on the seat where a companion is to sit, and is the life of that part of the room where he is located."

"That is very correct," said the teacher; "tell me what I must do with him. I whip him, but he is just as bad as ever."

"You see then, that whipping is not what he needs. You may as well give him exercise in a more pleasant way. Send word to his father to let him chop wood, or do something in the morning before he comes to school. This will last him for half an hour after school commences. When you see that he is becoming uneasy, send him to the post-office with a letter, tell him to run there as fast as he can. Then, when he begins again his mischief, send him for coal, wood, or water, and thus he will work off his energies, and will not be so much of a torment to you." The teacher tried the experiment, and it succeeded finely. The boy required more liberty than the close confinement of a school-room.

My firm opinion is, that if every rod was banished from the school-room the children would be better trained; but there is an art in teaching, and it is not every person who is fitted for this important vocation. There was a terribly malicious man in a State's prison in Kentucky. In order to turn his energy to account he was appointed an overseer over the other prisoners. When thus occupied, he not only was more docile himself, but checked the frequent disturbances which had arisen there nearly every day.

The best way to manage a child is to teach it to govern itself, as soon as possible. Many recognize this principle, but do not know how to proceed, and thus actually thwart their own plans.

I told the mother of a naughty boy, who came to me for advice, that instead of beating him on the head and pushing him about, she should first control her own temper before she attempted to enforce obedience in her son.

"But he gets into an awful passion—throws himself on to the floor, kicks every body who comes near; then I have to take the stick to him, and we have a scene."

I said to her, "The next time that John gets into a passion, keep cool yourself, get a pitcher of water and pour it on to his head near Combativeness and Destructiveness. If you are excited yourself, wet your own head first. By laving the head, it will check circulation and restore the balance of mind much sooner than the application of the rod."

Another mother desired information as to what she should do with her only child, who had a strong will and a broad base to the brain. I said, "Do not provoke his violent temper or will, but request him to do what you wish instead of giving him commands; ask him if he loves his mother, knows how much she loves him, and how anxious she is for her son to be good, and if he wishes to please her; and then say, 'Will you go up-stairs and bring me my work-box?'"

The mother told me that a few nights previous she had company, and when the clock struck nine, she said, "Charley, it is time for bed. Come and kiss me good night." Charley remained at his play, and she spoke again a little more sternly, "Come here, Charley, and kiss me good night;" but he did not stir. "I shall have to take a stick to you if you do not obey me." Finally she carried him out of the room and whipped him, but he would not kiss her. She continued the punishment till she was afraid to whip him any longer. He conquered his mother, and it was many days before he kissed her. A father said to his little child, "Susan, if you are naughty I can not kiss you when I leave the house in the morning;" and he started to go away. But Susan ran to him, begged his forgiveness, and said that she would be a good girl. "Well, I have no objection to kiss good girls;" and she returned home happy with the idea that her father was pleased. Sometimes the refusal of a kiss on the part of the parent is more to be dreaded than corporeal punishment. A kiss is always better than a blow. That obedience which results from superior strength is not as permanent as from love. That family which is bound by the cords of love is a permanent institution.

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The Dawn-Light of the Coming Year.

BY J. B. F. WALKER, M. D.

Inscribed to James Smith, Jr., of "Spring Bank," Hawes, Yorkshire, England.

SINCE sickness, woe, and death, all hopes do blast,
Through sometime disregard of law,
Men stumble blind 'mid ruins of the past,
Catching at mythologic-straw,
Still hoping in Apollo's bastard heir*—
Who brought the wrath of heaven down—
To find an answer to their pray'r,
And all their days with health to crown.

The dawn-light of the coming year I caught,
To read the epitaphs of Time,
The head-stones of the ages past I sought,
Perusing well each chisel'd line;
No Grecian sphinx the marble proved to be,
With riddles which might not be read—
The mystery of life was plain to me,
Although surrounded by the dead.

Oh, spirit of the upright and the pure,
In holy morn of this New Year,
Proclaim to man for sin there is no cure,
Save in the penitential tear!
The body and the soul walk hand in hand,
Sweet Nature's laws are over each;
The way is simple to the Promised Land—
The goddess Hygeia loves to teach!

Alcohol among the Doctors.

BY J. B. SNODGRASS, M. D.

FROM the moment the first sensation of pain was felt by mankind, the healing art may, without doubt, claim to date its existence, since that pain must, in the nature of things, have created a desire for relief by whatever appliance or agent is within reach; and if ever necessity became the mother of invention, it must have been in such an emergency as that.

This view warrants us in claiming a higher antiquity for medicine than any other art, crude and undefined in its theories, and decidedly chaotic in its facts though it doubtless was at first. It has always been highly valued as an art, while its sacredness has been next to that of religion in the estimation of the human race. The place which the "medicine man" holds in the regards of the aborigines of our own continent is the same that he has ever held in those of the nomadic or primitive and uncultured races of men in all countries and all times. That place is far above the one allotted to even the chief of the tribe or the most renowned of its warriors or braves. Mighty as may be the prowess, or astounding the exploits of the latter classes, they are still regarded as only naturally endowed mortals; but the former is more than this. He is considered as supernatural in his gifts, and therefore allied to the divine and the eternal, whatever their conception of these qualities may be as to embodiment, or form of expression, or name.

Even among more civilized peoples, until a comparatively late period, the professions of the priest and the physician were united in the same person—thus showing a disposition to regard medicine as a sacred art, and to protect it, accordingly, from the touch of profane hands.

During the early Christian epochs, the victim of disease turned to the monastery for medical aid as confidently as for spiritual. There he expected as certainly to find potions as prayers, as the one class of agents may have been needed for the body and the other for the soul. And even at the present day, the family physician finds himself beside the favorite pastor in the hearts of the people. As obstetrician or "midwife," the circumstances of his presence are peculiarly endearing, serving, as the same physician is not unfrequently found doing, at both the birth and the death of the same person—perhaps performing the offices of the spiritual adviser at the death-bed of his patient.

Compare the practical bearings of the science of medicine with that of the law, for another illustration of the importance of the former. The lawyer has chiefly to do with questions of property; the physician has to do with those of life. An attorney may send a substitute into court in ordinary cases, without much of risk to his case, or of dissatisfaction to his client. If damage results, it is mostly to property. A substitute for the family doctor is seldom accepted with satisfaction by his patient. While this fact indicates his personal importance, it at the same time should teach him the necessity of his avoiding whatever might be calculated to impair his intellectual powers, or render their employment in his profession less efficient or valuable. Of all men the physician should have an intellect, clear in its capacity to perceive, and prompt in its execution of whatever duty may summon it to do.

I trust I have said enough to prepare the minds of my readers to coincide with me in the propositions which I am about to enunciate—that of all classes of men, medical practitioners should be the last to indulge in the use of intoxicating beverages. Of all men he is least excusable for being cheated by the allurements of

*Æsculapius, the inventor of drug medicines.

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alcohol, no matter in how inviting a form presented. And this I say in full view of the fact that, from its commencement to its close, the career of the physician is calculated to expose him to the temptations of the social bowl. While a student, he is generally away from his friends and the restraints of his home. With most of our medical schools located in populous cities, in order of availing of the facilities furnished by them for dissection and chemical studies, it is not surprising to find him sorely tempted to indulge to his sure ruin. The first entrance into the dissecting-room is trying in the extreme to young men of impressible temperament, not only because of the sight of the putrified "subject" strewn around, despoiled of limbs and internal organs which meet the eye here and there, but also because of the stench, foul atmosphere which meets him at his entrance to the novel scene. For this ordeal—to say nothing of graveyard adventures in search of cadavers—alcoholic stimulants are far too conveniently availed of for laying the foundation for the self-destroying habit of the future drunkard. And the student is lucky if he has not before him, day after day, in the professors' chairs, as the writer of this had when a student, examples of intoxication but too well calculated to break down his own powers of resistance in times of temptation, by furnishing a too readily accepted example of intemperance.

But in after life, when at length engaged in the practice for which he has been preparing himself, the physician meets temptation at every turn. Especially is this the case in the practice of midwifery. The doctor is almost sure to be called upon to drink the health of the little stranger—particularly if it happens to be a "first-born." Among his German patrons he may expect to be importuned with special emphasis and persistence on such occasions, to partake of the marvelously "innocent lager beer," that beverage which, to hear our Teutonic friends sing its praises, one would deem far more free from harm than the fabled nectar of the gods itself!

And yet, much as medical practitioners are tempted to partake of alcoholic beverages, whether to meet the requirements of a perverted social custom, or to spur up the powers of his body and mind, so apt to be exhausted by his unceasing toils and privations, of all men they are least excusable for such a habit. The physician is expected to be familiar with the constituents as well as the functions of the human frame—what it needs and what it does not need for its healthy sustenance—what is noxious and what innoxious to its harmonious development or its continued well-being. He knows, or ought to know, that the most searching analysis has failed to find one drop of alcohol in the normal body, neither in the solids or the fluids. He finds a large number of mineral substances, such as lime and phosphorus in the bones, salt and iron in the blood, but, I repeat, he finds no alcohol there. Finding the above-named materials at birth in the human body, he has a warrant for putting them there at proper times and in proper quantities, as constituents of his food and drink. And as this rule should work both ways, finding no alcohol in the natural body, he has no warrant for putting it there.

If then alcoholic liquors have no place in the human body, and in fact, as a product of premature death, alcohol has no place anywhere in nature, the physician is left without excuse for using them himself as beverages; and what he knows to be contraband of nature from personal experience, he can not without crime against her laws, recommend for use by another. And yet, seldom as we get the whole truth as to the unfavorable side of character, medical biography is not without its warnings on this subject. As early as the beginning of the sixteenth century, we find no less a light of the profession than the truly learned Paracelsus himself, extinguished in an early and a dishonored grave by the intoxicating bowl. As an alchemist, he was distinguished above his contemporaries. But although he claimed to have discovered the true philosopher's stone, whose magic touch was to turn all baser metals into gold, he failed to find the touchstone of truth on this subject. Hence, morally speaking, his gold was all turned to worse than dross. Professing to have also discovered the "elixir of life," which discovery he said he owed to the Devil and not to God, he proclaimed that he had that which was sure to convert all men into Methuselahs; and yet it failed to carry him beyond the prime of manhood, as reckoned at even our day, and he fell a victim to the elixir of death, as alcohol might be not inaptly called, in what should have been the very prime of his manhood.

But coming down to our own country and nearer our own day, I have the painful citation to make, that one of the greatest of American physicians of the last century died a miserably bloated vagrant, as the result of intemperance. I allude to Dr. James Hurlbut of Connecticut. It is said to have been a common practice with him, so long as his means would sustain him in it, to drink a quart bottle of rum every day, besides eating large quantities of opium. At the

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enormous price the latter narcotic commanded at that day of less and dearer money, it took all his income to pay for it, and so his patrons were expected to furnish his daily ration of rum. Nor would he make a prescription for any one able to buy it, until his coveted beverage was placed before him! As was to have been anticipated, great as had been his professional distinction in his soberer days, charity was left to furnish a grave wherein to hide his bloated carcass, and not even an unlettered stone was set up to mark its resting place. In the language of the great dramatist, there were none so poor as to do him that reverence.

But I need not depend solely on the past for most painful examples of drunkenness in the profession. Sadly enough I recall the memory of a most talented young practitioner of this city, the cause of whose premature death was put down in the bills of mortality under that so often lying head, "brain fever." As if in imitation of his Connecticut prototype, it was his habit, whenever there was the slightest excuse for it, to call for a bottle of brandy.

The favorite "medicine" having been procured, of course he must test its quality. This he would do, exclaiming, as if a mere passing jest were his sole motive, "What's good for the patient is good for the doctor." Being an Allopath, his doses were never suspected of a tendency toward Homœopathic diminution—at least those taken by himself.

Many and curious are the resorts of such as have the drunkard's inexorable appetite and quenchless desire, to obtain their accustomed supply. In the case of the unfortunate young professional brother just alluded to, at least the credit of tact is due for procuring "the very best brandy"—for such only was he careful to prescribe—for his own perverted use at the expense of his patients.

The evil influence of the prescriptions of such a physician as this, backed as we have seen by his example, may be said to be incalculable. Many a poor drunkard to-day goes reeling toward a dishonored grave, because of a single prescription of alcoholic liquor by some rum-loving doctor! Nor have even the opposite sex escaped the malign consequences of such prescriptions. There occurs to me as I write, the history of several females who have been made drunkards by their physicians, through uncalled-for prescriptions of intoxicating liquors as medicines. I will mention only one of them. She was the wife of a man who was himself a liquor dealer. With the poison always accessible, she had contracted the habit of a confirmed drunkard.

Neglect of domestic duties of course followed in this poor woman's case. For this her husband, forgetting not only the origin of her habit, but also that he kept the tempter within her reach, had beaten her severely. Becoming alarmed by the impression that he had caused fatal internal injuries, he called me in to obtain my opinion on that point. When I questioned her about her habits, she owned that she had long been in the habit of intoxication, and that it had grown upon her even at the risk of frequent beatings, which had failed to deter her from thus continuing the beastly and besotting indulgence of the confirmed drunkard. But she threw the blame of it all upon a former family physician, who had prescribed ale to increase the flow of the mother's milk when nursing her first child.

I can not close this article without giving the testimony of my personal experience on the medical employment of alcoholic liquors. Upward of thirty years have passed since I commenced to practice, nearly two-thirds of it while classed as an Allopath, and the residue as a Homœopath. In all this time, nearly two-thirds of which has been passed in the South, where the use of intoxicating liquors is even more general than here in the North, I have not prescribed a quart of alcoholic stimulants.

In order to render my testimony the more effective, I will disregard all hesitancy about speaking of one's own success—statements of scientific experience being in fact necessarily egotistical in many cases, and state my confident belief that I have lost as few patients in proportion to the number treated, as the wine-and brandy prescribers (to put it modestly), and yet I have encountered my full share of those types of disease which they insist, and as is too generally supposed, can be successfully combatted only with the aid of alcoholic stimulants. I have persistently put my face against the use of these agents—only now and then succumbing to pressure in medical councils, or from even more persistence with wrongly educated lay-friends of my patients. Bearing in mind that such agents have no power to add vital strength to the organism, I have long since come to believe them to be deceptive, because only necessitating the divertion of existant vital forces from one point to another, often to the interruption of recuperative processes wisely set up in the system, which, if left to their own law of cure, would have saved the *seemingly* benefited victim of disease more facilely without than with their fictitious aid of alcoholic stimulation.

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Health Hints for the Winter.

BY A. L. WOOD, M. D.

As winter approaches, great care should be taken to suitably clothe and protect the body from cold. The golden rule to be here observed, is to wear a sufficient amount of clothing properly distributed, to keep all parts of the body of a uniform, comfortable temperature, and no more. Some persons require much more clothing than others, therefore each one must regulate the amount for himself, being careful not to wear more than is necessary, for, beyond that amount which conduces to comfort, it is injurious. It unnecessarily burdens the body, and by overheating, weakens the skin, and renders the person easily susceptible to colds.

The proper distribution of clothing is a subject of paramount importance, and one that receives very little attention, especially among ladies and children. Those portions of the body which are nearest the center of circulation, and consequently need the least protection, receive the most, while the extremities, which need the most, receive the least.

The fashionable and usual manner of dressing children during cold weather, especially in cities, is worse than foolish—it is inhuman, and causes the death of thousands. While their bodies are usually warmly clad, their arms, legs and feet, which need the most protection, are left almost or entirely unprotected. The result is, the blood in the limbs becomes chilled, and is forced back upon the internal organs, causing congestions, inflammations and death.

A distinguished Parisian physician declared, "I believe that during the twenty-six years I have practised my profession in this city, twenty thousand children have been borne to the cemeteries, a sacrifice to the absurd custom of naked arms."

A few days since, while in Central Park, I paid particular attention to the dress of the young children who were walking about and playing there by hundreds. Although the day was uncomfortably cold, there were these delicate children with an abundant supply of clothing about their bodies, and fully one-half of them with a portion of their legs from the knees to the ancles, entirely bare, and most of the others had but a thin pair of cotton stockings on their legs. Parents, what can you expect will be the fate of your little ones, if you treat them in this cruel manner? Can you wonder if they take cold, have the croup or pneumonia and die? If you value the health and lives of your children, see to it that their arms, legs and feet are effectually protected from cold and dampness. The same remarks, slightly modified, will apply to ladies, who dress their own limbs but little better than they do their children's.

Be exceedingly careful, especially when away, about exposing yourself to a draught of cold air long enough to become chilly. If you are exposed to cold air while insufficiently clothed, exercise briskly to keep warm.

If you get any portion of your clothing wet or damp, change it as soon as possible. Damp clothing chills the surface of the body very rapidly, the heat being carried away by evaporation.

Before exposing yourself to severe cold, get your system warmed up, either by exercise or before a fire. The body will resist cold much better when very warm, if not fatigued or perspiring, than when cool.

When going out into the cold, guard against colds, sore throats and inflammation of the lungs, by keeping the mouth closed and breathing through the nostrils.

A hand or towel bath daily, followed by vigorous friction of the surface, is an important means of preserving health, and of keeping the skin in a healthy, cold-defying condition.

Baths should never be taken in a very cold room. Always, if possible, use cool or cold water, and bathe where the air is warm, being careful to secure a good reaction. I have known persons to be seriously, and even fatally injured by bathing in cold water in a very cold room. Uncomfortable cold bathing exhausts vitality very fast, even when a good reaction is obtained, but cold bathing without reaction is suicidal.

Secure good ventilation in your sleeping rooms, whether the weather be warm or cold. Many persons who leave their bed-room windows open at night during the summer, close them when cold weather comes, for fear of taking cold. Pure air is as necessary in winter as in summer, and more colds are taken by sleeping in close, unventilated rooms, than by having the windows open. Go, in the early morning, from the fresh air outside, into an ordinary, close bed-room which has been occupied during the night, and if the smell does not convince you of the necessity of ventilation, nothing will.

Thousands of people suffer from cold feet, especially during the night, and many lose their rest from that cause alone. To prevent this, warm the feet thoroughly before retiring, and then, if they will not keep warm all night with plenty of clothing over them, place a hot free-stone, or a bottle or rubber bag filled with hot water in the foot of the bed.

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The Proper Management of Very Young Children.

BY MRS. O. F. M'CUNE, M. D.

A young baby should be dressed with only clothes enough to keep it warm; usually its neck and arms are bare, and very long clothes are pinned about its little body, tiring it by their weight and by being lifted by its clothes. The skirt bands should be narrow, and suspended from its shoulders by straps, sewed instead of pinned, about its body, loosely, so as to give perfect freedom. Its arms should have at least two thicknesses on if the weather is cold, and its dress should be close, save about the neck.

Wrap it in warm flannel, and put it in a warm, quiet place to sleep; cover it warmly, all but its face; be sure to give it fresh air when it sleeps. The fashion of covering babies' faces is a pernicious one; nurses seem to think they have never breathed until born, and so conclude they can do without air; so the little things are smothered in blankets until we wonder how they live. The child should be kept in a quiet place, so that it may sleep most of the time. Don't feed it in at least twelve hours after birth—some say twenty-four. I've never seen any good result in feeding babies very soon after birth. After some years' experience, I conclude to wait until the mother's milk comes, unless it is more than twenty-four hours. The child will cry, but we must remember all healthy children cry more or less. If you think it must be fed, it becomes a serious question what to feed it with. I should take a few drops of new milk and pour on ten drops of warm water; give it two teaspoonfulls of it once in two hours; remember a new-born child's stomach is about as large as a thimble and is easily overfilled—besides, it is unaccustomed to food of any kind.

As soon as the milk comes, then nurse baby once in three hours, and its food will require no more thought.

Feed it regularly, no matter if it does cry; it don't know what else to do, and restless children will cry a good deal, do what you will. If you persist in feeding it regularly, it will soon want to eat only when the hour arrives; you also save it from colic and its attendant evils by regularity.

When the child sleeps, put it in a quiet, comfortable place, with a dim light, and avoid awakening it, if possible; allowing it to be disturbed when sleeping not only makes it nervous and fretful, but gets it into irregular habits of sleeping which are very troublesome, disturbing digestion and every function of its body.

If the mother nurses her child—which all mothers should, unless incapable—once in three hours is often enough; and after a little let it sleep six hours during the night if it will. The next best is a wet nurse, provided her habits are good. Bad food, stimulating drinks, etc., affect the milk sooner than any secretion, and so the child often suffers from causes which scarcely affect the mother.

If the child must be fed from a bottle, it should have not more than one-sixth or one-eighth milk, the rest being water of blood-heat temperature; after the child is six weeks old, give it one-fourth milk; and when three or four months old, give it one-half milk; when six or eight months old the milk may be increased, if it is a well, strong child.

Milk does not agree with some children. I take unbolted wheat meal, pour on cold water, stir it well, let it stand until settled, pour off the water, boil it with a very little milk, or without any, and give it as you would the milk. Oat meal may be used in the same way. When ten months old, roll a Graham cracker, and put some in its food to make it richer.

BATHING.

After the child is twenty-four hours old, or thereabout, it should be carefully washed in water heated to 98 degrees, with a soft cloth, and carefully wiped, avoiding a chill to the surface. As the days go by use the water cooler, but never colder than 90 degrees; when it is six weeks old, if strong, have a basin ready with water at 90 or 92 degrees, have the room warm, put baby in, wash it quickly, take it out, wrap it in a warm towel to dry it, dress it properly, and it will be happy.

If the bowels do not move each day, give it enemas of water at 95 degrees at a regular hour; this will induce regularity. If it has colic, put its feet in warm water, and put a dry, hot flannel over the abdomen; if this does not relieve it, give a warm enema, and then quietly soothe it to sleep.

Don't, I beg of you, as you value its comfort, *don't dose* it; all nurses know a child cries after repeated doses, and it is fair to presume it would stop as soon with our remedy. Don't toss it about too much; many a child cries from weariness, and the nurse trots or tosses it, or confuses its little brain with all sorts of sounds. Children are miniature men and women and are affected similarly.

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Over-feeding is one great cause of discomfort —remember this when you are tempted to feed it more to stop its cries.

Mothers, use your dear children to fresh air; if they are warmly clothed, if they avoid drafts they will not suffer; have their room warm and well ventilated day and night; they will thus be free from colds and all other maladies.

Mothers, dress your children for their health and comfort, no matter what fashion dictates. Its extremities should always be kept warm. In order to do this its arms must be covered with several thicknesses; if the weather is cold, you can find ample scope for inventive genius in knitted sacks, undersleeves, and numberless things; you can devise ways enough if you are really determined to dress it hygienically.

TEETHING.

There is more or less disturbance of the digestive organs and bowels during teething. The child should be fed more carefully, if possible, than ordinarily. If it is feverish at night, take a soft piece of cloth of two thicknesses, wide enough to reach from its arms to its thighs, and long enough to reach around it; wet it in tepid or quite cool water, put it around the child and cover it with soft flannel a little longer than the cloth; if this dries during the night, re-wet it. Should the child be really sick, give it an enema of tepid water and also a bath; then apply the compress, and, in nineteen cases in twenty, it will be well in the morning, and not harmed by doses.

If we would remember that pain and sickness are always the result of an effort on the part of the system to rid itself of some offending matters, and only wants gentle assistance, we should hesitate in using harsh measures, particularly with children, for their systems are so active that, if let alone, they will soon recover from the numerous ills to which they are subject.

The excitement produced by the effort of the system in teething, is much aggravated by any derangement in the digestive organs. It is even more important now that they should be carefully and regularly fed, that they should sleep as much as possible; give them fresh air and outdoor exercise. If the bowels are too loose don't give astringents, not even fine flour; keep them quiet, give them less to eat, and a daily bath; put the girdle on them at night; have patience, wait, and they will soon be better. Try this once thoroughly, and you will "throw physic to the dogs," as well as all other drugs of whatever nature.

How to Bathe—No. III.

BY E. P. MILLER, M. D.

THE beneficial effects to be derived from bathing depends very much upon the temperature of the bath, and the manner in which it is given; and those physicians who exercise the most discretion in adapting these to the various temperaments and conditions of their patients, will generally be most successful in their practice.

A bath of a given temperature, that would be entirely appropriate and beneficial to a patient of one temperament afflicted with a certain disease, might be of little use, if not absolutely injurious to a patient of a different temperament, though suffering from a similar disease.

Some of the early German practitioners have brought the hydropathic practice into lasting disrepute by their indiscriminate use of the cold bath; and on this account we find many persons who have such a horror of the "cold water cure," that they will hardly tolerate the use of water of any temperature even for purposes of cleanliness.

We shall classify baths according to their temperatures, into cold, cool, tepid, warm, and hot; besides these we have refrigerations, fomentations, vapor and hot-air baths.

In this classification of baths we are not governed in the least by the sensations of the bather, in assigning the temperature by which each kind is known, but the temperature of each class is regulated by the degrees of heat as indicated by the thermometer.

The nervous sensibilities of people differ so widely that a bath which would be tepid to one would be cold to another, while it might be warm to a third; again, the sensations of the same person vary so much in different conditions as produced by disease, by exercise, by the temperature of the surrounding atmosphere, etc., that a tepid bath might feel warm at one time and cool at another.

It is probably well known to most people that the colder the water the lower the temperature, and the lower the mercury will sink in the thermometer; while on the contrary, the hotter the bath, the higher the temperature and the higher the mercury will rise in the thermometer.

I have known patients to get confused on this point, and think that the higher the temperature of a bath the colder it was.

We call a bath cold when the water is of the temperature commonly found in wells, springs, cisterns, rivers and lakes, which, when measured by a thermometer, will be found below 70 degrees, varying from that to 32 degrees or

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freezing point. A cool bath ranges in temperature from 70 to 80 degrees; a tepid bath from 80 to 92 degrees; a warm bath from 92 to 98 degrees; and a hot bath from 98 to 112 or 115 degrees, or as hot as the water can be borne.

It is very rare that a person will bear a bath above 110 degrees, although the sensibilities of people are so different, that some will bear 115 degrees as easily as others will 100 degrees; there are very few who will bear a temperature of water above 112 degrees.

The vapor bath can be borne as high as 120 degrees, and is usually given from 105 to 115; it can not be endured easily above 120 degrees.

The hot-air bath is easily borne at temperatures varying from 120 to 240 degrees.

The hot-air bath is familiarly known on the Eastern hemisphere as the Turkish Bath, where also the vapor bath is designated the Russian Bath. A person will enjoy a Turkish Bath at 150 degrees with pleasanter sensations than he will a Russian at 110 degrees.

Fomentations are usually local applications of heat by the use of flannel cloths wrung from hot water, and kept hot by frequently changing, or by hot bottles, jugs, bricks, or other means by which a high degree of heat can be applied to any particular part of the body. This is one of the most useful of the hygienic applications—a more explicit description of the methods used and the conditions to which it is applicable will be given in subsequent numbers of this series of articles.

Refrigerations are applications of ice, or of ice and salt, or of some other freezing mixture to any part of the body.

When we speak of the administration of cold, cool, tepid, warm or hot baths for any purpose, we shall refer to them as indicated by the temperatures above described, the minimum or maximum degree of each must be approached as the condition of the patient would indicate.

A word or two in regard to the temperature of the room in which baths are to be taken. As a general rule an invalid should not bathe in a room where the temperature is below 70 degrees, and for most persons it would be better still to have the room as warm as 80 or 85 degrees, provided there is good ventilation. Persons in vigorous health may enjoy a bath in a much colder room than the above, but those with moderate external circulation would be likely to be injured by so doing.

THE HIP OR SITZ-BATH.

Although this is usually regarded as a local bath, yet in the absence of conveniences for giving a full bath, it may be used for producing all the beneficial effects of a general bath.

This bath may be given in a common wash-tub, although it is best given in a tub made for the purpose, with the bottom raised three inches from the floor, and the back extending six or eight inches above the front, sloping backward at the sides so as to afford a support to the patient's arms and back while taking the bath.

The tub should be deep enough to allow the water to cover the hips and a good portion of the abdomen. Usually it requires about three or four gallons of water, and the temperature at which it is to be given depends entirely upon the condition of the bather and the effect you desire to produce.

It may be given cold, cool, tepid, warm or hot. The cold and hot being the extremes, are of course much the most powerful, and require greater care in their application. It is not absolutely necessary to disrobe entirely to take this bath, as the clothes may be carefully rolled up and made fast under the arms, so as not to wet them. This will not apply to ladies, however, so long as the present style of dress is worn.

It is always best to throw a blanket around the bather while taking this bath, and to rub the hips and abdomen thoroughly while in it.

The hip-bath, when applied cool or cold for a short time and frequently repeated, is considered a powerful tonic, but when extended to twenty or thirty minutes, whether at a similar temperature or warmer, it becomes a strong derivative or sedative.

The hip or sitz-bath, at the various temperatures at which it may be applied, is one of the most valuable forms of bath we have in our practice. For diseases of the bowels and pelvic viscera it is invaluable. For constipation, for diarrhea and dysentery; for piles, and for diseases of the kidneys, bladder and genital organs; for chronic affections of the stomach, liver and spleen, it is one of the most effectual applications that can be used in home treatment. It is very useful, also, in diseases of the brain, and in almost all forms of fever and local inflammation. It is indispensable for successfully treating a large class of female weaknesses.

I have had several cases of fever, in which very marked relief of the head and also of the excessive irritation of the stomach and bowels has been obtained by the hip-bath.

For relieving the severe paroxysms of pain in the passing of gall-stones, for gravel, for severe congestion of the liver or kidneys, and for pain in the bladder, the hip-bath, either hot or cold, will be found of great service.

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When you wish to give a general bath, the bather is to sit in the tub, with the water at the required temperature, and an attendant is to wash the back, chest and upper extremities with a towel or sponge; wipe them dry; then, while standing in the tub, have the lower extremities treated in the same manner.

Long cold hip-baths should not be taken except when advised by a physician, as they may give rise to congestion of the organs in the pelvis.

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

If the reader has faithfully followed the directions of last month, he is now ready to receive and profit by further directions.

First, let me say, that while following the directions now about to be given, the exercises already recommended should be repeated daily; and, beside the tranquil breathing there recommended, as soon as the lungs become strong enough, so that it can be done with safety and comfort, the air should be expelled suddenly through the open throat and mouth, increasing the suddenness, until it is expelled with nearly the abruptness of a cough.

The most common faults in reading and speaking, probably, are those of not properly filling the lungs, and not keeping the chest raised and pressed forward, which not only cause poor, weak voices, but irritate the lungs. Perhaps the next most common fault is that of not opening the throat freely, which causes "Ministers' Sore Throat," as well as harsh, unpleasant tones. The directions already given, if followed, will obviate these difficulties.

Now, let us try to cure another fault—that of sending sounding breath too far forward in the mouth as we form the voice. If persons will watch themselves, the majority will find that they permit the sounding breath to strike the roof of the mouth near the front teeth. This should not be done. The ordinary tones should be directed against the back part of the roof of the mouth.

The vail of the palate, which is to a greater extent than is generally supposed, under the control of the speaker, should be held quite tense, so that the sounding breath, in passing, shall not pass over a loose, flabby muscle—the effect of which upon the ear is not unlike that of attempting to produce music on a piano without sufficient strain on the strings. Read some selections now, first permitting the voice to strike the roof of the mouth far forward and then quite in the back part. Continue to repeat this until you can control the voice in this respect with ease.

In this way, and by following directions previously given, a full, smooth, pure tone may be produced. Let this be done on various keys, from very low to high, or very high.

When the learner can command himself in the above described efforts, let him try to form the orotund voice—that tone of voice which good speakers use with such effect when discoursing of the grand or the sublime—that tone of voice which the celebrated Dr. Rush described as "pure tone intensified." This tone is formed by complying with the foregoing conditions, and directing the sounding breath into the pharynx, the chamber just back of the mouth. To do this, let there be an effort made as though one should desire to send the voice out of the back of the head, instead of out of the mouth.

For practice in the orotund quality of voice, good selections may be taken from the Psalms of David or from the Prophets. The "Apostrophe to Mount Blanc," by Coleridge, is one of the best pieces in the language to practice upon in this tone of voice. In that piece we will find the low orotund demanded in most of the direct addresses to the mountain; as when he says,

"Hast thou a charm to stay?" etc.

A change should be made to the pure tone, by directing the voice to the back part of the mouth instead of into the back part of the pharynx, when speaking of the "Arve and the Arveiron," and then a return to the orotund when we come to the words,

"Whilst thou, dread mountain, form," etc.

Thus the reader must change throughout the piece from the orotund voice to pure tone, and from pure tone to the orotund. At one or two places in the piece the high orotund will be demanded, as on the words,

"Wake, oh wake, and utter praise!"

This piece is to be found in many of the school readers. Milton's works afford good examples for such practice, as do many of the published speeches of ancient and modern orators.

I am making no attempt to embellish these articles, but I try to present the subject in such a manner that a careful student will be able to grasp it. A careless one there is no hope for.

I never knew how it was, but I always seemed to have the most come in when I gave the most away.—*Baxter.*

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General Topics of the Month.



NEW YORK, JANUARY, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

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BY M. L. HOLBROOK, M. D.

A Happy New Year.—We can not do less than to wish a "Happy New Year" to each one of our subscribers and readers. We hope, however, to do much more than *wish* a Happy New Year, and believe we shall do much to make it one. And here it may be asked, "What is happiness? and what is its origin?" Webster defines it to be "The agreeable sensations which spring from the enjoyment of good; that state of a being in which the desires are gratified without pain." To be in any degree happy, we must be free from pain, both of body and mind. It therefore is true that whatever tends to improve the race, and to prevent and cure sickness, tends to happiness. The ancients sought a philosopher's stone with which they might transmute all things into gold. Had they found it, they would soon have sought another stone to turn some of this glittering metal back again into bread, clothing, houses, books; but there is a philosopher's stone which, while it never changed a pennyweight of any thing into gold, turns every thing into happiness. It is human health. This is the Philosopher's stone, which can only be obtained by right living and harmony of life with Nature's laws. Those who seek a Happy New Year may well then ask at the beginning of the year, "In what way can happiness be increased—manhood augmented?" If one season is better than another for a human being to stop in his course to measure his position and condition, to form new resolutions and break off bad habits, that time is at the beginning of the year. May not all of us, then, as we mutually wish each other a Happy New Year, remember to conform our lives to those laws of the body and mind which will secure for us what our hearts desire, not only a Happy New Year, but a happy year, and a happy life?

Drunkenness among Women.—Some months ago The Round Table published an article, which has been extensively copied, in which it was contended that drunkenness was exceedingly common among the women of New York city. This article caused much discussion at the time, and most people were inclined to think the statements over-drawn. In a very recent number of that same journal the same subject is discussed, and the opinion modified in part, though it is still maintained that drunkenness is of so frequent occurrence among the affluent as to occasion alarm for the future. While the modified statement may be nearer the truth than the original one, yet we are inclined to the opinion that the evil is a very grave one and needs an immediate remedy. It is well known that—leaving out of account the thousands of women of ill repute, who are, it is not denied, addicted to the regular use of alcoholic liquors—the women of this city, and of the whole country, are not awake in the cause of total abstinence. It is also well known that they do not generally refuse wines and brandies at parties, on wedding occasions, or when prescribed as a medicine. It is also true that alcoholic stimulants are in great demand as tonics for those who are ill, even though not under a physician's care. Add to this the number who are habitually addicted to it, and the picture becomes a sad one—even more so than The Round Table believes to be the case. But this is not all, for while drunkenness is generally admitted to be an evil of great magnitude, constant dosing and drugging with medicines, to cure the debility and diseases of civilized life, are doing more to undermine women's health than all the liquor they drink, for these practices are so much more common. Drug medication is an evil, when we take into account its greater extent, with which drunkenness bears no comparison.

So, again, the practice of dressing, so as to compress the chest into one-half or two-thirds its

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natural dimensions, does more harm to women, physically and morally, than all the liquor they drink. Add to this the lack of thorough physical culture and body education, and we have a catalogue of abuses which are keeping back the progress of civilization more than we are aware. How much might man, might woman become, might the race become, did we not fritter away our lives for that which is not bread. But we do not despair of the future. Reform was never more the watchword of the world than now. Temperance reform, health reform, political, social and religious reforms, are every day bringing back to first principles some wayward soul, who like the Prodigal Son, had departed from his father's house, who will take an interest in these questions, cast his or her influence in favor of true living, and not only bless themselves, but all who live now or come after them.

ARROW-ROOT FOOD BAD FOR CHILDREN.—It is a very common practice of mothers to feed young children on arrow-root to make up any deficiency of milk, or as a preferable diet when they are sick. This practice was undoubtedly borrowed from the French, where it has been in vogue, under the sanction of medical men, for we know not how long. Arrow-root is only a variety of starch made from the root of the *Maranta arundinacea*, and other plants of the same order. So strong had been the prejudice in favor of this food, that in Parisian hospitals for infants, when a child became sick, instead of allowing it to nurse when food was needful, it was withdrawn from the breast and fed with arrow-root and other similar preparations. This was followed by a large mortality, and yet French physicians, placing so much more value upon artificial than natural food, allow the above to go on despite results, and to spread their practice over the civilized world.

Arrow-root contains very little if any nutritive value, and Frenchmen are beginning to find it out; for, hunting for the sources of this great mortality, they at last discovered it to be caused by a jelly-like substance in the bowels, which on analysis proved to be starch, the result of feeding arrow-root. We have always deprecated the practice as unnatural, and believe it to be the cause of the death of very many children. Better try to build up a house from the ashes or bark of timber, than to build up a healthy human being by feeding it on an approximate element of food, but which of itself is not food and can give little or no nourishment. Let us stick closer to nature and we shall not repeat roger this French blunder.

THE WINE-MAKING DELUSION.—Dr. A. L. Stone, one of the first orators and preachers of Boston, was recently called to preside over a church in San Francisco, Cal. Before going there, he was in hopes that wine-making would prove a Temperance measure. He now, after a year in California, sees his delusion, and writes:

"The Association struck a strong blow for the Temperance cause, declaring in unequivocal terms against the manufacture and use of wine. This was a point upon which I will confess I had not previously a clear conviction. I had entertained a sort of hope that the manufacture of pure wines, and their introduction into general use, would crowd out the gross, strong liquor and diminish intemperance. I am now fully convinced that this hope was groundless and delusive. It is in evidence that full two-thirds of all the wine manufactured is converted by the manufacturers into brandy. It also appears that in the wine-growing districts intemperance is on the increase, extending even to the young of both sexes. There is no way but to take ground against its manufacture. This touches a very large and growing pecuniary interest, and will provoke strenuous opposition; but we must save this State, if it can be done, from such investment of capital and labor, and from the unavoidable results of drunkenness, profligacy and crime."

And so it will ever prove. Wine-making and alcoholic medication, together, are to-day blocking the wheels of the Temperance movement more than all other causes combined, and nearly all the papers of the land are helping to blind the people. Wine-making must be fought against, if ever we are to have a Temperance race of men and women, and secure our children from danger.

AS A BEVERAGE.—Temperance people are very careful to insert in all their resolutions against the use of intoxicating drinks, the fact that it is "*as a beverage*" that they object to it. Have the Temperance reformers ever given any thought to the question that alcoholic drinks taken as beverages produce precisely the same effect as when they are taken as medicines? The words, "*as a medicine*," have no talismanic power to change a corrupting poison into a healthful tonic or a harmless drink. It is high time that Temperance societies, in their resolutions against liquors, leave out the words "as a beverage," and proclaim war against the article as either food, drink or medicine. Only in this way can any real progress be made in reforming a drinking community into a virtuous and temperate one.

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DOCTORING VEGETABLES AND TREES.—Through a violation of the "natural laws of husbandry," vegetables as well as plants are greatly diseased. We see frequently in the papers recipes for curing many of these diseases, mostly by some chemical compound to be administered by sprinkling on the leaves, to be put into a hole made in the tree with an augur, or applied to the soil, and various other ways not necessary to mention. It is perhaps not unknown to a majority of our readers that plants are quite easily poisoned and killed by chemical preparations. One of the principal reasons why the vegetable world is so liable to disease is because of improper cultivation. Crude manures affect plants unfavorably, and cause constitutional disturbances which end in weakness and decay. Plants were, with a few exceptions, made to feed on decayed or thoroughly decomposed matter, not that undergoing decomposition. Some diseases are caused by not adapting the plant to the soil most natural to it; others from not preparing the soil properly. An undrained soil, for instance, allows the water to remain too long in the interstices between the particles of earth, causing coldness as well as wet. Such soil does not allow the atmosphere to enter the ground freighted with carbonic acid and other elements, which go to feed the tree or plant. There is no doubt that thorough under-draining would prevent a score of diseases which now trouble our vegetables. Other diseases are caused by sudden changes of the temperature of the air, the freezing in winter of succulent and half-ripe wood, forced to grow by stimulation too late in the autumn. A frequent cause of disease is the endeavor of cultivators to force plants to grow beyond their capacity, so that the growth is not healthful and does not ripen well. It is thought by many that insects cause many diseases, but with few exceptions, we believe that insects attack plants because of their sickness. At least this is true: that a perfectly healthy vegetable resists the attack of insects very often when feebler ones fall an easy prey to them. There, too, is reason to believe that the poisonous gases generated in many cities by manufacturing establishments, by distilleries, and particularly by the very extensive use of that detestable weed, tobacco, have weakened the stamina of many plants, so that, with other causes combined, the result has been disastrous. Now what is the remedy? Drugs? No; but feeding and cultivating each plant naturally. The natural laws of agriculture are scarcely understood by any of our scientific men, and farmers do not know much more about them. They have their foundation in vegetable physiology; but this branch of learning has never yet been investigated sufficiently to aid us very much. A few of the general principles however are, it seems to us, sufficiently understood to enable us to prevent most of the diseases of cultivated plants, by wise hygiene and the extensive application of common sense.

TYPHOID FEVER.—The New York Post, a very intelligent paper on most subjects, is easily befogged when getting out of its sphere. In a recent number a paragraph occurred, stating that in a small town in England the Temperance reform had culminated, and no liquor was either sold or drank there. Yet, notwithstanding this, a very serious form of typhoid fever was decimating the population. The Post thinks this very strange, and asks the cause? Certainly, Mr. Post. Bad food, bad air, and a want of bodily cleanliness. It is only a year or two ago that this fever broke up a ladies' school in Massachusetts, where it was supposed that great attention was given to health and physical culture. Bad air was the excepting cause. We hear every winter of cases in schools where pupils are overcrowded and do not pay sufficient attention to ventilation and bathing. These causes produce more typhoid fevers by far than liquor drinking does. This disease can be driven from any locality where these three rules are observed: Eat wholesome food; breathe pure air; keep the body clean by daily bathing.

FLOGGING IN SCHOOL.—Gradually the practice of flogging children at school and at home is going out of practice, and wiser modes of government by love and reason are taking its place. Occasionally, however, the old practice is revived, as was the case recently in Cambridge, Mass., where a school-girl was whipped for some reason not stated. The result was a threatened suit, and a resolution by the Board of Education that "corporeal punishment should be abolished in all the schools of the city." During the discussion of the subject, Prof. Agassiz, who is much ahead of the age in many if not most things, expressed himself as unequivocally against all corporeal punishment, whether of boys or of girls. He has been a teacher forty years "without ever striking a blow." The best teachers of this and other countries rarely if ever resort to the rod, and he is indeed a poor teacher who needs continually to appeal to it. See a most valuable article on "How to Train up a Child," in this number of the HERALD OF HEALTH, by Prof. Fowler.

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REFORM IN WOMAN'S DRESS.—There is a healthful tendency exhibited at this present writing, in regard to woman's dress. Not that it is all that it is desirable, but the general tendency is in the right direction. Even the fashion monthlies now and then adopt a wise suggestion from the physiologist. Years ago, on Broadway, the trail was so common that a gentleman must tread carefully on the sidewalk, or he would step on the silks and satins that swept the pavements. To-day they are nothing like so common. A year or two ago it became fashionable to loop up the long skirts so they should not touch the ground. Fashion forbade more, but she relaxed her dictum enough for this. "Give an inch and take an ell" is likely to be the result of this relaxation; for to-day, instead of looping up the skirts a few inches, a more sensible one of making them shorter has been introduced, and is likely to become popular. What the next step will be it is impossible to tell, but we hope it will be in advance. This short skirt, so far as looks are concerned, though not yet perfect, is much handsomer than the long skirt tied in ungraceful, bungling folds, and spread over broad hoops that tilt on every touch, so as to make the wearer violate every rule of modesty and propriety. But the great reform in woman's dress must be about the waist, where the vital organs are situated. Let woman make her dress about the chest both beautiful and physiological, so as to admit of the fullest action of the lungs, heart, and all the muscles of the abdomen, sides, chest, back and shoulders, and she will disenthral herself from a multitude of ills, improve her form, and become the mother of better, healthier children. Many women undertake to make their dresses about the waist loose, but forget to make them tasteful. In this they err, and prevent its general adoption. It is a very difficult if not impossible thing to make the waist handsome when using the most common style of pattern. We want the old style superseded, and something entirely new, physiological and beautiful. Man can point out wherein there is any departure from physiological principles, but to elaborate the design may well enough be left to woman. For any and all improvements in this direction we are thankful, but we will never be satisfied until a still higher standard of real merit is reached than has been gained by any one yet.

WHAT WILL THE ENGLISH DO FOR MEAT?—Our English friends are in a quandary as to where they are to get meat for their population. To answer the question, Joseph Fisher, an Englishman, has traveled extensively on the Continent, observed its agriculture, and, returning home, has written a book. His answer, restated, amounts to this: "Improve our agriculture, so as to make two blades of grass grow where but one grew before. By this means we can make two bullocks grow where only one grew before, and this, for the present and some time to come, will be sufficient." They will, however, find a more reasonable solution of the problem by accepting the theory that man needs less meat than has been supposed. Every new discovery in physiology and dietetics but adds another proof to the higher value of the productions of the earth, and the diminished importance of flesh food. Now so much land is devoted to beef-raising that the full capacity of the earth for producing food can not be tested, but there is every reason to believe it is sufficient for all the wants of human beings, and that neither Englishmen nor the world at large need to fear starvation, either now or in future generations.

SKATING.—Skating is one of the most healthful, exhilarating pastimes that can be enjoyed. It is now becoming as frequent for ladies to engage in it as gentlemen. This winter the skating parks of the Central Park will be alive with men and women, boys and girls, to the no smaller number than ten thousand at once on some of the lakes. The rules, which ladies often forget, for putting on the skates are these:

1. To adopt a skating costume which shall allow of freedom, ease, and grace of motion.

2. To dress the feet with thick, heavy boots or shoes, not worn tightly, and the legs with thick, heavy drawers and pants.

3. To commence the exercise gradually, and not to overdo it, under the excitement of the moment.

By following these rules many women will be alive and well in the autumn of 1867, who otherwise would not be.

SEWING MACHINES AND HEALTH.—It will be seen by referring to the business department, that the Publishers of THE HERALD OF HEALTH offer a Wheeler & Wilson Sewing Machine as a premium for 30 Subscribers to this magazine for 1867. The influence which the sewing machine has had and is having upon human health can probably never be estimated. Sewing by hand, when practiced steadily, is the parent of a multitude of diseases, principally curvature of the spine, weakness of all the muscles of the sides and chest, and resulting in dyspepsia, consumption, diseases of the throat, deficient and

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unbalanced circulation of the blood, cold feet, and many other afflictions we might name. The sewing machine, on the other hand, distributes the labor more equally to the various parts of the body, keeps the feet warm by calling them into exercise, and while its use may be abused, the general tendency of its use is to healthfulness. Certainly, the effect upon the mind when the operator is able to accomplish in a day what would otherwise require many days to do, must be very invigorating. It increases physical power many times. The sewing machine offered by the Publishers is one of the very best made, and will, we think, give perfect satisfaction. We hope, if any of our invalid readers are without one, they will at once avail themselves of the opportunity offered.

EQUAL RIGHTS FOR WOMAN.—At the late State election in New York it was voted to call a Convention to revise our Constitution. We are informed by Hon. H. R. Lowe, Member of the State Senate, and a man thoroughly imbued with the spirit of progress and improvement in whatever relates to human welfare, that there will be a strong effort made in the Convention for so changing the Constitution as to extend the elective franchise to women. There is a growing feeling, and it is every day becoming stronger, in favor of the justice of this change, and it comes from a source entitled to respect. We fear we shall never have a liquor law that can be enforced until woman is privileged to vote that alcohol shall not be sold to poison and debase her family. There are many who are timid and fearful of the success of this movement, lest it debase the sex; but they need have no fears in this direction. It is a matter of justice that they be not debarred from the polls. We must not expect, however, that they will at once correct all wrongs, but they will help on the tendency of the age in the right direction much faster than it goes now. There are those who think this question exceeds all others in importance, and that it will do more for woman than all other questions combined. We do not share this belief. The great want of woman in the present age is health and vigor of body and brain, and a more practical education for the duties of life. We are sorry to say it, but the education of woman is practically a failure. It does not do what it should—fit her for the highest womanhood. It is too narrow, too short and too shallow. The duties of life and the relation of the sex to nature and to society are ignored for trivial accomplishments and useless verbiage. How to be a true woman is the essential question; how to treat the body, so as to secure health; in what way to treat the mind, so as to secure growth and progress, and how to care for a child, so that it shall have a chance to be all that nature made it for, are questions of importance, not only to woman, but to man. Our readers are aware where *our* field of labor lies—in doing what we can to secure health of body and brain for woman, with a full knowledge of the vast means of caring for children, so that they shall be temperate, healthy, and noble in character and life. We hail with pleasure, however, all efforts outside our own work for the elevation of men and women, and bid the movement for woman's enfranchisement God speed.

TEETHING CHILDREN.—A little boy in Calais, Me., suffering much from teething, was treated to a decoction of opium leaves, which produced such narcotization that fatal results were anticipated. But even if his life is spared, it is probable that his nervous system will be so injured that he will always suffer from it. While immediately fatal consequences do not result from this ignorance and tampering with poisons by parents and physicians upon innocent children, the amount of permanent injury to the cause of civilization is almost past belief. The teething is looked upon by most mothers and physicians as the most fatal and dangerous period through which the young pass. Most of this danger comes through defective nutrition, over-feeding and meddling with nature, in giving poisons, and are avoidable.

A VALUABLE DISCOVERY.—We have long believed in the great value of the sun's rays in promoting health, and have often seen the best results from the sun-bath—going barefoot, and of living much in the sunlight of heaven; but a medical discoverer proposes using the sunshine in surgery as a caustic. Mr. Augustus Barnes, who has been studying this subject for many years, has succeeded in killing cancers and treating a variety of morbid growths and skin diseases with success by the concentrated rays of the sun under a small lens. We are promised an article from him on this subject for THE HERALD OF HEALTH. If his discoveries prove to have the value it is believed they will, it will be but another instance showing the value of Hygienic remedies for disease, and that, too, in a field where even those who discard mineral poisons in ordinary cases were obliged to use them to destroy morbid growths.

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Readings and Notes from New Books.

LIFE—ITS NATURE, VARIETIES, AND PHENOMENA.—One of the most intensely interesting, instructive, and suggestive books that it has been our good fortune to read for a long time is "Life—its Nature, Varieties, and Phenomena," by Leo H. Grindon, Lecturer on Botany, at the Royal School of Medicine, Manchester, England. The work consists of thirty chapters, in which the various phenomena of life are treated in a philosophical and deeply religious manner; and, while not quite as free from technical words as might be desired, yet its style is so simple and plain, that though there were many more foreign expressions, yet the most uncultured mind would still find it as readable as the most charming story. And what is life but a story, or what are stories but records of histories of life, well or illy, truely or falsely told! And yet the work is not a biography, nor is it in any sense a physiology. Our author begins his book by giving what he considers a general idea of life and the universality of its presence; its source; varieties; signs of life; relation of food, air, culture, religion, and the affections to life; leases of life; health and disease, death, youth, and age; future life, instinct and reason, and kindred topics. Here is a brief extract:

"The most striking illustrations of the importance of light to the play of life are furnished by the vegetable kingdom. Secluded from the solar light, plants, if they do not soon die, become wan, feeble, and sickly. The few leaves and shoots put forth, are pale yellow instead of green; and the ordinarily firm and solid stem becomes watery and semi-translucent. If there be an effort made to produce flowers and seeds, that is, to become parents—after self-preservation, the foremost, though it may be unconscious, desire of all living things—it is but to fail miserably. The qualities of a plant are no less weakened by want of light than its constitution is. The acrid become bland, the deleterious innocuous. In gardens and orchards, flowers and fruits accidentally shaded by dense foliage, fail to acquire their proper tint—of the full sunlight come all the glow and brilliance of the blossom, the purple hue of the peach, the rosy one of the apple. Who has not observed the beautiful affection with which plants kept in parlors turn themselves toward the window; and how the leaves of the geranium press their bosoms to the glass? The sunflower, the heliotrope,* the turnsole, the salsify, are celebrated for keeping their faces always fixed on 'glorious Apollo.' It would be much more difficult to find a plant which does *not* turn toward the sun, though its movement might be slower than is fabled. While these confess the sweetness and the potency of the solar presence, that sullen troglodyte, the *Luthræa squamaria*, or tooth-wort, of our woods, where the botanist obtains it only by excavating among earth and dead leaves, shows in its skeleton-like configuration and cadaverous hue, that life in the dark is but a compromise with death. When the trees and shrubs beneath the shade of which it usually secretes itself are cut away, so as to expose the plant to the full action of the light, like a morose and unsocial man made to laugh against his will, it enlivens into a pink purple. Superabundance of light, on the other hand, elicits the most beautiful displays, both as to perfection of form and height of color. Tschudi, in his picturesque 'Sketches of Nature in the Alps,' tells us that the flowers there have a wonderfully vivid coloring. 'The most brilliant blues and reds, with a rich brown, shading to black, are observable amid the white and yellow flowers of the lower districts, both kinds assuming in the higher regions a yet more pure and dazzling hue.' A similar richness of coloring is reported of the vegetation of Polar countries, where the hues not only become more fiery, but undergo a complete alteration under the influence of the constant summer light and the rays of the midnight sun, white and violet being often deepened into glowing purple. This happens not alone with the flowers. Within the arctic circle, the lichens and mosses shine in hues of gold and purple quite unknown to them in lower latitudes. The balsamic fragrance of the Alpine plants, likewise caused by the brilliant light, is, according to Tschudi, no less remarkable and characteristic. From the abricula down to the violet-scented moss (*Byssus colithes*), this strong aromatic property is widely prevalent, and far more so in the high Alps than in the lowlands.

The value and importance of light to animal life, though the immediate connection is not so

* The delicious, vanilla-scented, lilac flower, which now bears the name of Heliotrope, is in no way specially deserving of it. Neither is the great golden Sunflower of our autumn gardens, which is so called, not as often though, because of remarkable sensitiveness to solar attraction, but because of its vast circular disk and yellow rays.

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obvious, all experience shows it impossible to over-estimate. There is something more than a metaphor in speaking of the 'light of life.' Digestion, assimilation, circulation, the functions also of the brain and of the nerves, proceed in a more orderly and agreeable manner when we exclude ourselves as little as possible from the light of heaven. No dwellings are so pleasant, because so healthful, as those which have a southerly aspect; people who live in houses looking chiefly to the north and east, suffer seriously, if not sensibly, from the imperfect sunning of the air; the unkindness of the aspect imparts itself to the occupant; that the hearts should look southwards, our windows should do so. No one can say how much sickness and debility, how much ill-temper and moroseness are not owing to self-imprisonment in dark streets and dull counting-houses and back parlors, into which a sunbeam never enters: 'Truly the light is sweet, and a pleasant thing it is for the eyes to behold the sun.' School-rooms, most of all, should be on the sunny side of the house; no sensible schoolmaster ever places them anywhere else. The curious exception to love of light which occurs in the pink sea-weeds, again occurs in marine animal life. Almost all the animals which inhabit the sea-side are more numerous under the shelter of rocks than where the coast is open. Compared with such localities, shadowless sands and beaches are untenanted. The colors also of marine animals, like those of the algæ, are often brighter when they dwell in comparative shade, as well exemplified in the prawn. It is only in the gloom of deep holes and rocky pools that the fine zebra-like hues of this pretty creature become fully developed. Fishes, especially those of the sea, are well known to be fonder of night than of day, probably because of darkness being more congenial; and the same is probably the reason of many animals being most active in the winter. Here again we have a parallel with the vegetable world; it is when the days are darkest and shortest that the Christmas-rose expands its flowers. Sunshine has a wonderful influence even upon *external form*, as we might anticipate from the improvement it causes in plants. Humboldt ascribes the infrequency of deformity among certain nations who clothe but scantily, more to the free action of light upon their bodies, than to any peculiarities in mode of life. Those exquisite shapes which art has immortalized in marble, doubtless owed not a little to the full and free exposure of the body to the light and air, so agreeable in the fine climate of ancient Greece."

RELATION OF AIR TO LIFE.

We should like, had we space, to quote a few paragraphs from the chapter on the relations of the atmosphere to life; how the word "animal" signifies breath, and animated nature, breathing nature; that by means of air our senses of seeing, hearing, feeling, and smelling are made possible; where respiration is vigorous, as in birds, life is energetic; when it is feeble, as in snakes and frogs, life is slow; how man lives in proportion as he breathes, and the activity of the child is in proportion to the vigor of its lungs; and the calmness and power of man is combined with tranquil respiration. If the lungs be sound, strong and active, there is magnanimity, courage, boldness; if feeble and languid, there is timorousness and debility. To be out of spirits is to be out of breath; to be animated is to be full of breath. When eager, we pant; when weary, we yawn; when fearful, we are breathless or aghast. The air is the cellarage of aerial wines, the heaven of the spirits of plants and flowers, which are safely kept there till called for by lungs and skin. Dirty air produces greater evil than dirty water. However well we diet or doctor, if we do not take in good air we can not take on good conditions. Plants take the poison, carbonic acid, from the air. The date trees on the banks of the Nile drink it in by their leaves; the cedars of Lebanon take it in to add to their stature; the cocoa-nuts grow rich on it; the lotus plant will change it into flowers. Plants give oxygen to the air. The oak and cedar, cinnamon tree, rhododendron and roses, each in their daily processes of growth, unpoison the atmosphere of the load of carbonic acid passing into it by our breath and by animal and vegetable decay, and each pour out a stream of oxygen so necessary to animal life. But we must leave this rich chapter until our next issue.

Catarrh in the Head.—"Will you please give us, in the HERALD OF HEALTH, a remedy for catarrh in the head? It is at times very offensive and discharges hard, dry, greenish pieces, which cause severe pain in the head and difficulty of breathing. Is it proper to inhale water through the nostrils? It has afforded speedy relief, though it effects no cure."

Frequent sniffing of tepid or cool water up the nostrils is the principal local treatment to be employed and should be perseveringly carried out. The diet should be plain and dry, and rather abstemious in quantity. Turkish Baths should be employed when convenient; when not, packs and foot baths instead. Plenty of out-of-door exercise should be taken, avoiding damp, chilly winds.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Congestion of the Liver.—Acute congestion of the liver is a very common affection in tropical climates, and is occasionally met with in temperate regions. It may be induced by whatever seriously obstructs the circulation of the blood in the liver, causing it to accumulate there till the organ becomes oppressed and distended.

CAUSES.—Alcoholic stimulants, vinegar, mustard, spices, and condiments of all kinds are among the prominent causes of this condition. Over ingestion of rich food, hot coffee and strong tea; violent exercise, or a cold bath after a full meal, may produce it. A common cause is probably some organic disease of the heart. If the cardial orifices are contracted so that the blood will not flow freely through them, or if the valves of the heart are changed in form so that they will not close properly, and thus at each contraction of the ventricles the blood is regurgitated or thrown back, its course through the hepatic veins is obstructed, and in this way it accumulates in the liver, producing distension and congestion of that organ. Emphysema and engorgement of the lungs may cause it in a similar manner.

THE SYMPTOMS of acute congestion of the liver are a sense of weight and uneasiness in the region of that organ, impaired appetite, indigestion, pain in the right shoulder and in the loins, sometimes nausea and vomiting; there may be either constipation or looseness of the bowels; there is a bitter taste in the mouth; the tongue presents a yellow or brownish coat; the head aches heavily; there is considerable depression of spirits, and generally some enlargement of the organ; also a sallowness of expression, and great loss of strength, but little or no fever. Congestion is the primary stage of most other diseases of the liver, and if not soon removed gradually assumes the chronic form.

TREATMENT.—The Allopathic treatment would be a saline cathartic, or some mild mercurial preparation; or it might be Rochelle salts, aloes, rhubarb, calomel with mineral acids, ammonia, ether, etc., with blistering and cupping as counter irritants.

The Homœopathic treatment would be aconite, bryonia, belladonna, chamomilla, chincona, mercurius, nux vomica, lachesis, etc.

The Hygienic treatment would be whatever would equalize the circulation of the blood and reduce the quantity in the liver, without injury to the system. We would advise entire abstinence from food for two or three days, and then only very light, plain food for several days after; the full tepid, or warm bath, with thorough friction of the entire body, to bring the blood to the surface; fomentations and cold compresses applied alternately, to stimulate the action of the capillaries in the liver, with tepid compresses at night.

Hot hip and foot-baths will be applicable in some cases. The wet-sheet pack and rubbing wet-sheet may be used where there are not conveniences for the full baths above recommended. Packs, compresses and fomentations will be most useful in a chronic form of this disease.

Hepatitis.—This name is applied to inflammation of the liver; which, though quite often exhibited in temperate regions, is much more common in tropical climates. It is said that a person making his residence in India is "sure to return *with* a fortune, but *without* a liver." The common signs of inflammation—*heat*, *pain*, *redness* and *swelling*—appertain to hepatitis. In some cases this disease is of short duration, ending favorably by resolution; in others it is the cause of severe and protracted suffering, terminating in suppuration or abscess, and sometimes it ends in gangrene of the organ, which is of course fatal.

CAUSES.—The miasms of hot climates are the most prolific cause, those of fever and ague districts the next. Alcoholic stimulants, taking cold after a debauch, mechanical injuries of the organ, and all those derangements of the digestive apparatus which result in ulceration of the intestines, of the stomach, of the gall-bladder or gall-ducts, will cause hepatitis. The use of purgative medicines is one of the most common causes. It sometimes supervenes upon pleuritis, or accompanies intermittent fever.

SYMPTOMS.—At the commencement of the difficulty there is usually a slight uneasiness and tenderness in the region of this organ, which is increased by pressure; there is a fullness in the right side indicating enlargement; a dry, hot skin, high fever, often typhoid in character, considerable thirst and scanty urine; the pain, which soon becomes severe, is increased by a full inspiration or by coughing, and also by lying on the right side; the pains often extend up to

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the right shoulder, and are of a gnawing and aching character. When the pain in the side is of a lancinating character it is supposed that the outer portion, or peritoneal covering, is the seat of the inflammation; but when it is of a dull aching character, it is the deeper structures that are involved. The bowels are generally constipated, but in some cases the opposite, or an alternation may be their condition.

In a majority of cases there is a yellow tinge of the eye, or well-marked jaundice. If a distinct chill occurs during the process of the disease, it is an indication that the inflammation is approaching suppuration, and of course becomes more serious in its character.

PROGNOSIS.—This disease is usually attended with much danger, especially under the common forms of treatment; if it is not arrested before suppuration takes place, it often terminates fatally. It is usually rapid in its course, its duration not generally exceeding three weeks; if recovery takes place after abscesses form, the disease is of a protracted and tedious character. When the inflammation ends in suppuration, the pus or matter formed may find its way into the intestines, into the biliary ducts, into the cavity of the lungs, the cavity of the abdomen, or out through the abdominal walls. It is most certainly fatal when it is thrown into the cavity of the abdomen or lungs, as it gives rise to inflammation of the membranes covering those parts.

TREATMENT.—Allopathically, hepatitis will be treated on the principle of general inflammations, by dry cupping, leeching, in some cases general blood-letting, purging with blue pill, ipecacuanha, or extract of taraxacum with an alkali; stimulating liniments, and ointments or blisters externally, and opium in proportion to the amount of pain. After pus has formed, a nutritious diet, with quinia, iron, and other tonics would be used, and also applications—external as well as internal—of nitro-muriatic acid.

Homœopaths give nux vomica, chincona, belladonna, mercurius, aconite, bryonia, chamomilla, lachesis, etc.

The Hygienic treatment—*Put out the fire!* Heat is the first condition of inflammation, subdue that, and the pain, redness and swelling will soon be reduced; water quenches fire and cold counteracts heat, therefore apply cold compresses to the liver and change them as often as they become warm. If they occasion chilly sensations, they may be used tepid or warm, for even then they are cool compared with the body. Equalize the circulation of the blood, so as to withdraw it from the liver; give a vigorous rubbing in a tepid or warm bath. Warm or hot hip and foot-baths may be used for this purpose, if there is a tendency to chill. If there is very much fever the tepid wet-sheet pack may be employed, followed by a towel bath. In the intervals between the baths, the compresses must be kept upon the liver till the inflammation subsides. Entire abstinence from food for three or four days with absolute rest must be enjoined.

The bowels should be kept free by enemas. The thirst should be allayed by the free use of cool water. If the pain is very excruciating, applications of ice-cloths or of hot fomentations, or of both alternating, may be requisite to afford relief.

The treatment should be vigorously applied in the first stages of this disease to prevent, if possible, suppuration, and to promote resolution; but if suppuration takes place, the treatment should be adapted somewhat to the feeling of the patient, and applied so as to soothe the pains, keep the blood to the surface, and afford as much relief as possible. The food should be plain and unstimulating, the bowels free, the room warm, the air pure, and then let Nature take her course, and if not hindered by poisons she will do the best she can.

Chronic Hepatitis.—In chronic hepatitis we have precisely the symptoms of the acute disease, only they occur in a less violent and more subdued form. There is usually considerable enlargement; so much that it may be felt extending far into the abdomen, especially in the early stages, but subsequently it may become contracted and actually smaller than in health. This disease requires a thorough course of wet-sheet packing, compresses, tepid baths, hip baths, and *plain diet.*

Inflammation of Gall-Bladder and Gall-Ducts.—The gall-bladder and gall-ducts are sometimes the seat of inflammation, which give rise to nausea, furred tongue, tenderness in the region of the liver, diarrhea, colored stools, and jaundice. Inflammation of the duct that conveys the gall from the gall-bladder to the intestines sometimes causes adhesions of the walls of this duct, closing it completely; in which event the bile accumulates in the gall-bladder, producing enlargement and finally perforation and death. The jaundice in such case is very bad, and abdominal dropsy supervenes. Eight or ten pounds of thick bile has sometimes been found in these over-distended gall-bladders.

The treatment for these difficulties must be similar to that for hepatitis.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

The Turkish Bath.—"I. What are the essential features of the Turkish Bath?

"II. What are the effects of this bath?

"III. What are the special uses of this bath?

"IV. Is the Turkish Bath weakening?

"V. Does the Turkish Bath render the bather susceptible to colds?"

I. The essential features of the Turkish or Hot-air Bath are: 1. Bathing the entire body in heated air until perspiration is induced over the whole surface of the body. 2. The process of shampooing, which loosens up the dirt and scarf skin, greatly promotes the circulation of blood in the muscles, skin and adjacent tissues, and soothes the nervous system. 3. The cleansing of the skin and reduction of the temperature of the body to the natural standard by the use of water, either by the spray, douche, shower or plunge. 4. The drying and airing process which prepares the bather for the "outer world" again. The different processes are varied to suit particular cases.

II. The effects of the bath are: 1. To cleanse and promote the healthful action of the skin and the seven million perspiratory sewers or pores which open upon its surface and carry waste and effete matters from the system. 2. To purify the blood by draining off its impurities through the perspiration. 3. To equalize the circulation of the blood, thus removing all local congestions of the head or internal organs. 4. To soothe and tranquilize the nervous system. Rightly administered it produces the above results as no other bath can.

III. The uses of the bath are to secure perfect cleanliness, to preserve the health, to prevent disease, and to cure disease. It is more or less useful in the treatment of all diseases, but especially so in diseases of the skin, coughs, colds, rheumatism, neuralgia, intermittent fever, biliary derangements, scrofula, bronchitis, and local congestions and inflammations of any kind.

IV. The Turkish Bath is not weakening. The shampooers who labor hard in the bath from ten to twelve hours per day grow strong instead of weak, and are remarkably healthy and exempt from colds. Go ask the glass blowers, the sugar refiners, laborers in the harvest field, the stoker at the furnace, the blacksmith at the forge, if heat and perspiration are weakening. They will tell you No, and their appearance will corroborate their words. Scores of times have I asked this question of the shampooers in the baths of England and Ireland, men who have worked in them constantly for six, eight or ten years—and the answer invariably was, "I never was so strong and healthy until I entered the bath."

V. No, by freeing the blood of impurities and promoting the healthful action of the skin, it strengthens that organ and renders it less liable to obstruction, and consequently better able to resist cold.

Ice and Ice-Houses.—"Do you approve of the use of ice? How can it be obtained in the country during hot weather? Is there any cheap method by which it can be kept through the year?"

Ice is very useful in many ways, and no home should be without a supply of it on hand at all times. In the treatment of many forms of disease; as congestions, inflammations and hemorrhages, it is often indispensable to successful treatment. Every family in the country, where a supply of ice can not be procured in any other way, should at once build an ice-house, if they have not one already, and during the winter lay in a supply sufficient to last a year. Such a house can be built very cheaply. The essential points in its construction are: 1. It should be built entirely above ground. 2. The walls should be double, with a space of about twelve inches between them which should be packed close with saw-dust. A house from ten to twelve feet square, with walls eight feet high, is large enough for family use. 3. The floor should be constructed so that the water will all run to one point from whence it must be conducted away by a trapped pipe, so as to prevent the ingress of air. The floor should then be covered with a layer of sawdust at least six inches thick, upon which the ice may be closely packed in blocks. Always select ice which is thick, clear and free from snow, and put it in during very cold weather. After it is all in, pour water over it until the crevices are all filled and it is one solid mass. Cover the top with a layer of well-pressed sawdust about a foot in thickness. 4. Construct the roof with projecting eaves, with an open space three or four inches in width immediately under them, upon both sides, so as to secure the most perfect circulation of air through the space above the ice. 5. Have a small, close-fitting double door in one end, of the same thickness and construction as the walls.

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Vegetarianism and Meatitarianism.—"In the September number of THE HERALD OF HEALTH for 1866, I find an article on 'Self-Government in Diet and Doctoring,' by F. B. Perkins. The writer says: 'In like manner some people need meat, and some may be able to live without it. Neither vegetarianism nor meatitarianism, pure and simple, is a safe code. The writer has eaten more meat—good roast beef and beefsteak, mostly—than in any summer of his life before, and he has been remarkably well. A hot blooded, full blooded person, doubtless needs less meat; while one of low vitality, little blood and feeble circulation, needs food of a more stimulating and heat-giving character. What each man's enlightening stomach teaches him to eat is best for him, but not necessarily for his neighbor.'

"I would like to know what your opinion is upon vegetarianism and meatitarianism. Do you concur with the writer of the article above alluded to? Is a mixed diet the best for us? I have been taught to believe that a farinaceous, vegetable, and fruit diet, was the best for every body, without regard to constitution, vitality, hot blood, full blood, or a feeble circulation. Am I right in my belief? If a 'man's enlightening stomach' teaches him that pork, salt, milk, mince pies and sauerkraut are best for him, should he eat them? Should a man eat whatever his appetite craves, and whatever agrees with him?'

1. My opinion upon the subject of diet is that an exclusive fruit diet is the most natural, the purest, the healthiest, the most enjoyable, and conduces most to self-restraint, longevity, and the highest development of the physical, intellectual, and moral faculties of man. A *well selected* vegetable diet is in every respect superior to an animal or mixed diet, while an *improperly* selected vegetable diet *may be* far inferior; for instance, fine flour bread and sugar are more injurious than beef; so are a poor quality of fruits and vegetables. Many people get the idea that meat is bad and leave it off, and then eat double or treble the quantity of other things which are more unhealthful than meat. If the tastes and appetites of mankind had never become perverted by misuse and abuse, they would unquestionably be the proper guides in the selection of food, but perverted as they now are it will not do to trust them. A "man's enlightening stomach" will teach him to drink tea, coffee, beer and wine, and chew tobacco, if he is in the habit of doing it.

Many persons while making a change from a stimulating to an unstimulating dietary, are apparently not as well for a time, just as they are when they leave off using alcoholic liquors or tobacco—they have lost their stimulus; but if they persevere, their systems will in time become accustomed to the change and they will be "the better for it."

Dreams—Electricity.—"1. What is the cause of dreams? How can a person prevent their occurrence?

"2. Will electricity eradicate disease and restore invalids to health, without the assistance of any other remedial agents? There are physicians who pretend to remove disease and restore health by electricity alone. What is your opinion?"

1. Dreams are the result of imperfect sleep. Some one or more of the mental faculties continue in action while the others rest. This partial sleep is caused by some abnormal physical condition, usually by a disordered condition of the stomach. To prevent them obey the laws of your nature, and especially the laws of your stomach.

2. Electricity rightly used is an important remedial agent, and there are cases in which health can be restored by the use of electricity alone. This is no more than can be said of any of the other natural remedial agents. The right use of a single agent is good so far as it goes, but in most cases it is necessary to employ more than one and in some all are required to effect a cure.

Milk and Fruit.—"Is it wholesome to drink very heartily of milk? What is the proper time of day to eat fruit, before or after meals?"

1. Milk is the natural food of calves and babies, but it was never intended as an article of diet for the adults of either species. It is far from the best kind of food, and when drank in large quantities is very unwholesome.

2. The proper time to eat fruit or any thing else, is at and as a part or the whole of a regular meal.

Sleeping Together.—"If it is unhealthy for two persons to sleep together, how is a man with an affectionate wife to keep peace in the family? My better half is opposed to my leaving her bed."

When a person must do one of two things, both of which are bad, he should "of two evils choose the least."

Sugar.—"Is much sweet (sugar, syrup, etc.) injurious with regular meals?"

It is injurious at any and all times.

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Healthy Spices and Hygienic Condiments

LAP-DOGS—The babies of fashionable life.

DR. CARLYON describes a dinner party as "A hospitable attempt upon your life."

"YOU seem to walk more erect than usual, my friend." "Yes; I have been straightened by circumstances."

A WIFE asked her husband if druggists kept dye-stuffs for sale. He replied, "Most druggists keep little else but die-stuffs."

MR. PULLUP, coming home late, "pretty full," finds the walking slippery, and he exclaims: "V-v-very singular, when water freezes it allus f-r-freezes with the slippery side up; singular!"

A MAN lately heard another gravely inform two comrades, that a seventy-four pounder is a cannon that sends a pound ball exactly seventy-four miles.

A HYPOCRITICAL scoundrel in Athens inscribed over his door, "Let no fool enter here." Diogenes wrote under it, "How does the owner get in?"

AN Englishman is said recently to have invented a scarecrow so effective that one crow who saw it brought back all the corn he had stolen for three years.

A POOR man who had been ill, on being asked by a gentleman whether he had taken a remedy, replied, "No; I ain't taken any remedy, but I have taken lots of physic."

AN Irishman, charged with an assault, was asked by the Judge whether he was guilty or not? "How can I tell," was the reply, "till I have heard the ividence."

THE people live uncommon long in Vermont. There are two men there, so old that they have quite forgotten who they are, and there is no body alive who can remember it for them.

AMONG the many applications for office now pending at Washington, is one from Springfield, Ill., of a patriot whose sole claim is that he held the umbrella over the President when he made a speech there in the rain.

A STOREKEEPER painted the lower part of his stove red, and saved seventy per cent. in the consumption of wood thereby during the winter. The illusion was so complete, that one man tried to make him pay for a pair of boots he had burnt on the stove.

THE late Dr. Hawks was troubled with pecuniary embarrassments; a friend told him "the Lord would feed the young ravens." "Ay, yes," replied the doctor, "but there is nothing said about the young Hawks."

A YOUNG lady being asked whether she would wear a wig when her hair turned gray, replied with great earnestness, "Oh, no; I'll dye first!" It is a pity that the character doesn't always, like the hair, grow white with age.

A MAN had been in the habit of borrowing books, but never returned them. Being expostulated with on the subject, he replied, he was only exercising his profession. He was a book-keeper.

A MAN named Dawson, residing at Fredericksburg, Va., was recently knocked down by lightning. He had been at death's door with rheumatism previously, but had not felt a twinge since. He need not take out a patent for that cure.

AN industrious tradesman, having taken a new apprentice, awoke him early by calling out that the family were about sitting down to the table. "Thank you," said the boy, as he turned over in bed, preparatory to another nap, "thank you, but I never eat any thing during the night time."

A JERSEYMAN was very sick, and was not expected to recover. His friends got around his bed, and one of them says: "John, do you feel willing to die?" John made an effort to give his views on the subject, and answered with his feeble voice, "I—think—I'd rather stay where I'm better acquainted."

THERE is a hopeful popular delusion that there is silver in the new three and five cent coin. Perhaps there is. The doctors tell us there is iron in the human blood, but we never heard of any fellow creature being successfully worked as an iron mine.

"YOUNG man, what's the price of this silk?" asked a deaf old lady

"Seven dollars," was the reply.

"Seventeen dollars!" exclaimed she. "I'll give you thirteen."

"Seven dollars, ma'm, is the price of the silk," replied the honest shopman.

"Oh, seven dollars!" rejoined the lady, sharply; "I'll give you five."

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Department of the Publishers.

This Number.—It will be seen that this number contains 56 pages, instead of 48, as also did the December number. Its list of articles will be found unusually attractive.

The first, from Rev. Henry Ward Beecher, is upon a theme of unusual importance. It can not fail to produce a deep and lasting impression upon the reader. What facts more important to know than those connected with the right selection of companions and their relation to the health of offspring!

"The Sacredness of the Body," by Rev. O. B. Frothingham, is in his usual elegant style, and, what is better still, it gives due claim to our physical frames. We can not imagine how it can be read without profit.

"Alcohol among the Doctors," by Dr. Snodgrass, is an interesting statement of a much neglected question. Dr. Snodgrass furnished us with a valuable article for December, on "National Prohibition," which it would be well for every legislator to consider. It would be taking the question where it belongs, to Congress, where all action would be general and benefit each State, and produce a harmonious result. The whole subject is placed by him in a new light, and we advise those who have not read the December number to send 20 cents at once and get it.

"Dental Physiology." Dr. J. Allen of New York has kindly furnished us with an abstract of his essay on this subject, read before and highly approved by the Association for the Advancement of Science in New York. We commend the essay to parents who would learn a valuable lesson on preserving the teeth of their children.

"A Glance from the Jury-Box," by G. W. Bungay, is in a happy vein, and withal contains many lessons. Mr. Bungay is now lecturing in the West, and we advise our readers, where possible, to go and hear him.

"The Four Ages," by Mr. Sizer, the Phrenologist, is good, and we have in hand an article from him on "Mental Hygiene," which will appear in the February number.

Dr. Walker gives us an interesting and well-written little poem.

"How to Train Up a Child," a lecture by L. N. Fowler, is not only as readable and fascinating as a novel, but brimfull of capital ideas and hints which we earnestly hope will be read by all. The lecture is a long one, but none who commence it will be willing to stop without reading every word. We have several lectures by Mr. Fowler which we hope to print during the year. Each is as interesting as this. They are worth a year's subscription.

"How to Bathe," by Dr. Miller, is continued in this number. So few know any thing about thorough bathing that these articles can not but be considered most timely.

"Health Hints for the Winter," by Dr. Wood, were designed for the December number, but it is not yet too late to act upon them.

"The Proper Management of Young Children" is by Mrs. O. F. McCune, a lady physician of extensive experience and observation, and who, wherever known, is highly esteemed. Our promise to furnish a large amount of matter regarding the rearing and training of children, our readers will see, is being fulfilled.

"General Topics for the Month," "Readings and Notes from New Books," "Hygienic Home Treatment of Diseases," "Answers to Correspondents' Notes and Queries," and "Healthy Spices and Hygienic Condiments," all go to make up, we believe, a most valuable monthly indeed, and one which no family who wish to be healthy and happy can afford to do without.

Words of Cheer.—We are in constant receipt of such letters as the following:

"NEW YORK, 204 EAST 14TH ST., *December* 10, 1866.

"MESSRS. MILLER, WOOD & Co.—*Gentlemen:* Inclosed please find two dollars, my subscription to THE HERALD OF HEALTH for 1867.

"I have subscribed for THE HERALD OF HEALTH, I think, from its commencement, but never did I read it with so much pleasure as now; it is vastly improved and improving. To its teachings, I and my family are largely indebted; and sure I am that *many* times over it has greatly repaid us in a pecuniary point of view. I wish sincerely *every* family in the United States could monthly peruse its teachings; what a vast amount of suffering would it mitigate, and by increasing health, what happiness would it spread! If the heads of families would but place it before their children, exhorting them to study its lessons of wisdom, they would surely, I think, find a rich return for these endeavors. Hoping its list of subscribers may have increased in proportion to its enhanced value,

"I am respectfully yours, THOMAS B. LANGDON."

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Sexual Physiology.—"This is a handsome, new and elaborate work, discussing in a thorough and scientific manner the whole subject of sexual physiology, law of sex, theory of population, etc. Every page and sentence is worthy of thorough study. An original work, well written, philosophically elaborated, and beautifully illustrated, it is by far the ablest work on the subject that has ever appeared, and one of the most valuable contributions to our literature. It is adapted to both the scientific and popular mind. It should be in the hands of every man and woman in our country. It is an honor to the author and to our age.—*Eclectic Medical and Surgical Journal, Philadelphia.* Price by mail, $2. Address

MILLER, WOOD & Co.,
No. 15 LAIGHT STREET, NEW YORK.

Sewing Machines.—Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as New Years' Presents.

Samples.—Those who receive THE HERALD as a sample are respectfully requested to send us their subscription for a year. It will be a constant help in every household where found.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

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Over-feeding is one great cause of discomfort —remember this when you are tempted to feed it more to stop its cries.

Mothers, use your dear children to fresh air; if they are warmly clothed, if they avoid drafts they will not suffer; have their room warm and well ventilated day and night; they will thus be free from colds and all other maladies.

Mothers, dress your children for their health and comfort, no matter what fashion dictates. Its extremities should always be kept warm. In order to do this its arms must be covered with several thicknesses; if the weather is cold, you can find ample scope for inventive genius in knitted sacks, undersleeves, and numberless things; you can devise ways enough if you are really determined to dress it hygienically.

TEETHING.

There is more or less disturbance of the digestive organs and bowels during teething. The child should be fed more carefully, if possible, than ordinarily. If it is feverish at night, take a soft piece of cloth of two thicknesses, wide enough to reach from its arms to its thighs, and long enough to reach around it; wet it in tepid or quite cool water, put it around the child and cover it with soft flannel a little longer than the cloth; if this dries during the night, re-wet it. Should the child be really sick, give it an enema of tepid water and also a bath; then apply the compress, and, in nineteen cases in twenty, it will be well in the morning, and not harmed by doses.

If we would remember that pain and sickness are always the result of an effort on the part of the system to rid itself of some offending matters, and only wants gentle assistance, we should hesitate in using harsh measures, particularly with children, for their systems are so active that, if let alone, they will soon recover from the numerous ills to which they are subject.

The excitement produced by the effort of the system in teething, is much aggravated by any derangement in the digestive organs. It is even more important now that they should be carefully and regularly fed, that they should sleep as much as possible; give them fresh air and outdoor exercise. If the bowels are too loose don't give astringents, not even fine flour; keep them quiet, give them less to eat, and a daily bath; put the girdle on them at night; have patience, wait, and they will soon be better. Try this once thoroughly, and you will "throw physic to the dogs," as well as all other drugs of whatever nature.

How to Bathe—No. III.

BY E. P. MILLER, M. D.

THE beneficial effects to be derived from bathing depends very much upon the temperature of the bath, and the manner in which it is given; and those physicians who exercise the most discretion in adapting these to the various temperaments and conditions of their patients, will generally be most successful in their practice.

A bath of a given temperature, that would be entirely appropriate and beneficial to a patient of one temperament afflicted with a certain disease, might be of little use, if not absolutely injurious to a patient of a different temperament, though suffering from a similar disease.

Some of the early German practitioners have brought the hydropathic practice into lasting disrepute by their indiscriminate use of the cold bath; and on this account we find many persons who have such a horror of the "cold water cure," that they will hardly tolerate the use of water of any temperature even for purposes of cleanliness.

We shall classify baths according to their temperatures, into cold, cool, tepid, warm, and hot; besides these we have refrigerations, fomentations, vapor and hot-air baths.

In this classification of baths we are not governed in the least by the sensations of the bather, in assigning the temperature by which each kind is known, but the temperature of each class is regulated by the degrees of heat as indicated by the thermometer.

The nervous sensibilities of people differ so widely that a bath which would be tepid to one would be cold to another, while it might be warm to a third; again, the sensations of the same person vary so much in different conditions as produced by disease, by exercise, by the temperature of the surrounding atmosphere, etc., that a tepid bath might feel warm at one time and cool at another.

It is probably well known to most people that the colder the water the lower the temperature, and the lower the mercury will sink in the thermometer; while on the contrary, the hotter the bath, the higher the temperature and the higher the mercury will rise in the thermometer.

I have known patients to get confused on this point, and think that the higher the temperature of a bath the colder it was.

We call a bath cold when the water is of the temperature commonly found in wells, springs, cisterns, rivers and lakes, which, when measured by a thermometer, will be found below 70 degrees, varying from that to 32 degrees or

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freezing point. A cool bath ranges in temperature from 70 to 80 degrees; a tepid bath from 80 to 92 degrees; a warm bath from 92 to 98 degrees; and a hot bath from 98 to 112 or 115 degrees, or as hot as the water can be borne.

It is very rare that a person will bear a bath above 110 degrees, although the sensibilities of people are so different, that some will bear 115 degrees as easily as others will 100 degrees; there are very few who will bear a temperature of water above 112 degrees.

The vapor bath can be borne as high as 120 degrees, and is usually given from 105 to 115; it can not be endured easily above 120 degrees.

The hot-air bath is easily borne at temperatures varying from 120 to 240 degrees.

The hot-air bath is familiarly known on the Eastern hemisphere as the Turkish Bath, where also the vapor bath is designated the Russian Bath. A person will enjoy a Turkish Bath at 150 degrees with pleasanter sensations than he will a Russian at 110 degrees.

Fomentations are usually local applications of heat by the use of flannel cloths wrung from hot water, and kept hot by frequently changing, or by hot bottles, jugs, bricks, or other means by which a high degree of heat can be applied to any particular part of the body. This is one of the most useful of the hygienic applications—a more explicit description of the methods used and the conditions to which it is applicable will be given in subsequent numbers of this series of articles.

Refrigerations are applications of ice, or of ice and salt, or of some other freezing mixture to any part of the body.

When we speak of the administration of cold, cool, tepid, warm or hot baths for any purpose, we shall refer to them as indicated by the temperatures above described, the minimum or maximum degree of each must be approached as the condition of the patient would indicate.

A word or two in regard to the temperature of the room in which baths are to be taken. As a general rule an invalid should not bathe in a room where the temperature is below 70 degrees, and for most persons it would be better still to have the room as warm as 80 or 85 degrees, provided there is good ventilation. Persons in vigorous health may enjoy a bath in a much colder room than the above, but those with moderate external circulation would be likely to be injured by so doing.

THE HIP OR SITZ-BATH.

Although this is usually regarded as a local bath, yet in the absence of conveniences for giving a full bath, it may be used for producing all the beneficial effects of a general bath.

This bath may be given in a common wash-tub, although it is best given in a tub made for the purpose, with the bottom raised three inches from the floor, and the back extending six or eight inches above the front, sloping backward at the sides so as to afford a support to the patient's arms and back while taking the bath.

The tub should be deep enough to allow the water to cover the hips and a good portion of the abdomen. Usually it requires about three or four gallons of water, and the temperature at which it is to be given depends entirely upon the condition of the bather and the effect you desire to produce.

It may be given cold, cool, tepid, warm or hot. The cold and hot being the extremes, are of course much the most powerful, and require greater care in their application. It is not absolutely necessary to disrobe entirely to take this bath, as the clothes may be carefully rolled up and made fast under the arms, so as not to wet them. This will not apply to ladies, however, so long as the present style of dress is worn.

It is always best to throw a blanket around the bather while taking this bath, and to rub the hips and abdomen thoroughly while in it.

The hip-bath, when applied cool or cold for a short time and frequently repeated, is considered a powerful tonic, but when extended to twenty or thirty minutes, whether at a similar temperature or warmer, it becomes a strong derivative or sedative.

The hip or sitz-bath, at the various temperatures at which it may be applied, is one of the most valuable forms of bath we have in our practice. For diseases of the bowels and pelvic viscera it is invaluable. For constipation, for diarrhea and dysentery; for piles, and for diseases of the kidneys, bladder and genital organs; for chronic affections of the stomach, liver and spleen, it is one of the most effectual applications that can be used in home treatment. It is very useful, also, in diseases of the brain, and in almost all forms of fever and local inflammation. It is indispensable for successfully treating a large class of female weaknesses.

I have had several cases of fever, in which very marked relief of the head and also of the excessive irritation of the stomach and bowels has been obtained by the hip-bath.

For relieving the severe paroxysms of pain in the passing of gall-stones, for gravel, for severe congestion of the liver or kidneys, and for pain in the bladder, the hip-bath, either hot or cold, will be found of great service.

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When you wish to give a general bath, the bather is to sit in the tub, with the water at the required temperature, and an attendant is to wash the back, chest and upper extremities with a towel or sponge; wipe them dry; then, while standing in the tub, have the lower extremities treated in the same manner.

Long cold hip-baths should not be taken except when advised by a physician, as they may give rise to congestion of the organs in the pelvis.

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

If the reader has faithfully followed the directions of last month, he is now ready to receive and profit by further directions.

First, let me say, that while following the directions now about to be given, the exercises already recommended should be repeated daily; and, beside the tranquil breathing there recommended, as soon as the lungs become strong enough, so that it can be done with safety and comfort, the air should be expelled suddenly through the open throat and mouth, increasing the suddenness, until it is expelled with nearly the abruptness of a cough.

The most common faults in reading and speaking, probably, are those of not properly filling the lungs, and not keeping the chest raised and pressed forward, which not only cause poor, weak voices, but irritate the lungs. Perhaps the next most common fault is that of not opening the throat freely, which causes "Ministers' Sore Throat," as well as harsh, unpleasant tones. The directions already given, if followed, will obviate these difficulties.

Now, let us try to cure another fault—that of sending sounding breath too far forward in the mouth as we form the voice. If persons will watch themselves, the majority will find that they permit the sounding breath to strike the roof of the mouth near the front teeth. This should not be done. The ordinary tones should be directed against the back part of the roof of the mouth.

The vail of the palate, which is to a greater extent than is generally supposed, under the control of the speaker, should be held quite tense, so that the sounding breath, in passing, shall not pass over a loose, flabby muscle—the effect of which upon the ear is not unlike that of attempting to produce music on a piano without sufficient strain on the strings. Read some selections now, first permitting the voice to strike the roof of the mouth far forward and then quite in the back part. Continue to repeat this until you can control the voice in this respect with ease.

In this way, and by following directions previously given, a full, smooth, pure tone may be produced. Let this be done on various keys, from very low to high, or very high.

When the learner can command himself in the above described efforts, let him try to form the orotund voice—that tone of voice which good speakers use with such effect when discoursing of the grand or the sublime—that tone of voice which the celebrated Dr. Rush described as "pure tone intensified." This tone is formed by complying with the foregoing conditions, and directing the sounding breath into the pharynx, the chamber just back of the mouth. To do this, let there be an effort made as though one should desire to send the voice out of the back of the head, instead of out of the mouth.

For practice in the orotund quality of voice, good selections may be taken from the Psalms of David or from the Prophets. The "Apostrophe to Mount Blanc," by Coleridge, is one of the best pieces in the language to practice upon in this tone of voice. In that piece we will find the low orotund demanded in most of the direct addresses to the mountain; as when he says,

"Hast thou a charm to stay?" etc.

A change should be made to the pure tone, by directing the voice to the back part of the mouth instead of into the back part of the pharynx, when speaking of the "Arve and the Arveiron," and then a return to the orotund when we come to the words,

"Whilst thou, dread mountain, form," etc.

Thus the reader must change throughout the piece from the orotund voice to pure tone, and from pure tone to the orotund. At one or two places in the piece the high orotund will be demanded, as on the words,

"Wake, oh wake, and utter praise!"

This piece is to be found in many of the school readers. Milton's works afford good examples for such practice, as do many of the published speeches of ancient and modern orators.

I am making no attempt to embellish these articles, but I try to present the subject in such a manner that a careful student will be able to grasp it. A careless one there is no hope for.

I NEVER knew how it was, but I always seemed to have the most come in when I gave the most away.—*Baxter.*

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General Topics of the Month.



NEW YORK, JANUARY, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ The Publishers *do not hold themselves as indorsing every article which may appear in* The Herald. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* The Herald of Health and Journal of Physical Culture.

BY M. L. HOLBROOK, M. D.

A Happy New Year.—We can not do less than to wish a "Happy New Year" to each one of our subscribers and readers. We hope, however, to do much more than *wish* a Happy New Year, and believe we shall do much to make it one. And here it may be asked, "What is happiness? and what is its origin?" Webster defines it to be "The agreeable sensations which spring from the enjoyment of good; that state of a being in which the desires are gratified without pain." To be in any degree happy, we must be free from pain, both of body and mind. It therefore is true that whatever tends to improve the race, and to prevent and cure sickness, tends to happiness. The ancients sought a philosopher's stone with which they might transmute all things into gold. Had they found it, they would soon have sought another stone to turn some of this glittering metal back again into bread, clothing, houses, books; but there is a philosopher's stone which, while it never changed a pennyweight of any thing into gold, turns every thing into happiness. It is human health. This is the Philosopher's stone, which can only be obtained by right living and harmony of life with Nature's laws. Those who seek a Happy New Year may well then ask at the beginning of the year, "In what way can happiness be increased—manhood augmented?" If one season is better than another for a human being to stop in his course to measure his position and condition, to form new resolutions and break off bad habits, that time is at the beginning of the year. May not all of us, then, as we mutually wish each other a Happy New Year, remember to conform our lives to those laws of the body and mind which will secure for us what our hearts desire, not only a Happy New Year, but a happy year, and a happy life?

Drunkenness among Women.—Some months ago The Round Table published an article, which has been extensively copied, in which it was contended that drunkenness was exceedingly common among the women of New York city. This article caused much discussion at the time, and most people were inclined to think the statements over-drawn. In a very recent number of that same journal the same subject is discussed, and the opinion modified in part, though it is still maintained that drunkenness is of so frequent occurrence among the affluent as to occasion alarm for the future. While the modified statement may be nearer the truth than the original one, yet we are inclined to the opinion that the evil is a very grave one and needs an immediate remedy. It is well known that—leaving out of account the thousands of women of ill repute, who are, it is not denied, addicted to the regular use of alcoholic liquors—the women of this city, and of the whole country, are not awake in the cause of total abstinence. It is also well known that they do not generally refuse wines and brandies at parties, on wedding occasions, or when prescribed as a medicine. It is also true that alcoholic stimulants are in great demand as tonics for those who are ill, even though not under a physician's care. Add to this the number who are habitually addicted to it, and the picture becomes a sad one—even more so than The Round Table believes to be the case. But this is not all, for while drunkenness is generally admitted to be an evil of great magnitude, constant dosing and drugging with medicines, to cure the debility and diseases of civilized life, are doing more to undermine women's health than all the liquor they drink, for these practices are so much more common. Drug medication is an evil, when we take into account its greater extent, with which drunkenness bears no comparison.

So, again, the practice of dressing, so as to compress the chest into one-half or two-thirds its

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natural dimensions, does more harm to women, physically and morally, than all the liquor they drink. Add to this the lack of thorough physical culture and body education, and we have a catalogue of abuses which are keeping back the progress of civilization more than we are aware. How much might man, might woman become, might the race become, did we not fritter away our lives for that which is not bread. But we do not despair of the future. Reform was never more the watchword of the world than now. Temperance reform, health reform, political, social and religious reforms, are every day bringing back to first principles some wayward soul, who like the Prodigal Son, had departed from his father's house, who will take an interest in these questions, cast his or her influence in favor of true living, and not only bless themselves, but all who live now or come after them.

ARROW-ROOT FOOD BAD FOR CHILDREN.—It is a very common practice of mothers to feed young children on arrow-root to make up any deficiency of milk, or as a preferable diet when they are sick. This practice was undoubtedly borrowed from the French, where it has been in vogue, under the sanction of medical men, for we know not how long. Arrow-root is only a variety of starch made from the root of the *Maranta arundinacea*, and other plants of the same order. So strong had been the prejudice in favor of this food, that in Parisian hospitals for infants, when a child became sick, instead of allowing it to nurse when food was needful, it was withdrawn from the breast and fed with arrow-root and other similar preparations. This was followed by a large mortality, and yet French physicians, placing so much more value upon artificial than natural food, allow the above to go on despite results, and to spread their practice over the civilized world.

Arrow-root contains very little if any nutritive value, and Frenchmen are beginning to find it out; for, hunting for the sources of this great mortality, they at last discovered it to be caused by a jelly-like substance in the bowels, which on analysis proved to be starch, the result of feeding arrow-root. We have always deprecated the practice as unnatural, and believe it to be the cause of the death of very many children. Better try to build up a house from the ashes or bark of timber, than to build up a healthy human being by feeding it on an approximate element of food, but which of itself is not food and can give little or no nourishment. Let us stick closer to nature and we shall not repeat roger this French blunder.

THE WINE-MAKING DELUSION.—Dr. A. L. Stone, one of the first orators and preachers of Boston, was recently called to preside over a church in San Francisco, Cal. Before going there, he was in hopes that wine-making would prove a Temperance measure. He now, after a year in California, sees his delusion, and writes:

"The Association struck a strong blow for the Temperance cause, declaring in unequivocal terms against the manufacture and use of wine. This was a point upon which I will confess I had not previously a clear conviction. I had entertained a sort of hope that the manufacture of pure wines, and their introduction into general use, would crowd out the gross, strong liquor and diminish intemperance. I am now fully convinced that this hope was groundless and delusive. It is in evidence that full two-thirds of all the wine manufactured is converted by the manufacturers into brandy. It also appears that in the wine-growing districts intemperance is on the increase, extending even to the young of both sexes. There is no way but to take ground against its manufacture. This touches a very large and growing pecuniary interest, and will provoke strenuous opposition; but we must save this State, if it can be done, from such investment of capital and labor, and from the unavoidable results of drunkenness, profligacy and crime."

And so it will ever prove. Wine-making and alcoholic medication, together, are to-day blocking the wheels of the Temperance movement more than all other causes combined, and nearly all the papers of the land are helping to blind the people. Wine-making must be fought against, if ever we are to have a Temperance race of men and women, and secure our children from danger.

AS A BEVERAGE.—Temperance people are very careful to insert in all their resolutions against the use of intoxicating drinks, the fact that it is "*as a beverage*" that they object to it. Have the Temperance reformers ever given any thought to the question that alcoholic drinks taken as beverages produce precisely the same effect as when they are taken as medicines? The words, "*as a medicine*," have no talismanic power to change a corrupting poison into a healthful tonic or a harmless drink. It is high time that Temperance societies, in their resolutions against liquors, leave out the words "as a beverage," and proclaim war against the article as either food, drink or medicine. Only in this way can any real progress be made in reforming a drinking community into a virtuous and temperate one.

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DOCTORING VEGETABLES AND TREES.—Through a violation of the "natural laws of husbandry," vegetables as well as plants are greatly diseased. We see frequently in the papers recipes for curing many of these diseases, mostly by some chemical compound to be administered by sprinkling on the leaves, to be put into a hole made in the tree with an augur, or applied to the soil, and various other ways not necessary to mention. It is perhaps not unknown to a majority of our readers that plants are quite easily poisoned and killed by chemical preparations. One of the principal reasons why the vegetable world is so liable to disease is because of improper cultivation. Crude manures affect plants unfavorably, and cause constitutional disturbances which end in weakness and decay. Plants were, with a few exceptions, made to feed on decayed or thoroughly decomposed matter, not that undergoing decomposition. Some diseases are caused by not adapting the plant to the soil most natural to it; others from not preparing the soil properly. An undrained soil, for instance, allows the water to remain too long in the interstices between the particles of earth, causing coldness as well as wet. Such soil does not allow the atmosphere to enter the ground freighted with carbonic acid and other elements, which go to feed the tree or plant. There is no doubt that thorough under-draining would prevent a score of diseases which now trouble our vegetables. Other diseases are caused by sudden changes of the temperature of the air, the freezing in winter of succulent and half-ripe wood, forced to grow by stimulation too late in the autumn. A frequent cause of disease is the endeavor of cultivators to force plants to grow beyond their capacity, so that the growth is not healthful and does not ripen well. It is thought by many that insects cause many diseases, but with few exceptions, we believe that insects attack plants because of their sickness. At least this is true: that a perfectly healthy vegetable resists the attack of insects very often when feebler ones fall an easy prey to them. There, too, is reason to believe that the poisonous gases generated in many cities by manufacturing establishments, by distilleries, and particularly by the very extensive use of that detestable weed, tobacco, have weakened the stamina of many plants, so that, with other causes combined, the result has been disastrous. Now what is the remedy? Drugs? No; but feeding and cultivating each plant naturally. The natural laws of agriculture are scarcely understood by any of our scientific men, and farmers do not know much more about them. They have their foundation in vegetable physiology; but this branch of learning has never yet been investigated sufficiently to aid us very much. A few of the general principles however are, it seems to us, sufficiently understood to enable us to prevent most of the diseases of cultivated plants, by wise hygiene and the extensive application of common sense.

TYPHOID FEVER.—The New York Post, a very intelligent paper on most subjects, is easily befogged when getting out of its sphere. In a recent number a paragraph occurred, stating that in a small town in England the Temperance reform had culminated, and no liquor was either sold or drank there. Yet, notwithstanding this, a very serious form of typhoid fever was decimating the population. The Post thinks this very strange, and asks the cause? Certainly, Mr. Post. Bad food, bad air, and a want of bodily cleanliness. It is only a year or two ago that this fever broke up a ladies' school in Massachusetts, where it was supposed that great attention was given to health and physical culture. Bad air was the excepting cause. We hear every winter of cases in schools where pupils are overcrowded and do not pay sufficient attention to ventilation and bathing. These causes produce more typhoid fevers by far than liquor drinking does. This disease can be driven from any locality where these three rules are observed: Eat wholesome food; breathe pure air; keep the body clean by daily bathing.

FLOGGING IN SCHOOL.—Gradually the practice of flogging children at school and at home is going out of practice, and wiser modes of government by love and reason are taking its place. Occasionally, however, the old practice is revived, as was the case recently in Cambridge, Mass., where a school-girl was whipped for some reason not stated. The result was a threatened suit, and a resolution by the Board of Education that "corporeal punishment should be abolished in all the schools of the city." During the discussion of the subject, Prof. Agassiz, who is much ahead of the age in many if not most things, expressed himself as unequivocally against all corporeal punishment, whether of boys or of girls. He has been a teacher forty years "without ever striking a blow." The best teachers of this and other countries rarely if ever resort to the rod, and he is indeed a poor teacher who needs continually to appeal to it. See a most valuable article on "How to Train up a Child," in this number of the HERALD OF HEALTH, by Prof. Fowler.

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REFORM IN WOMAN'S DRESS.—There is a healthful tendency exhibited at this present writing, in regard to woman's dress. Not that it is all that it is desirable, but the general tendency is in the right direction. Even the fashion monthlies now and then adopt a wise suggestion from the physiologist. Years ago, on Broadway, the trail was so common that a gentleman must tread carefully on the sidewalk, or he would step on the silks and satins that swept the pavements. To-day they are nothing like so common. A year or two ago it became fashionable to loop up the long skirts so they should not touch the ground. Fashion forbade more, but she relaxed her dictum enough for this. "Give an inch and take an ell" is likely to be the result of this relaxation; for to-day, instead of looping up the skirts a few inches, a more sensible one of making them shorter has been introduced, and is likely to become popular. What the next step will be it is impossible to tell, but we hope it will be in advance. This short skirt, so far as looks are concerned, though not yet perfect, is much handsomer than the long skirt tied in ungraceful, bungling folds, and spread over broad hoops that tilt on every touch, so as to make the wearer violate every rule of modesty and propriety. But the great reform in woman's dress must be about the waist, where the vital organs are situated. Let woman make her dress about the chest both beautiful and physiological, so as to admit of the fullest action of the lungs, heart, and all the muscles of the abdomen, sides, chest, back and shoulders, and she will disenthral herself from a multitude of ills, improve her form, and become the mother of better, healthier children. Many women undertake to make their dresses about the waist loose, but forget to make them tasteful. In this they err, and prevent its general adoption. It is a very difficult if not impossible thing to make the waist handsome when using the most common style of pattern. We want the old style superseded, and something entirely new, physiological and beautiful. Man can point out wherein there is any departure from physiological principles, but to elaborate the design may well enough be left to woman. For any and all improvements in this direction we are thankful, but we will never be satisfied until a still higher standard of real merit is reached than has been gained by any one yet.

WHAT WILL THE ENGLISH DO FOR MEAT?—Our English friends are in a quandary as to where they are to get meat for their population. To answer the question, Joseph Fisher, an Englishman, has traveled extensively on the Continent, observed its agriculture, and, returning home, has written a book. His answer, restated, amounts to this: "Improve our agriculture, so as to make two blades of grass grow where but one grew before. By this means we can make two bullocks grow where only one grew before, and this, for the present and some time to come, will be sufficient." They will, however, find a more reasonable solution of the problem by accepting the theory that man needs less meat than has been supposed. Every new discovery in physiology and dietetics but adds another proof to the higher value of the productions of the earth, and the diminished importance of flesh food. Now so much land is devoted to beef-raising that the full capacity of the earth for producing food can not be tested, but there is every reason to believe it is sufficient for all the wants of human beings, and that neither Englishmen nor the world at large need to fear starvation, either now or in future generations.

SKATING.—Skating is one of the most healthful, exhilarating pastimes that can be enjoyed. It is now becoming as frequent for ladies to engage in it as gentlemen. This winter the skating parks of the Central Park will be alive with men and women, boys and girls, to the no smaller number than ten thousand at once on some of the lakes. The rules, which ladies often forget, for putting on the skates are these:

1. To adopt a skating costume which shall allow of freedom, ease, and grace of motion.

2. To dress the feet with thick, heavy boots or shoes, not worn tightly, and the legs with thick, heavy drawers and pants.

3. To commence the exercise gradually, and not to overdo it, under the excitement of the moment.

By following these rules many women will be alive and well in the autumn of 1867, who otherwise would not be.

SEWING MACHINES AND HEALTH.—It will be seen by referring to the business department, that the Publishers of THE HERALD OF HEALTH offer a Wheeler & Wilson Sewing Machine as a premium for 30 Subscribers to this magazine for 1867. The influence which the sewing machine has had and is having upon human health can probably never be estimated. Sewing by hand, when practiced steadily, is the parent of a multitude of diseases, principally curvature of the spine, weakness of all the muscles of the sides and chest, and resulting in dyspepsia, consumption, diseases of the throat, deficient and

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unbalanced circulation of the blood, cold feet, and many other afflictions we might name. The sewing machine, on the other hand, distributes the labor more equally to the various parts of the body, keeps the feet warm by calling them into exercise, and while its use may be abused, the general tendency of its use is to healthfulness. Certainly, the effect upon the mind when the operator is able to accomplish in a day what would otherwise require many days to do, must be very invigorating. It increases physical power many times. The sewing machine offered by the Publishers is one of the very best made, and will, we think, give perfect satisfaction. We hope, if any of our invalid readers are without one, they will at once avail themselves of the opportunity offered.

EQUAL RIGHTS FOR WOMAN.—At the late State election in New York it was voted to call a Convention to revise our Constitution. We are informed by Hon. H. R. Lowe, Member of the State Senate, and a man thoroughly imbued with the spirit of progress and improvement in whatever relates to human welfare, that there will be a strong effort made in the Convention for so changing the Constitution as to extend the elective franchise to women. There is a growing feeling, and it is every day becoming stronger, in favor of the justice of this change, and it comes from a source entitled to respect. We fear we shall never have a liquor law that can be enforced until woman is privileged to vote that alcohol shall not be sold to poison and debase her family. There are many who are timid and fearful of the success of this movement, lest it debase the sex; but they need have no fears in this direction. It is a matter of justice that they be not debarred from the polls. We must not expect, however, that they will at once correct all wrongs, but they will help on the tendency of the age in the right direction much faster than it goes now. There are those who think this question exceeds all others in importance, and that it will do more for woman than all other questions combined. We do not share this belief. The great want of woman in the present age is health and vigor of body and brain, and a more practical education for the duties of life. We are sorry to say it, but the education of woman is practically a failure. It does not do what it should—fit her for the highest womanhood. It is too narrow, too short and too shallow. The duties of life and the relation of the sex to nature and to society are ignored for trivial accomplishments and useless verbiage. How to be a true woman is the essential question; how to treat the body, so as to secure health; in what way to treat the mind, so as to secure growth and progress, and how to care for a child, so that it shall have a chance to be all that nature made it for, are questions of importance, not only to woman, but to man. Our readers are aware where *our* field of labor lies—in doing what we can to secure health of body and brain for woman, with a full knowledge of the vast means of caring for children, so that they shall be temperate, healthy, and noble in character and life. We hail with pleasure, however, all efforts outside our own work for the elevation of men and women, and bid the movement for woman's enfranchisement God speed.

TEETHING CHILDREN.—A little boy in Calais, Me., suffering much from teething, was treated to a decoction of opium leaves, which produced such narcotization that fatal results were anticipated. But even if his life is spared, it is probable that his nervous system will be so injured that he will always suffer from it. While immediately fatal consequences do not result from this ignorance and tampering with poisons by parents and physicians upon innocent children, the amount of permanent injury to the cause of civilization is almost past belief. The teething is looked upon by most mothers and physicians as the most fatal and dangerous period through which the young pass. Most of this danger comes through defective nutrition, over-feeding and meddling with nature, in giving poisons, and are avoidable.

A VALUABLE DISCOVERY.—We have long believed in the great value of the sun's rays in promoting health, and have often seen the best results from the sun-bath—going barefoot, and of living much in the sunlight of heaven; but a medical discoverer proposes using the sunshine in surgery as a caustic. Mr. Augustus Barnes, who has been studying this subject for many years, has succeeded in killing cancers and treating a variety of morbid growths and skin diseases with success by the concentrated rays of the sun under a small lens. We are promised an article from him on this subject for THE HERALD OF HEALTH. If his discoveries prove to have the value it is believed they will, it will be but another instance showing the value of Hygienic remedies for disease, and that, too, in a field where even those who discard mineral poisons in ordinary cases were obliged to use them to destroy morbid growths.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Congestion of the Liver.—Acute congestion of the liver is a very common affection in tropical climates, and is occasionally met with in temperate regions. It may be induced by whatever seriously obstructs the circulation of the blood in the liver, causing it to accumulate there till the organ becomes oppressed and distended.

Causes.—Alcoholic stimulants, vinegar, mustard, spices, and condiments of all kinds are among the prominent causes of this condition. Over ingestion of rich food, hot coffee and strong tea; violent exercise, or a cold bath after a full meal, may produce it. A common cause is probably some organic disease of the heart. If the cardial orifices are contracted so that the blood will not flow freely through them, or if the valves of the heart are changed in form so that they will not close properly, and thus at each contraction of the ventricles the blood is regurgitated or thrown back, its course through the hepatic veins is obstructed, and in this way it accumulates in the liver, producing distension and congestion of that organ. Emphysema and engorgement of the lungs may cause it in a similar manner.

The Symptoms of acute congestion of the liver are a sense of weight and uneasiness in the region of that organ, impaired appetite, indigestion, pain in the right shoulder and in the loins, sometimes nausea and vomiting; there may be either constipation or looseness of the bowels; there is a bitter taste in the mouth; the tongue presents a yellow or brownish coat; the head aches heavily; there is considerable depression of spirits, and generally some enlargement of the organ; also a sallowness of expression, and great loss of strength, but little or no fever. Congestion is the primary stage of most other diseases of the liver, and if not soon removed gradually assumes the chronic form.

Treatment.—The Allopathic treatment would be a saline cathartic, or some mild mercurial preparation; or it might be Rochelle salts, aloes, rhubarb, calomel with mineral acids, ammonia, ether, etc., with blistering and cupping as counter irritants.

The Homœopathic treatment would be aconite, bryonia, belladonna, chamomilla, chincona, mercurius, nux vomica, lachesis, etc.

The Hygienic treatment would be whatever would equalize the circulation of the blood and reduce the quantity in the liver, without injury to the system. We would advise entire abstinence from food for two or three days, and then only very light, plain food for several days after; the full tepid, or warm bath, with thorough friction of the entire body, to bring the blood to the surface; fomentations and cold compresses applied alternately, to stimulate the action of the capillaries in the liver, with tepid compresses at night.

Hot hip and foot-baths will be applicable in some cases. The wet-sheet pack and rubbing wet-sheet may be used where there are not conveniences for the full baths above recommended. Packs, compresses and fomentations will be most useful in a chronic form of this disease.

Hepatitis.—This name is applied to inflammation of the liver; which, though quite often exhibited in temperate regions, is much more common in tropical climates. It is said that a person making his residence in India is "sure to return *with* a fortune, but *without* a liver." The common signs of inflammation—*heat, pain, redness* and *swelling*—appertain to hepatitis. In some cases this disease is of short duration, ending favorably by resolution; in others it is the cause of severe and protracted suffering, terminating in suppuration or abscess, and sometimes it ends in gangrene of the organ, which is of course fatal.

Causes.—The miasms of hot climates are the most prolific cause, those of fever and ague districts the next. Alcoholic stimulants, taking cold after a debauch, mechanical injuries of the organ, and all those derangements of the digestive apparatus which result in ulceration of the intestines, of the stomach, of the gall-bladder or gall-ducts, will cause hepatitis. The use of purgative medicines is one of the most common causes. It sometimes supervenes upon pleuritis, or accompanies intermittent fever.

Symptoms.—At the commencement of the difficulty there is usually a slight uneasiness and tenderness in the region of this organ, which is increased by pressure; there is a fullness in the right side indicating enlargement; a dry, hot skin, high fever, often typhoid in character, considerable thirst and scanty urine; the pain, which soon becomes severe, is increased by a full inspiration or by coughing, and also by lying on the right side; the pains often extend up to

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the right shoulder, and are of a gnawing and aching character. When the pain in the side is of a lancinating character it is supposed that the outer portion, or peritoneal covering, is the seat of the inflammation; but when it is of a dull aching character, it is the deeper structures that are involved. The bowels are generally constipated, but in some cases the opposite, or an alternation may be their condition.

In a majority of cases there is a yellow tinge of the eye, or well-marked jaundice. If a distinct chill occurs during the process of the disease, it is an indication that the inflammation is approaching suppuration, and of course becomes more serious in its character.

PROGNOSIS.—This disease is usually attended with much danger, especially under the common forms of treatment; if it is not arrested before suppuration takes place, it often terminates fatally. It is usually rapid in its course, its duration not generally exceeding three weeks; if recovery takes place after abscesses form, the disease is of a protracted and tedious character. When the inflammation ends in suppuration, the pus or matter formed may find its way into the intestines, into the biliary ducts, into the cavity of the lungs, the cavity of the abdomen, or out through the abdominal walls. It is most certainly fatal when it is thrown into the cavity of the abdomen or lungs, as it gives rise to inflammation of the membranes covering those parts.

TREATMENT. — Allopathically, hepatitis will be treated on the principle of general inflammations, by dry cupping, leeching, in some cases general blood-letting, purging with blue pill, ipecacuanha, or extract of taraxacum with an alkali; stimulating liniments, and ointments or blisters externally, and opium in proportion to the amount of pain. After pus has formed, a nutritious diet, with quinia, iron, and other tonics would be used, and also applications—external as well as internal—of nitro-muriatic acid.

Homœopaths give nux vomica, chincona, belladonna, mercurius, aconite, bryonia, chamomilla, lachesis, etc.

The Hygienic treatment—*Put out the fire!* Heat is the first condition of inflammation, subdue that, and the pain, redness and swelling will soon be reduced; water quenches fire and cold counteracts heat, therefore apply cold compresses to the liver and change them as often as they become warm. If they occasion chilly sensations, they may be used tepid or warm, for even then they are cool compared with the body. Equalize the circulation of the blood, so as to withdraw it from the liver; give a vigorous rubbing in a tepid or warm bath. Warm or hot hip and foot-baths may be used for this purpose, if there is a tendency to chill. If there is very much fever the tepid wet-sheet pack may be employed, followed by a towel bath. In the intervals between the baths, the compresses must be kept upon the liver till the inflammation subsides. Entire abstinence from food for three or four days with absolute rest must be enjoined.

The bowels should be kept free by enemas. The thirst should be allayed by the free use of cool water. If the pain is very excruciating, applications of ice-cloths or of hot fomentations, or of both alternating, may be requisite to afford relief.

The treatment should be vigorously applied in the first stages of this disease to prevent, if possible, suppuration, and to promote resolution; but if suppuration takes place, the treatment should be adapted somewhat to the feeling of the patient, and applied so as to soothe the pains, keep the blood to the surface, and afford as much relief as possible. The food should be plain and unstimulating, the bowels free, the room warm, the air pure, and then let Nature take her course, and if not hindered by poisons she will do the best she can.

Chronic Hepatitis.—In chronic hepatitis we have precisely the symptoms of the acute disease, only they occur in a less violent and more subdued form. There is usually considerable enlargement; so much that it may be felt extending far into the abdomen, especially in the early stages, but subsequently it may become contracted and actually smaller than in health. This disease requires a thorough course of wet-sheet packing, compresses, tepid baths, hip baths, and *plain diet.*

Inflammation of Gall-Bladder and Gall-Ducts.—The gall-bladder and gall-ducts are sometimes the seat of inflammation, which give rise to nausea, furred tongue, tenderness in the region of the liver, diarrhea, colored stools, and jaundice. Inflammation of the duct that conveys the gall from the gall-bladder to the intestines sometimes causes adhesions of the walls of this duct, closing it completely; in which event the bile accumulates in the gall-bladder, producing enlargement and finally perforation and death. The jaundice in such case is very bad, and abdominal dropsy supervenes. Eight or ten pounds of thick bile has sometimes been found in these over-distended gall-bladders.

The treatment for these difficulties must be similar to that for hepatitis.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

The Turkish Bath.—"I. What are the essential features of the Turkish Bath?

"II. What are the effects of this bath?

"III. What are the special uses of this bath?

"IV. Is the Turkish Bath weakening?

"V. Does the Turkish Bath render the bather susceptible to colds?"

I. The essential features of the Turkish or Hot-air Bath are: 1. Bathing the entire body in heated air until perspiration is induced over the whole surface of the body. 2. The process of shampooing, which loosens up the dirt and scarf skin, greatly promotes the circulation of blood in the muscles, skin and adjacent tissues, and soothes the nervous system. 3. The cleansing of the skin and reduction of the temperature of the body to the natural standard by the use of water, either by the spray, douche, shower or plunge. 4. The drying and airing process which prepares the bather for the "outer world" again. The different processes are varied to suit particular cases.

II. The effects of the bath are: 1. To cleanse and promote the healthful action of the skin and the seven million perspiratory sewers or pores which open upon its surface and carry waste and effete matters from the system. 2. To purify the blood by draining off its impurities through the perspiration. 3. To equalize the circulation of the blood, thus removing all local congestions of the head or internal organs. 4. To soothe and tranquilize the nervous system. Rightly administered it produces the above results as no other bath can.

III. The uses of the bath are to secure perfect cleanliness, to preserve the health, to prevent disease, and to cure disease. It is more or less useful in the treatment of all diseases, but especially so in diseases of the skin, coughs, colds, rheumatism, neuralgia, intermittent fever, biliary derangements, scrofula, bronchitis, and local congestions and inflammations of any kind.

IV. The Turkish Bath is not weakening. The shampooers who labor hard in the bath from ten to twelve hours per day grow strong instead of weak, and are remarkably healthy and exempt from colds. Go ask the glass blowers, the sugar refiners, laborers in the harvest field, the stoker at the furnace, the blacksmith at the forge, if heat and perspiration are weakening. They will tell you No, and their appearance will corroborate their words. Scores of times have I asked this question of the shampooers in the baths of England and Ireland, men who have worked in them constantly for six, eight or ten years—and the answer invariably was, "I never was so strong and healthy until I entered the bath."

V. No, by freeing the blood of impurities and promoting the healthful action of the skin, it strengthens that organ and renders it less liable to obstruction, and consequently better able to resist cold.

Ice and Ice-Houses.—"Do you approve of the use of ice? How can it be obtained in the country during hot weather? Is there any cheap method by which it can be kept through the year?"

Ice is very useful in many ways, and no home should be without a supply of it on hand at all times. In the treatment of many forms of disease; as congestions, inflammations and hemorrhages, it is often indispensable to successful treatment. Every family in the country, where a supply of ice can not be procured in any other way, should at once build an ice-house, if they have not one already, and during the winter lay in a supply sufficient to last a year. Such a house can be built very cheaply. The essential points in its construction are: 1. It should be built entirely above ground. 2. The walls should be double, with a space of about twelve inches between them which should be packed close with saw-dust. A house from ten to twelve feet square, with walls eight feet high, is large enough for family use. 3. The floor should be constructed so that the water will all run to one point from whence it must be conducted away by a trapped pipe, so as to prevent the ingress of air. The floor should then be covered with a layer of sawdust at least six inches thick, upon which the ice may be closely packed in blocks. Always select ice which is thick, clear and free from snow, and put it in during very cold weather. After it is all in, pour water over it until the crevices are all filled and it is one solid mass. Cover the top with a layer of well-pressed sawdust about a foot in thickness. 4. Construct the roof with projecting eaves, with an open space three or four inches in width immediately under them, upon both sides, so as to secure the most perfect circulation of air through the space above the ice. 5. Have a small, close-fitting double door in one end, of the same thickness and construction as the walls.

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Vegetarianism and Meatitarianism.—"In the September number of THE HERALD OF HEALTH for 1866, I find an article on 'Self-Government in Diet and Doctoring,' by F. B. Perkins. The writer says: 'In like manner some people need meat, and some may be able to live without it. Neither vegetarianism nor meatitarianism, pure and simple, is a safe code. The writer has eaten more meat—good roast beef and beefsteak, mostly—than in any summer of his life before, and he has been remarkably well. A hot blooded, full blooded person, doubtless needs less meat; while one of low vitality, little blood and feeble circulation, needs food of a more stimulating and heat-giving character. What each man's enlightening stomach teaches him to eat is best for him, but not necessarily for his neighbor.'

"I would like to know what your opinion is upon vegetarianism and meatitarianism. Do you concur with the writer of the article above alluded to? Is a mixed diet the best for us? I have been taught to believe that a farinaceous, vegetable, and fruit diet, was the best for every body, without regard to constitution, vitality, hot blood, full blood, or a feeble circulation. Am I right in my belief? If a 'man's enlightening stomach' teaches him that pork, salt, milk, mince pies and sauerkraut are best for him, should he eat them? Should a man eat whatever his appetite craves, and whatever agrees with him?'

1. My opinion upon the subject of diet is that an exclusive fruit diet is the most natural, the purest, the healthiest, the most enjoyable, and conduces most to self-restraint, longevity, and the highest development of the physical, intellectual, and moral faculties of man. A *well selected* vegetable diet is in every respect superior to an animal or mixed diet, while an *improperly* selected vegetable diet *may be* far inferior; for instance, fine flour bread and sugar are more injurious than beef; so are a poor quality of fruits and vegetables. Many people get the idea that meat is bad and leave it off, and then eat double or treble the quantity of other things which are more unhealthful than meat. If the tastes and appetites of mankind had never become perverted by misuse and abuse, they would unquestionably be the proper guides in the selection of food, but perverted as they now are it will not do to trust them. A "man's enlightening stomach" will teach him to drink tea, coffee, beer and wine, and chew tobacco, if he is in the habit of doing it.

Many persons while making a change from a stimulating to an unstimulating dietary, are apparently not as well for a time, just as they are when they leave off using alcoholic liquors or tobacco—they have lost their stimulus; but if they persevere, their systems will in time become accustomed to the change and they will be "the better for it."

Dreams—Electricity.—"1. What is the cause of dreams? How can a person prevent their occurrence?

"2. Will electricity eradicate disease and restore invalids to health, without the assistance of any other remedial agents? There are physicians who pretend to remove disease and restore health by electricity alone. What is your opinion?"

1. Dreams are the result of imperfect sleep. Some one or more of the mental faculties continue in action while the others rest. This partial sleep is caused by some abnormal physical condition, usually by a disordered condition of the stomach. To prevent them obey the laws of your nature, and especially the laws of your stomach.

2. Electricity rightly used is an important remedial agent, and there are cases in which health can be restored by the use of electricity alone. This is no more than can be said of any of the other natural remedial agents. The right use of a single agent is good so far as it goes, but in most cases it is necessary to employ more than one and in some all are required to effect a cure.

Milk and Fruit.—"Is it wholesome to drink very heartily of milk? What is the proper time of day to eat fruit, before or after meals?"

1. Milk is the natural food of calves and babies, but it was never intended as an article of diet for the adults of either species. It is far from the best kind of food, and when drank in large quantities is very unwholesome.

2. The proper time to eat fruit or any thing else, is at and as a part or the whole of a regular meal.

Sleeping Together.—"If it is unhealthy for two persons to sleep together, how is a man with an affectionate wife to keep peace in the family? My better half is opposed to my leaving her bed."

When a person must do one of two things, both of which are bad, he should "of two evils choose the least."

Sugar.—"Is much sweet (sugar, syrup, etc.) injurious with regular meals?"

It is injurious at any and all times.

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Healthy Spices and Hygienic Condiments

LAP-DOGS—The babies of fashionable life.

DR. CARLYON describes a dinner party as "A hospitable attempt upon your life."

"YOU seem to walk more erect than usual, my friend." "Yes; I have been straightened by circumstances."

A WIFE asked her husband if druggists kept dye-stuffs for sale. He replied, "Most druggists keep little else but die-stuffs."

MR. PULLUP, coming home late, "pretty full," finds the walking slippery, and he exclaims: "V-v-very singular, when water freezes it allus f-r-freezes with the slippery side up; singular!"

A MAN lately heard another gravely inform two comrades, that a seventy-four pounder is a cannon that sends a pound ball exactly seventy-four miles.

A HYPOCRITICAL scoundrel in Athens inscribed over his door, "Let no fool enter here." Diogenes wrote under it, "How does the owner get in?"

AN Englishman is said recently to have invented a scarecrow so effective that one crow who saw it brought back all the corn he had stolen for three years.

A POOR man who had been ill, on being asked by a gentleman whether he had taken a remedy, replied, "No; I ain't taken any remedy, but I have taken lots of physic."

AN Irishman, charged with an assault, was asked by the Judge whether he was guilty or not? "How can I tell," was the reply, "till I have heard the ividence."

THE people live uncommon long in Vermont. There are two men there, so old that they have quite forgotten who they are, and there is no body alive who can remember it for them.

AMONG the many applications for office now pending at Washington, is one from Springfield, Ill., of a patriot whose sole claim is that he held the umbrella over the President when he made a speech there in the rain.

A STOREKEEPER painted the lower part of his stove red, and saved seventy per cent. in the consumption of wood thereby during the winter. The illusion was so complete, that one man tried to make him pay for a pair of boots he had burnt on the stove.

THE late Dr. Hawks was troubled with pecuniary embarrassments; a friend told him "the Lord would feed the young ravens." "Ay, yes," replied the doctor, "but there is nothing said about the young Hawks."

A YOUNG lady being asked whether she would wear a wig when her hair turned gray, replied with great earnestness, "Oh, no; I'll dye first!" It is a pity that the character doesn't always, like the hair, grow white with age.

A MAN had been in the habit of borrowing books, but never returned them. Being expostulated with on the subject, he replied, he was only exercising his profession. He was a book-keeper.

A MAN named Dawson, residing at Fredericksburg, Va., was recently knocked down by lightning. He had been at death's door with rheumatism previously, but had not felt a twinge since. He need not take out a patent for that cure.

AN industrious tradesman, having taken a new apprentice, awoke him early by calling out that the family were about sitting down to the table. "Thank you," said the boy, as he turned over in bed, preparatory to another nap, "thank you, but I never eat any thing during the night time."

A JERSEYMAN was very sick, and was not expected to recover. His friends got around his bed, and one of them says: "John, do you feel willing to die?" John made an effort to give his views on the subject, and answered with his feeble voice, "I—think—I'd rather stay where I'm better acquainted."

THERE is a hopeful popular delusion that there is silver in the new three and five cent coin. Perhaps there is. The doctors tell us there is iron in the human blood, but we never heard of any fellow creature being successfully worked as an iron mine.

"YOUNG man, what's the price of this silk?" asked a deaf old lady

"Seven dollars," was the reply.

"Seventeen dollars!" exclaimed she. "I'll give you thirteen."

"Seven dollars, ma'm, is the price of the silk," replied the honest shopman.

"Oh, seven dollars!" rejoined the lady, sharply; "I'll give you five."

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Department of the Publishers.

This Number.—It will be seen that this number contains 56 pages, instead of 48, as also did the December number. Its list of articles will be found unusually attractive.

The first, from Rev. Henry Ward Beecher, is upon a theme of unusual importance. It can not fail to produce a deep and lasting impression upon the reader. What facts more important to know than those connected with the right selection of companions and their relation to the health of offspring!

"The Sacredness of the Body," by Rev. O. B. Frothingham, is in his usual elegant style, and, what is better still, it gives due claim to our physical frames. We can not imagine how it can be read without profit.

"Alcohol among the Doctors," by Dr. Snodgrass, is an interesting statement of a much neglected question. Dr. Snodgrass furnished us with a valuable article for December, on "National Prohibition," which it would be well for every legislator to consider. It would be taking the question where it belongs, to Congress, where all action would be general and benefit each State, and produce a harmonious result. The whole subject is placed by him in a new light, and we advise those who have not read the December number to send 20 cents at once and get it.

"Dental Physiology." Dr. J. Allen of New York has kindly furnished us with an abstract of his essay on this subject, read before and highly approved by the Association for the Advancement of Science in New York. We commend the essay to parents who would learn a valuable lesson on preserving the teeth of their children.

"A Glance from the Jury-Box," by G. W. Bungay, is in a happy vein, and withal contains many lessons. Mr. Bungay is now lecturing in the West, and we advise our readers, where possible, to go and hear him.

"The Four Ages," by Mr. Sizer, the Phrenologist, is good, and we have in hand an article from him on "Mental Hygiene," which will appear in the February number.

Dr. Walker gives us an interesting and well-written little poem.

"How to Train Up a Child," a lecture by L. N. Fowler, is not only as readable and fascinating as a novel, but brimfull of capital ideas and hints which we earnestly hope will be read by all. The lecture is a long one, but none who commence it will be willing to stop without reading every word. We have several lectures by Mr. Fowler which we hope to print during the year. Each is as interesting as this. They are worth a year's subscription.

"How to Bathe," by Dr. Miller, is continued in this number. So few know any thing about thorough bathing that these articles can not but be considered most timely.

"Health Hints for the Winter," by Dr. Wood, were designed for the December number, but it is not yet too late to act upon them.

"The Proper Management of Young Children" is by Mrs. O. F. McCune, a lady physician of extensive experience and observation, and who, wherever known, is highly esteemed. Our promise to furnish a large amount of matter regarding the rearing and training of children, our readers will see, is being fulfilled.

"General Topics for the Month," "Readings and Notes from New Books," "Hygienic Home Treatment of Diseases," "Answers to Correspondents' Notes and Queries," and "Healthy Spices and Hygienic Condiments," all go to make up, we believe, a most valuable monthly indeed, and one which no family who wish to be healthy and happy can afford to do without.

Words of Cheer.—We are in constant receipt of such letters as the following:

"NEW YORK, 204 EAST 14TH ST., *December* 10, 1866.

"MESSRS. MILLER, WOOD & CO.—*Gentlemen:* Inclosed please find two dollars, my subscription to THE HERALD OF HEALTH for 1867.

"I have subscribed for THE HERALD OF HEALTH, I think, from its commencement, but never did I read it with so much pleasure as now; it is vastly improved and improving. To its teachings, I and my family are largely indebted; and sure I am that *many* times over it has greatly repaid us in a pecuniary point of view. I wish sincerely *every* family in the United States could monthly peruse its teachings; what a vast amount of suffering would it mitigate, and by increasing health, what happiness would it spread! If the heads of families would but place it before their children, exhorting them to study its lessons of wisdom, they would surely, I think, find a rich return for these endeavors. Hoping its list of subscribers may have increased in proportion to its enhanced value,

"I am respectfully yours, THOMAS B. LANGDON."

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Sexual Physiology.—"This is a handsome, new and elaborate work, discussing in a thorough and scientific manner the whole subject of sexual physiology, law of sex, theory of population, etc. Every page and sentence is worthy of thorough study. An original work, well written, philosophically elaborated, and beautifully illustrated, it is by far the ablest work on the subject that has ever appeared, and one of the most valuable contributions to our literature. It is adapted to both the scientific and popular mind. It should be in the hands of every man and woman in our country. It is an honor to the author and to our age.—*Eclectic Medical and Surgical Journal, Philadelphia.* Price by mail, $2. Address

MILLER, WOOD & CO.,
No. 15 LAIGHT STREET, NEW YORK.

Sewing Machines.—Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as New Years' Presents.

Samples.—Those who receive THE HERALD as a sample are respectfully requested to send us their subscription for a year. It will be a constant help in every household where found.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

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How to Do Good.—We have received the following letter from an earnest and practical friend of Health Reform in Boston, which speaks for itself:

"PHILADELPHIA, PA., *October* 1, 1866.

"MESSRS. MILLER, WOOD & CO.—*Dear Sirs:* You are engaged in a noble work, and nobly are you performing it. THE HERALD OF HEALTH, as now conducted, is a most excellent magazine, and one that should regularly visit every family circle in America. People everywhere are living in abject ignorance of the laws of health, and are constantly violating them, and bringing upon themselves sickness, misery and death. The people need to be enlightened upon these subjects and I know of no way of educating them so readily as to get them to read your HERALD OF HEALTH. Now, in view of this, I have a proposition which I wish to make, and which, if you think best you can submit to your readers. It is this: That those persons who wish to do good by helping onward the great movement, and for the Health Education of the People, shall contribute whatever amount they feel disposed to, for the purpose of sending sample numbers of THE HERALD to their friends or others, and thus call their attention to the subject. I would suggest that for this purpose you furnish THE HERALD at cost, or less, if you feel disposed to do so—say 10 cents per copy. Although I am not very abundantly supplied with 'this world's goods,' I will 'start the ball in motion' by sending you $25, together with a list of the names and addresses of 250 persons in different parts of the country, to whom I would like you to send copies of THE HERALD. I know of no way in which I can do as much good with the same money.

"Laboring and hoping for the 'good time coming,' when sickness and premature death shall be unknown, I remain

"Yours for Progress, CHARLES P. THAYER."

We most cheerfully accede to the above proposition, and in order to furnish still greater encouragement to those who desire to enlighten their friends and others, and help forward the great work of Health Reformation, we make the following offer:

We will send 12 sample numbers of THE HERALD to as many different addresses, or to the address of the person ordering them, to be distributed by such person as may be deemed best, for $1; 40 copies for $3; 70 copies for $5; 150 copies for $10; 400 copies for $30; and at the same rate for larger quantities. We shall announce in THE HERALD the names, addresses and number of sample copies ordered by each person, unless requested not to do so.

If 250 persons would contribute $25 apiece, it would place a copy of THE HERALD in the hands of 100,000 families. Think of it, friends of reform, and contribute to the extent of your desire to do good.

Premiums.—Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

Agents Wanted—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

Write Plainly.—All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

PREMIUM LIST FOR 1867!

As will be seen by our Prospectus on the fourth page of the cover, our Premium List is more valuable than ever before. The following is an abstract of it:

For 30 *Subscribers and* $60,

We give a "Wheeler & Wilson Sewing-Machine," worth $55, or a Silver Watch of the same value and of American manufacture;

For 15 *Subscribers and* $30,

"Webster's Pictorial Unabridged Dictionary," worth $12;

For 10 *Subscribers and* $20,

Each member of the Club will receive a copy of "Lincoln at Home." This Picture is 19x24 inches, and a very valuable one, being well engraved on steel;

For 6 *Subscribers and* $12,

One copy of the "Hydropathic Encyclopedia," worth $4 50.

For 4 *Subscribers and* $8,

A Gold Pen worth $3;

For 3 *Subscribers and* $6,

A copy of the "Hand-Book of Hygienic Practice," worth $2;

For 2 *Subscribers and* $4,

[One of whom shall be a new subscriber], one copy of "Lincoln at Home," worth $1.

These Premiums are all valuable ones, and priced at just what they sell for in market. Owing to our taking a large number, we are enabled to offer very great inducements to our patrons. We hope our friends everywhere will help to extend our circulation.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Clubs.—Every friend of our magazine and the cause we advocate should see to it now that our cause is nobly sustained for the coming year. We are bound to make the journal a good one, and one that can safely be put in the hands of all with the assurance that its teachings will improve their health and habits. Let each one not only re-subscribe, but get one, two, ten or twenty new names.

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books, and Baths.

October Number for 1865.—We will thank all those who have the October number of THE HERALD for 1865, and do not wish to keep it, to mail the same to us.

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Literary Notices.

PHENOMENA OF PLANT LIFE. By Leo H. Grindon of Manchester. Published in Boston by Nichols & Noyes. Price, 1 25.

This little book contains a chapter on Winter, Early Spring, April, Leaves, Structure of Flowers, Flowerless Plants, Fruits and Autumnal Days, and the Oak.

HOW NEW YORK CITY IS GOVERNED. By James Parton. Reprinted from The North American Review. Boston: Ticknor & Fields. This pamphlet of 48 pages has excited considerable comment, and is put in its present form for the benefit of the million. It would be well if every resident of any city, no matter how small, should read it.

COMPARATIVE PHYSIOGNOMY; or, the Resemblances between Men and Animals. By Jas. W. Redfield. Illustrated; pp. 334. New York: W. J. Widdleton.

Redfield's works contain much that is curious and interesting. The efforts made by the illustrations to make men look like animals and animals like human beings are, we think, overdrawn, and more the result of the art of the draughtsman and engraver than of nature. Still, the student of human Nature who is discriminating will be much instructed by perusing the work.

CURTIS'S THEORY AND PRACTICE—A Synopsis of Lectures on Medical Science; embracing the Principles of Medicine, or Physiology, Pathology and Therapeutics, as Discovered in Nature; and the Practice according to those Principles, as applied to Art. By Alva Curtis, A. M., M. D., Professor of the Institutes and Practice of Medicine in "The Physio-Medical College of Ohio;" Author of "Lectures on Obstetrics," "Medical Criticisms," etc. Fourth Edition. New York: Andrew J. Graham.

This is an exposition of the theory and practice of the Physio-Medical or Botanic System of Medicine, by the able and acknowledged leader of that school. It condemns the use of chemical substances in large or small doses, and supplies its Materia Medica with plants, roots and herbs, and the vapor bath. To those who wish to acquaint themselves with this mode of practice it is a valuable work.

RED LETTER DAYS. By Gail Hamilton. Boston: Ticknor & Fields. The "little folks" remember that Christmas is at hand, and our welcome writer, Gail Hamilton, has remembered it too, and prepared a feast for them in the form of an illustrated book, entitled "Red Letter Days in Applethorne," a story for each holiday of the year. The children will find it just the book to amuse them, and will consider it a splendid holiday gift.

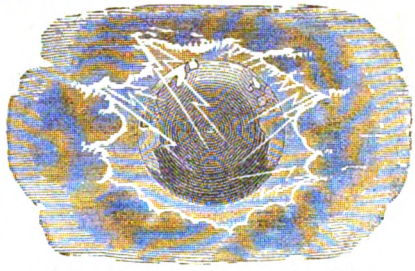
Gail Hamilton evidently understands little folks, and who knows how to talk to them and about them in a fresh, spicy way that interests old as well as young people. We extract a bit of Hygienic advice given at the end of the May-day story, "Being a Boy:"

"On the whole, I am rather sorry I have told you this story. I think I will not do so any more, lest you think girls ought not to roam about with boys; but I want girls to go trouting, and rambling and frolicking in the fields and woods just as much as boys, only if they have not been used to it, they ought to be a little careful how they attempt hard tramps in the beginning, especially if their brothers do not give them a very hearty invitation.

"Gusty made her experiment under disadvantages. She tried too much for the first time; but, after all, I do not know as it did her the least harm. It is better to be sunburnt than shadow-paled, so I advise you little girls to tie your hats close on your heads, put on stout leather boots, and strike straight out into the woods, where I doubt not you will have such fine frolics that your brothers will be stealing out after you, and begging you to let them come too!"

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.



DR. JEROME KIDDER'S
IMPROVED
ELECTRO-MEDICAL APPARATUS

Patented in the United States, England and France.

"The best yet devised, in any country, for the treatment of disease."—*Dr. Hammond, late Surgeon-General U.S.A.*

"Yours is far preferable, as any unprejudiced mind can see."—*Dr. Garratt, Author of Electro-Therapeutics, 480 Broadway, New York.*

☞ Address Dr. JEROME KIDDER, 480 Broadway, New York. jan-3t

NEW PATENT WATER-CURE APPLIANCES. *To Water-Cure and other Physicians and Patients.* If you want to cure diseases speedily and *very* successfully, or pursue home-treatment, get Dr. S. M. Landis's celebrated "*Patent Compound Electro-Magnetic Hot and Cold Air Bath,*" being a Complete Water-Cure and Electrical Establishment in a portable box resembling a wardrobe; also his "*Patent Compound Male and Female Magnitude Syringe and Organic Bath.*" Without these you are behind the age of Hygienic Improvement; or go to his office, *corner of Thirteenth Street and Girard Avenue*, or Mrs. Dr. Landis's Institute, 1631 *Vine Street*, Philadelphia, Penna., where they cure all diseases speedily; or send 15 cents for "*Medical Guide,*" etc. jan-1t

BOOT AND SHOE STORE, No. 415 Canal Street. Ladies', Gentlemen's, Boys', Misses' and Children's Boots, Shoes and Rubbers, in all their varieties, always on hand. Work made to order, and Repairing done on the shortest notice and reasonable terms.

DAVID WALKER,
aug-12t No. 415 Canal, corner Sullivan Street.

BINGHAMTON WATER CURE AND HYGIENIC INSTITUTE, BINGHAMTON, BROOME COUNTY, NEW YORK. This establishment holds out rare inducements to patients who contemplate spending the autumn and winter at a Water cure. Send for circular, or address O. V. THAYER, M. D. oc-tf

HIGHLAND WATER CURE.

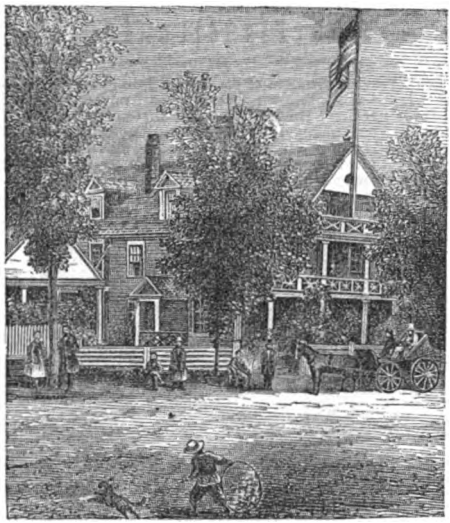
H. P. BURDICK, M. D., and MRS. MARY BRYANT BURDICK, M.D., } PHYSICIANS.
Send for Circular. Address—Alfred, Alleghany Co., N.Y.
aug-tf

WOOD'S PARLOR GYMNASIUM,

A valuable instrument for developing and strengthening the chest, lungs, etc., is easily put up, requires but little space, and may be graduated to suit the strength of any man, woman or child.

Price, $10, with pamphlet of instructions. Address, for illustrated circular, to J. WOOD, Gymnastic Academy, No. 6 East Twenty-eighth Street, New York. nov-1y*

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GRANITE STATE HEALTH INSTITUTE,

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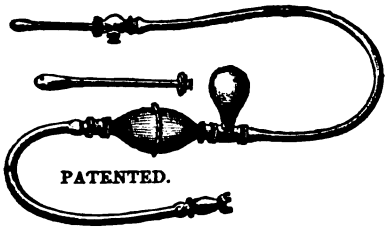
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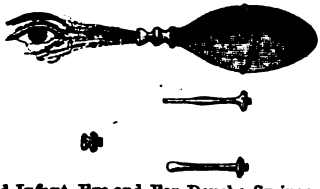
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FEBRUARY, 1867.

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General Articles—Hygienic and Miscellaneous.

The Source of our Muscular Power.

BY PROF. R. K. BROWNE, M. D.

ABOUT with us and within us, in every part, from center to outside, there incessantly flows a certain *tide* having a certain freight—the tide of life, and the freight—the sum of the particles with which that tide is freighted, which go first to make us, as we grow from infancy to maturity, and at the same time to make up the daily expenditure of the substance of our bodies.

This process is called nutrition, and by it we are incessantly furnished with the substance which supplies both the loss of our bodies and the force we exert in its movements. For in every action of our bodies, whatever that be, inappreciably slight or palpably powerful, whether *within* our bodies, or plain to the eye or other senses, as in pushing, pulling, lifting, striking or straining, we exert and thus liberate or use up a certain amount of force or power, which is eventually supplied by the freight of this tide.

This tide varies in its rate of progression from district to district of our bodies. It proceeds through and receives its first and main impulsion from a hollow muscular organ, the heart, and three sets of tubes, the arteries, capillaries and veins.

It is through the extremely thin sides—far thinner than the thinnest film of water forming the bubble—of the second, that the molecular substance which replaces the waste of the tissues transudes, to take the atomic place of other particles released from combination in the tissues.

Through their permeable banks innumerable particles constantly proceed to leave the stream and take their place in *organic union* beyond, while side by side other particles, destitute of force, unfixed from organic union, reversely proceed to enter the stream through its banks.

These tide-channels constitute a very large portion of the whole area of the flesh. They occupy every nearest and remotest nook and recess of the body. They not only are channels, but they form far the larger part of every organ, and in some organs are so numerous that they constitute nearly the whole of the tissue, except occupied intervals, of microscopic thinness, of other flesh elements, either fibers or cells.

They are far finer than their name expresses, and, unlike arteries and veins, they run *into each other*, so that the blood-elements, going a certain direction in one, in the next instant will pursue a different line of advance in another.

Through them, therefore, the tide courses in various directions, except directly backward. If, instead of projecting from the foot of a tree, the rootlets proceeded from *the twigs*, and, instead of being solid and separated, were hollow and run into each other, they would be exactly similar to the capillaries of our bodies.

This tide, we said, varies in its rate of progression, and even in the *character of its motion*.

It is resurgent from the heart, into which it incessantly falls; it is tumultuous in the arte-

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ries, and placidly-flowing in the capillaries, and is sluggish, and sometimes even stagnant, in the veins.

This tide is a thick liquor, holding in suspension the particles which sustain the tissues of the body, and furnishes both the material and the force or power for all its *functions*. For in the performance of every function, if it be only the exudation of the gastric juice, *some power is expended.*

Thus, the blood is the proximate source of all that is expended from within the body, whether it be *substance* or whether it be *force;* whether it be expended in the involuntary movements, as in the ascending and descending play of the lungs, in respiration, in pulsation or digestion, or in the voluntary movement in the exercise of the muscular members.

The freight of this tide, we said, was certain particles to supply the waste of the tissues. These particles are derived from the food, but as food itself never enters these channels we must learn how these particles arrive in them. This is the problem of digestion and absorption.

The animal, vegetable and earthy substances we eat, our aliment or food, enters the portal of a long flesh tube, extending from one extremity of the trunk to the other. That portion of it which leaves the tube is refuse. That which for a while is retained there undergoes, at a certain stage of its progress downward—in a large, capacious bulging of the tube (the stomach)—a process by which much of it becomes flowing. Therein particles of the food have entered into a condition of suspension or solution, in virtue of the action of a certain fluid—the gastric or stomach juice—which transuded from the blood through the sides of the capillaries, throughout the walls of the stomach, during the food's presence therein as eaten.

Soon after the largest quantity of this juice has entered upon the food, parts of it, the latter acted on by the former, begin slowly to find their way into the same channels whence the juice was exuded. The first of these processes is digestion; the second, absorption of food.

These particles mingle with the rest of the flowing tide in the capillaries—the blood; are thus carried with it to every part of the body the blood reaches.

The other means by which another portion of those select particles from the food proceed indirectly through the lymph *canals* to reach the same tide, we need not particularly describe.

If we have now mastered this necessary preliminary and essential information, we are prepared to comprehend the character of the great problem of food or alimentation—a problem which has engaged the best attention of physiologists for many years, but which has not until very recently yielded definite results.

To ascertain which of the enormous varieties of food eaten by man yield the relatively largest proportion of substances, or particles to supply the substances, expended or wasted by the animal frame, is the problem of the nutritive value of food.

At first, physiologists, led by chemical notions, did not exactly comprehend a distinction which we now find to be essential to an understanding of nutritive value. This was because we began by supposing that the waste to be supplied was that only of the substance of the formed *tissue* itself, and that this appeared in an excreted, *spent* form of substance, formed from that waste of living tissue. This spent substance was urea, and it was supposed to be the eventual wasted form of that formed tissue, because *it* was found to consist of the same chemical elements, viz.: carbon, oxygen, hydrogen and nitrogen, as the tissue itself yielded these on chemical analysis, whether the particles moving in the blood did or *did not*. We shall presently apprehend the error of this supposition.

We now know, however, that to estimate the *waste* of the formed living *tissue*, the flesh proper gives us, even if correctly ascertained, but a fractional understanding of the case. *This* waste occurs during the elimination of a *certain* amount of force exerted in some action or change of the *tissue*.

According to the chemical notion alluded to, this *change* was a combustion of the tissue called oxidation, a term which, in physiology, masks far more truth than it ever hinted. But this notion—while, of course, it implied that an equivalent amount of substance to that wasted by the living structure, was supplied from the moving, molecular contents of the nutritive channels, and thus implied *nutrition*, did not recognize that these contents, not yet in organic bond or structural cohesion, but ready floating to *become* so, supplied any form of bodily force.

It therefore did not comprehend any expenditure of either force or substance from the constituents of the contents of the nutritive channels in their flowing state, or until a small proportion of them had reached their structural state. This, however, was, as we have said, but a small fraction of the problem proper.

We now know that this nutritive juice or sap, the liquor, whose incoming ingredients of today from yesterday's meals of food, are eventually, after a certain probation, to become *bound*

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sions of tissue, are both *materials* of structure and exponents of force, and that to this continually replenished tide we must look for both; and therefore that these materials may evolve force without becoming a part of the tissue itself. The *demand* for the repair of the waste of the tissue is, of course, neither determined by the amount of the *supply*, nor proportionate thereto, but the supply has a certain variable relation to the waste. In the history of this problem, the first great division of the foods was into two classes, one of which differed, on *chemical* analysis, from the other in containing nitrogen. They were, therefore, respectively designated nitrogenous and *non*-nitrogenous forms of food. But in reality this division is totally inadmissible, in a physiological aspect, as it classes under one head non-nitrogenous compound alimentary substances or foods even chemically totally distinct—as fats, carbo-hydrates (starch, sugar, gum, etc.), organic acids, alcohol, etc.—but groups under the designation albuminous matters, many nitrogenous food-substances which differ very greatly from one another, both in their chemical composition and physiological importance.

The next division of organic aliments (that is aliments from some organic form of life) was: 1. *Albuminous matters* (so named from their composition agreeing with white of egg), chemically consisting of nitrogen, carbon, oxygen and hydrogen. 2. Fats, consisting of the three latter elements (destitute of nitrogen). These are butter, hog's fat, goose fat, olive and other vegetable oils. 3. The *carbo*-hydrates—as starch, sugar, gum, cellulose (skin of cells)—considered as a compound of water and carbon, whence their name. Formerly the albuminous matters were regarded as animal products, but in reality they are first formed in the vegetable kingdom.

The next division of food was Liebig's, with respect to their *assumed* physiological—not as before, chemical—significance. He regarded the albuminous or nitrogenous matters of food as furnishing the material which in and from the blood took part in the supply of the waste of tissue to the amount that waste demanded such supply; and 2. The carbo-hydrates which did not so become tissue, but merely served to evolve heat through the function of respiration. In other words he assumed that the nitrogenous food determined the continuance of the manifestation of forces; while the non-nitrogenous serve to produce heat. The former are builded into organised structures and are the producers of force; the latter support the respiratory process—so that Liebig, not aware of the doctrine that heat is simply a manifestation of force, not only distinguished mistakenly between the two, but between elements of food as tissue-repairers and heat-producers. The one exclusively taking part in one process, the second in the other.

But it was long ago known to physiologists that the theory of the character of the respiratory function—namely, that it was the special seat of combustion of carbon with evolution of heat—a physiological analogue of a house furnace—was untenable, and since we know that, while the daily departure from the body (called waste) of the element carbon—carbonic acid—(composing, with oxygen, the major part of the expired breath) may find its yet unused equivalent at a cheaper rate, in fats and carbo-hydrates, than by albuminates, yet all organic foods have a respiratory "value"—cheaper, for the reason that the carbo-hydrates are produced in much greater proportion in nature than the albuminates, and the latter are formed in the vegetable kingdom usually mixed with such large proportions of cellulose and other carbo-hydrates, that man can digest and directly appropriate them but slightly. However, in making his division, Liebig assumed the bodily force to arise wholly from the oxidation of former tissue, *i. e.* muscle, and hence that this tissue, being itself nitrogenous, could only have its waste of combustion supplied with nitrogenous or "plastic" food; in other words, that nitrogenous alimentary matters were the only substances capable of giving rise to force, and that only after their organic conversion into the muscle they nourished. But Liebig was utterly mistaken, and of this the reader will be profoundly convinced.

Seeing that muscular contraction is the great motive power within the body, and seeing, also, that chemico-physiological change is the condition of the development of this force, the products of oxidation must—or may—be in direct ratio to the force developed, and, if so, the latter may be measured by the former.*

As in the processes of physical combustion and of chemical combination, there is in the first, while it lasts, a waste of carbon (smoke) and gases, and in the second, a development of heat, analogously in the physiological changes or combustion of the body—there is an escape, in some form, of effete material which, analagous to the coke, coal or wood, or other combustible material in the first case, has taken part in the process. These are carbonic acid (burnt-up carbon) *no*-nitrogen, from the lungs, and urea, hippuric and uric acids, etc, etc., containing nitrogen

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from the kidneys. Said Liebig: "The carbonic acid is a product of the respiratory articles of food now in a flowing condition in the blood," while the excreta by the kidneys, urea, etc., arose from oxidation of muscular tissue in action. [Muscular tissue is always in action—in walking, in sitting, even in reclining and resting—least in profound and dreamless sleep.]

According to Liebig, therefore, the carbonic acid exhaled by the lungs should be a measure of the amount of non-nitrogenous matter consumed in the body, while the urea would indicate the amount of muscular combustion the muscular force exerted.

But, in 1859, Smith proved that the amount of carbonic acid from the lungs varied from time to time—a variation due not to change in food, but to change in bodily exertion, and that the expiration of carbonic acid continues with uniformity in the entire absence of food.

And he ascertained that food has, to a certain extent, the power of increasing the amount of carbonic acid. He then proved that, precisely contrary to what Liebig had alleged, it was nitrogenous articles of food—milk, tea, coffee, rum, beer, sugar, cereals and potatoes—which induce the largest evolution of carbonic acid in expired air, while the very substances the latter had pointed out as respiratory materials—starch and fat—had no effect on the exhalation of carbonic acid, *except taking them was followed by exercise*, which latter, of itself, always has the effect of increasing the expiration of this gas.

Again, contrary to Liebig, it was proved that exertion—muscular activity—had no influence on the increase of urea containing all the excreted nitrogen, while the food had a very influential one [urea is distinguished by the fact that it is nearly half its volume nitrogen, and was therefore supposed to be the exact form of the waste of the muscular, nitrogenous tissue of the body]; in other words, Dr. Smith found that the nitrogen expelled from the body did not vary in a ratio with the work done by the nitrogenous tissue, but with the quantity and quality of the food consumed. Thus, we found that the first systematic notions on this subject were wrong on every point.

At this moment Joule demonstrated, in accord with the doctrine of the correlation of physical forces, the exact relation of heat to force—namely, that the concussion produced by the fall of one kilogram through four hundred and twenty-five meters, produces heat enough to raise one kilogram of water one degree in temperature.

The heat developed, then, was the real measure of the force in the body, and the former was to be estimated by measuring the temperature which would result from converting muscle-albumen into urea, the amount of the latter being known.

To determine this, two German professors ascended a mountain. As a necessary condition, before and during the course of the experiment, they abstained from nitrogenous food, and fed on starch, fat and sugar. They sought to ascertain precisely the amount of nitrogenous matter escaping from the body, thence to deduce the amount of heat evolved in the formation of these from albumens, and from this latter ascertain, by deduction, the actual amount of force spent. The height of the mountain was known, the weight of the experimenters and their accoutrements, and the amount of work to be done, could be ascertained by multiplying the one into the other. To this work, however, was to be added that of respiration and circulation—muscular work done by the heart, arteries and lungs. From the entire data the amount of force expended in one individual case was estimated at 5197 meter-kilograms, and 25.344 meter-kilograms for the other, which, added to the apparent amount of work done, amounted to 159.637 meter-kilograms as the total work performed by one, and 187.287 meter-kilograms by the other.

It was previously known that little or no nitrogen escapes, except by the urine. Accordingly, the urine passed by the experimenters for some time before, and during and after the ascent, was carefully analyzed, and its nitrogen precisely ascertained. The exact weight of muscle which would yield the same amount of nitrogen was also determined. It was calculated that little or no nitrogen existed in the system, in the state of urea, prior to the experiment, and as little remained at its termination. We see, then, that the amount of heat evolved by burning albumens being ascertained—as it was by Frankland—by the combination of the two series of data, the amount of energy developed, in the conversion of albuminous muscular tissue, into a known weight of urea and uric acid, could be exactly determined, and this estimate compared with the work known to have been accomplished. In the calculation it was found that the amount of muscle consumed was 37.17 grams in one individual, and 37 in the other. The force capable of being generated by the oxidation of these quantities of muscle, in the muscular tissue of the body, amounts only to 68.690 meter-kilograms of force for one of the experimenters, and 68.476 for the other one; so

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that, by comparing this with the work ascertained to have been performed, we find :

	No. 1.	No. 2.
Total ascertainable work done in meter-kilograms, . .	159.647	184.287
Work accounted for by oxidation of muscle, . .	68.690	68.376
Unaccounted for, . . .	90.947	11.5911

But great as this difference is, it is not the whole, for it is known that all the heat developed is not converted into force; for even in the best constructed steam engine, only one-tenth is so transformed, but in the human system it is probable that one-fifth of the heat energy developed can appear as actual work.

By means of these laboriously acquired data, it is therefore demonstrated that scarcely one-fifth of actual energy developed by these experiments, can be accounted for by the disintegration and oxidation of tissue, as supposed by Liebig.

Strikingly confirmatory of these disproofs of the old theory, and equal conclusively themselves against it, were the experiments of Messrs. Lawes and Gilbert on the best means of feeding cattle, for they found, even long before the above experiments were announced, that the value of fodder as an article of diet for graminivorous animals was not in the ratio of the amount of nitrogenous matter, but rather on the non-nitrogenous substances they were fed. They also found that the increase of the former in the fodder of an animal could double the amount of urea excreted, without any increase of muscular exertion, even when the cattle were kept lying as much as possible.

These gentlemen demonstrated that the increase in growth and weight of these animals by food-stuffs was due to their non-nitrogenous constituents, rather than their richness in the nitrogenous ones. On careful experiments, Bischoff and Voit found, while in search of an experimental confirmation of Liebig's theory, that the amount of urea passed by an animal subjected to severe labor was no *greater than when at rest*, while the carbon, in the form of carbonic acid, was much increased.

After all, there never was any *positive* proof that urea is the product of the decomposition of muscular fiber. The fact that it consisted in large part of nitrogen *suggested* that it arose from the decomposition of nitrogenous or muscular tissue. Neither is there a modicum of positive proof that oxidation actually occurs in the muscular tissue itself. As to urea, positive researches have proved that a large proportion of it is neither formed in the tissues nor in the blood, but arises in the kidney itself, as pneumic acid does in the lungs. Hence it is far more *probable* that, if it be the result of a process of oxidation, it is the oxygen of the arterial blood, which oxidizes certain constituents of the cells of the kidney.

Undoubtedly, the muscle tissue wears out and hence requires repair, either directly or indirectly, but the product of this activity, so far as we can ascertain it by direct experiment, is carbonic acid. In many cases, muscular tissue, after the decease of animals, may be made to resume and continue that form of its activity contraction, when it always evolves carbonic acid. To affect this repair, the body requires a certain kind of nitrogenous food, but either kind of food, namely, nitrogenous or non-nitrogenous, may originate force. Either are the fuel of the motive power. Force does not therefore depend on the oxidation of muscle nor even on nitrogenous food ; neither can urea be taken as a measure of muscular matter, even if it is a product of it.

For when we have such undoubted facts as these before us, namely, that by simply increasing the amount of nitrogenous food, with little or no muscular exertion, we can increase correspondingly the urea voided, we can not suppose that this food, only attained to the state of pabulum, can possibly cause an increase of muscular exertion or expenditure of force, resulting from oxidation of muscle in the process, when there is no detectable evidence of increased or even of considerable muscular exertion at all, during the period of increase of urea.

Yet so closely did men hug this exploded theory of Liebig, that, in their first experiments, Bischoff and Voit endeavored to account for this increase of urea without increase of muscular play, by supposing that there *must* have been a "corresponding increase in the force exercised in the actions within the body." This supposition they afterward, however, abandoned.

But the researches of Smith and Frankland seem conclusively to establish that it is not the urea but the *carbon* of the body escaping, which varies in a direct ratio with the amount of work performed.

To the question of the origin of muscular force, we must reply that the supply of this force is from the food, as assimilated to the blood, and the various articles of diet both nitrogenous and non-nitrogenous.

The complicity and variety of the conditions are such that we can not be said to have as yet any measure of nutrition. But we may say that we are gaining light, and that recent researches

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are in a direction to induce the actual hope, that at no distant day we may give a very unexceptionable answer to the questions of food and strength.

That a long existing false theory should at length be totally exploded, is a great gain. The explosion scatters a whole nest of errors.

Brain and Body.

BY NELSON SIZER.

Between the brain and body there is a reciprocal action and reaction. The brain does as much for the body as the body does for the brain. To a casual observer, the brain feeds upon the body, is nourished by it, and returns no equivalent. In point of fact, however, the brain is the dominant force which controls mentally and magnetically the bodily operations; even those by means of which it is itself fed and sustained. Health teachers and physicians who ignore or overlook the intimate relationship between the mind and the bodily health, thereby exclude themselves from one of the richest fields in the whole domain of anthropology. There is an old adage containing more truth than is generally supposed, namely, "Conceit can kill, conceit can cure." This is illustrated by the old story, full of new truth to those who have not been familiar with it, of a certain charcoal-man, a marked specimen of ruddy health, who boasted that he never was sick in his life. He used to supply the students of a certain university, and was known to many belonging to the medical department. After a lecture by the professor, in which the idea was stated that the mind rules the body, the students resolved on a concert of action, to see what effect the professor's theory would have upon the ruddy coalman. So, apparently out on their morning walk, separated from each other by short distances, each student accosted him in a similar manner, expressing great concern as to his health. To the first he said with a laugh that he never was better, and, moreover, he never was sick in his life. The next one met him, inquiring after his health, and expressing surprise and alarm that he should look so ill. The reply was less confident, and had a touch of the anxious in it. The third, fourth and fifth student met him, each insisting that he was either sick, fit for the bed, or was about to be taken down with a severe illness. And, as the story goes, the man became pale, sick, alarmed, and was obliged to be taken to the hospital, leaving his cart in the street, and it required all the skill of the professor and his associates, and the best nursing the students could give to resuscitate him.

Now these appeals were made to the man's mind. This acting through the organs of the brain, almost paralyzed all the vital functions.

It is this theory of Phrenology, that all the vital organs, indeed that each of the organs of the body employed in carrying on health and vigor, has in the brain an organ which presides over its particular function. This is inferred from the fact that several organs have been discovered directly tending to verify this hypothesis, and it is inferred that not a few merely, but each of the bodily functions has, somewhere in the base of the brain nearest the body, an organ, the office of which is to control that particular bodily function.

The organ of Alimentiveness, located directly forward of the opening of the ear, is supposed to preside over appetite and to stimulate the process of digestion, and it has been discovered that those in whom that part of the brain is most developed, have the most ample and healthy digestion. Behind the ear, in the base of the brain, located like Alimentiveness, close to the common brain-center, the *medulla oblongata*, the organ called Vitativeness is located. This is supposed to give the love of life in the abstract, a desire for existence and a consequent dread of death. Such a faculty seems necessary to the preservation of the individual, irrespective of incidental pleasure or pain. This faculty has so powerful an influence in the recovery of patients who are wounded or otherwise prostrated, that they will hold on to life with a blind, yet instinctive and unyielding tenacity which does not wait for, nor need the co-operation of the reason, though doubtless it is enhanced and intensified in its action by reason. The influence of a strong endowment of this feeling is so great that a patient will recover almost marvelously, while those in whom it is weak, have little wish to live; and though not seriously wounded or ill, they readily give up to die, and no human agency can save them. The procreative faculty, Amativeness, is located in the base of the posterior part of the brain, and is powerful in its influence on bodily vigor and health. We have no doubt the liver, the lungs, the heart, the kidneys, the spleen and the muscles have severally their allotted portion of brain which presides over these functions respectively. Those organs which are located in the base of the forehead, relate us to the physical world intellectually. Persons with the brow prominently developed, delight in seeing, in experiencing, in coming in contact with the outward world.

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When we refer to the animal kingdom, we find that broad-headed animals which have a large base of brain are tenacious of life. They are hard to be killed; while the narrow-headed animals having a small base of brain, have relatively feeble vitality, and are easily killed. Take for example the lion, the tiger, the wolf, the hyena, the cat, the shark, the cat-fish, the eagle, the owl, the hawk. All the ferocious beasts and fish, and all carnivorous birds, have wide, broad heads. On the other hand, the beasts, birds and fish which are the natural prey and plunder of the carnivorous tribes, have narrow heads, and are easily killed. It may be said that, being made to be killed, they die easily—the sheep, the rabbit, the pigeon, the shad, are examples. The shark will live an hour or two out of water, and fight the handspike and bite the crow-bar. The cat-fish, or bull-head, as it is in some localities called, after being half cut in two by a spear, will live in a quart of water in the bottom of the boat all night, and fight fiercely for what remains of life in the morning. The cat is said to have "nine lives," and those who have tried to kill a cat have usually come to the opinion that its one life was nine times more difficult to extinguish than is that of the sheep or rabbit.

The brain, presiding as it does over the health, vigor and life-power of the individual, how important is it that it should be kept healthy. That this may be done, it is necessary that the mind be instructed rightly, and surrounded with circumstances of comparative happiness. But it is evident that the mind should control the body; that through the brain the whole physical system should be directed and regulated. In the lower animals instinct takes the place of reason. Pope says of reason and instinct: "This (instinct) must go right, the other (reason) may go wrong."

Left to himself, where there is a plenty of food, the beast eats that which is proper and in proper quantities. He rests when he needs rest; exercises according to the laws of health, and lives, accidents excepted, the whole measure of his natural life—it may be said without a pain or ache. Man, having reason, should have that reason instructed. He should, in short, understand Physiology and the laws of Hygiene, and conform to those laws; and we believe man would be more healthy, because more highly and more perfectly organized, than the lower animals. It is a shame, if not a crime, for human beings to be sick. Of course we mean that from generation to generation human beings should live so that their posterity would inherit good constitutions, and then by obeying the laws of their being, they might attain to a good old age without the pain and penalties which now come from the almost constant violation of health laws.

The over-working of the brain is a fruitful cause of illness. Man need not sweat and swelter under physical burdens in order to break down. He may simply be exercised, mentally, with care and burdensome responsibility, or he may be petted, and harassed, and vexed, and he will lose his flesh, and gradually break down in health. It is brain-work that does the business; that robs the body of its nutriment, and deranges the functions of the system, especially the vital functions. How does fear, bad news, joyous news, anxiety about business, the prospect of great gain or great loss, take away the appetite, the color, the strength and the flesh. Joyous news even has killed many a person of robust health, and "hope deferred that makes the heart sick" soon undermines the constitution, and sends the victim to his grave. Religious excitement has a powerful effect upon the body, more especially if the excitement be of a saddening and alarming character. Indeed there is no great interest, whether it be business, study, reputation, danger or love, that does not unsettle the sanity, break down the health, and send its victims to untimely graves.

One of the first sources of health, therefore, is to guide the mind into a healthy, moral condition. A clear conscience, a confiding trust in God, a benign, generous spirit toward mankind; these qualities of character which constitute the crowning excellence of human nature, should first be awakened and sustained; then Approbativeness or ambition for a good reputation, and an excellent standing in the community; then intellectual activity which is not burdensome, which ushers mind into the wide realm of knowledge and reason; the imagination which brings us into harmony with the esthetic world; social influence which makes one feel that he is not an isolated, separate individual, but that he is loved and prized, and lives for others beside himself. Let these emotions be aroused, and a man has no desire to die, but to be healthful, and useful, and active. But let these feelings be reversed; let one feel no kindly emotion toward his fellow men; let his sense of the presence and power of the Deity be blotted out, and the whole moral world becomes a chaos; let the eye of faith be extinguished, and the harp-strings of imagination broken; let one feel cast out from society and alone in the world, and he soon will become depressed in feeling, his health will be-

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come feeble, and he will welcome if not seek death, unless he has so much animal power as to become an Ishmael and make war on humanity with the base instincts of animal feeling. Ninety-nine men in a hundred, with all these moral and social props taken away, will soon leave a world in which they have ceased to be useful and happy. Suicide and murder do not require the bludgeon, the pistol or the poisonous potion; but crushed hopes, a blighted faith, a blasted reputation, and social ties sundered, will accomplish the dire work as effectually as it could be done by the assassin's steel, or the frantic act of the suicide.

Advancing.

STILL advancing, still progressing,
Is the cause we advocate;
Onward, upward, ever pressing,
For no "stand-still" can *we* wait;
Neither can the car of progress
By "old fogies" be delayed—
They can not prevent our egress
From the Drugopathic shade.

Men begin to learn that Nature
Would have all her children blessed,
Clothed with health have ev'ry creature,
And have life enjoyed with zest;
Rent have been the chains that bound them
To the follies of the past,
Light effulgent shines around them,
From their eyes the scales are cast.

Drugs no more, nor strong potations,
Shall life's temple desecrate;
Offer they no more oblations
To the gods that enervate.
There shall dawn a glorious era,
And its twilight now is seen,
Lighting up the brow of morning
With its radiating sheen.

HORACE.

MADISON, *January*, 1867.

Buildings for the Poor.

BY HORACE GREELEY.

THE wretched tumble-down rookeries now largely inhabited by the poor of our city (New York) are horribly wasteful in every way—wasteful of space, of property, of health, of life. Sweep away all these kennels on a block, and build up in their stead a substantial structure six to eight stories high, with basement and sub-cellar, the whole divided into rooms and suites of rooms for families and single persons, with baths, wash-houses, refectories, etc., in the basement, and public and private parlors, library, reading-room, etc., on the second floor. Let the first floor for stores or shops, and a part of the second for offices, if required; put the whole building in charge of some responsible person, disqualified for rugged labor, to be let at reasonable rates, payable monthly in advance—the highest story not more than fifty cents per bed-room. Such an edifice (economizing the space now required for cooking, washing, yard, rooms, etc.) might afford accommodations to families at from one hundred dollars to two hundred dollars, according to size and location, while two seamstresses might have an attic in common for one dollar each per month. As each family could hire a parlor or bed-room (retained for this purpose) whenever it had company, no one need hire regularly any more room than is absolutely needed, while a large square in the center of the block should be embellished with trees and shrubbery, gravel walks, grass plats and fountain.

One such edifice filled with tenants and paying ten per cent. to its owners, with a liberal margin for repairs, would very soon be imitated and improved upon until our whole laboring population would be better lodged than they now are at half the expense, while room would be made on our island for thrice the population it can now stow away under the present architectural anarchy. Pestilence would be all but rendered impossible by this building reform.

I would further suggest a Labor Exchange—the union and organization of all workers for their mutual improvement and benefit—leading to the erection of a spacious edifice at some central point in our city to form a Laborers' Exchange, just as Commerce now has its Exchange, very properly. Let the new Exchange be erected and owned as a joint stock property, paying a fair dividend to those whose money erected it; let it contain the best spacious hall for general meetings to be found in our city, with smaller lecture-rooms for meetings of particular sections or callings, all to be leased or rented at fair prices to all who may choose to hire them, when not needed for the primary purpose of discussing and advancing the interests of labor. Let us have here books opened wherein any one wanting work may inscribe his name, residence, capacities and terms, while any one wishing to hire may do likewise, as well as meet personally those seeking employment.

WE may with propriety forget that we have bestowed; but what we have received, never.

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Memory.

BY PROF. L. N. FOWLER.

THERE is no manifestation of the mind except through an organ. Phrenology declares that the brain is that organ. In proportion to its size, quality, activity and healthy condition, is it a suitable medium for mental development. Size alone is not an indication of power—some heads are too large, some are too small—and frequently the relation between the size of the brain and that of the body is not sufficiently harmonious to secure both mental and physical vigor.

When parents and teachers take into account the necessity of educating every power of the mind, we shall have better systems of education, which will develop the mind harmoniously. Children are sent to school, and they go through with a certain process of education, which perhaps brings them to the head of their class and secures for them rewards and honors. During this period of school life, only a portion of the brain has been exercised and partial genius developed, but every power of both body and mind should receive careful attention.

A young man or young lady may have a fine constitution when they commence attending school, but when they have completed their education, they have frequently done so, at the expense of health and constitution, and they return to their homes to be useless or to die. A correct system of education would have produced the opposite effect. Children, even with feeble constitutions, should not only receive book-knowledge for the brain, but should have their health renovated and restored, and fitted by their education to sustain the various relations in life that will devolve upon them. A perfect system of training recognises the body as well as the brain, and that individual only is educated, who has a sound mind in a sound body. But we shall never see any change in this particular, till the principles of Phrenology and Physiology are applied to education. Each faculty remembers for itself, and one can not take the place of another, though each has a relative power in proportion to its size and development. The strongest faculty generally takes the lead. A mother who has large Philoprogenitiveness will notice children and their peculiarities. The mechanic, with large Constructiveness, will examine every thing that pertains to his own trade. A hatter will notice hats wherever he goes. A shoemaker will see shoes. A milliner perceives every new style of bonnets. An architect will notice the architecture of buildings; while an artist will see every variety of art in paintings.

Suppose twelve individuals have visited the International Exhibition and faithfully recorded their impressions. We should have, perhaps, twelve different descriptions of the same Exhibition. The flippant young gentleman has seen only the fashionable young ladies, and the splendid equipages in which they came. The mechanic has seen the machinery; while the amateur artist has admired the beauties of the picture-galleries, etc.

The idea is, that the mind guides the eye and the ear; so that the range of observation will extend in proportion as the mind is educated and developed. This is peculiarly the case with memory. We remember those things best which engage our attention, and we attend to those that please or gratify our predominant faculties. Supppose a young man, who has a very poor memory of names, should love a young lady whose name he does not know; as soon as he hears it, he pays attention, and thus it becomes indelibly fixed in his mind.

But if he had felt no special interest in the young lady, he might have heard her name several times and not remembered it. A business man may have great difficulty in remembering names of persons; but let some one tell him if he will recall that of a certain individual, it will be one hundred dollars in his pocket, he will not fail in the attempt; personal interest will overcome his natural deficiency. Hence, we perceive that a bad memory is sometimes the result of carelessness. When all the faculties of the mind are cultivated, we shall have good memories. ¡The query then arises: How shall the mind be cultivated? What faculties shall first receive attention? Our efforts will be effectual if we commence in childhood, for the child has the faculties of the man; many of them are however latent, and require much care in their development. We must follow the order of nature in this respect, as well as in the cultivation of the soil; and, as mind is far superior to matter, so every aid that will help us in understanding the former, should be as joyfully welcomed by the teacher, as hints about the latter, are, by the scientific farmer.

The appetites, passions, and the acquisitive disposition are first developed, then observation of the practical, every day occurrences of life. The child remembers first what he sees and hears, the lapse of time, the physical condition of things, before thought, imagination and conscientiousness are exercised. Hence, we see the absolute necessity of educating the mind accord-

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ing to its natural growth. We must begin with the base of the brain, and if that is well cultivated or wisely directed, we lay the foundation for the correct action of the mind as a whole. We must have method in our plans, and not allow education to be a mere chance.

The perceptive faculties of children are cultivated by surrounding them with objects of sight and perception. An old lady sent for me to examine her grandchild—its mother was dead, and she wanted to make an angel of the little girl. She certainly took the best course to do so, for after Susan was dressed very neatly every morning, she sat on one chair in the drawing-room nearly all day, so that she need not soil her clean dress. Her shoes always looked as if just purchased, for she was not allowed to play out of doors, and her curls were as smooth at night as when combed in the morning. Grandmamma was fearful that her skin would become browned by the sun; so the poor child had to remain in the house nearly the whole day, and literally was pining for the sports and amusements of childhood. She was as pale as marble, as though she had no blood in her veins—a puny, delicate, sickly-looking child. "Ah!" I replied, "you are pursuing the very course to make an angel of your child; keep it on one chair, do not let the sun shine upon it, do not let it soil its apron, do not let her play with other children, draw down the curtains of the window so that the air may not come into the room, and by-and-by, you will not have your child here; she will in reality be an angel. But, if you wish to have her live and be healthy, let her breathe fresh air every day, let the sun shine upon her, never mind if she soil her shoes and clothes—these can be renewed, but you can not get back your child when she has gone. She will be obliged, eventually, to come in contact with human beings, and unless she plays with children, she will be quite unprepared for her future intercourse in society." This hint was sufficient—the lady saw her mistake, and promised better things for the future.

The perceptive faculties of children can only be cultivated by directing their attention to objects of sight. I would assemble the children of a neighborhood in a large hall which should be devoted entirely to education; comfortable seats should be around the hall, the light should come in from the ceiling, the walls should be hung with paintings and diagrams illustrating every branch of natural history. There should be a laboratory, in which all kinds of chemical experiments should be made. Every object of art and manufacture should be displayed in the room. The teacher should be competent to explain to the children the various phenomena in nature, and should vary the exercises from day to day, so that there should be no monotony in the education. For example—let the teacher take a candle, explain its composition, and if possible, make one before the children, tracing it through the various processes from the animal to its present form. The children would never forget what they had seen, and would be much more interested than if they had learned it from books; in fact, I would have no books in the building, but objects to be seen, so as to cultivate perceptive memory. The children should be taught to walk lightly and gracefully, and the muscles developed by calisthenic exercises. Sometimes a whole congregation is disturbed by a person who carelessly walks with heavy boots into church. If the man had been disciplined when a boy, he would have regarded the rights and feelings of others, and if obliged to go late to church, he would have entered noiselessly. Children should be taught to walk properly when young; they will then acquire the habit, and will always do so when older.

I would have a fine garden around the schoolroom, planted with trees, vines and flowers of various kinds. I would have birds and their nests, and would teach the children how to cultivate flowers and plants. There should be a work-shop for those who had mechanical talent, tools for them to use, and models for them to copy. After a thorough foundation had been laid for practical knowledge, I would, perhaps, at the age of eight or ten years, put books into the hands of the children, and continue their education in the various sciences which might benefit them in after life.

Education at the present day has a two-fold object—one, to learn those things which we need to know, and the other, to discipline the mind while we study. It is a fact that children, under the present system of education, spend one-half of their time in studying those branches which discipline the mind, but are of no utility to them in the practical affairs of life; whereas they ought to accomplish both of these ends at the same time, with much less labor and a better result.

In thus conducting the education of children, I would take into account the organization of each. If the perceptive faculties of a pupil were deficient, I would direct the attention of the scholar to those things which would call these faculties into exercise. If I observed that the eye of a scholar was not prominent, thus conveying to my mind the idea that the power of language was deficient, I would encourage such a

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led to read aloud, commit to memory, express his ideas clearly on different subjects, till he had developed the faculty of language. In the same way, I would encourage all the weak elements of mind, and repress those which were too strong.

When a good foundation is laid, I would then endeavor to develop the reasoning powers. Children see, remember, compare, are emotional, but they do not reason. Old people complain sometimes of the thoughtlessness of children. It is true that they do not think, that they can not think and reason. The faculty of Casualty is, generally, latent in childhood. The perceptive faculties must store the mind with facts, before the reflective powers can act wisely, for reasoning is based on observation and experience, and we can not reason correctly without observing correctly.

When the child observes and becomes interested in objects, then the queries arise, why, for what, and wherefore, such a thing was made. It must see the moon before it will ask who made it; and then is the time to train the reason as the mind expands to desire it. If we watch the buddings of intellect, the remarks and questions of a child will be our natural guide for its education.

The language of large Individuality in a child is, "Let me see, let me see! I do not wish to go to bed, because I want to see what is going on." Large Eventuality wants "to see how the thing is done, how the parts are put together." But large Causalty asks "why the thing is done." By gratifying these various powers of the mind, other avenues of thought are opened gradually, but if they are checked, originality is ultimately stunted. Curiosity should be stimulated, so far as it leads to good results, for without it, the child's mind would soon become a blank.

Some children will gain much information through the sense of hearing. Let such listen to conversations of a practical, scientific, and useful kind, attend lectures and debates, and be encouraged to express what they have heard.

Some children do not love their school. The reason is that the school is not adapted to them. When children are educated according to their intellectual tendencies, instead of being forced to follow a prescribed course, whether they are fitted for it or not, they will be better pleased, for every child has an instinctive desire for some kind of information. We can form but a limited idea of the real power of any faculty of the mind. We may obtain an occasional glimpse of what might be attained by discipline, from the achievements of individuals in certain directions, physical as well as mental.

The mind, as well as the body, can be trained to a wonderful extent. Sir William Hamilton says in The Monthly Religious Magazine, that Ben Jonson could not only repeat all that he had ever written, but the entire contents of books that he had read. Jonson had a large perceptive brain, and prominent Eventuality. Niebuhr, in his youth, was employed in a public office in Denmark, and on one occasion, when part of a book of accounts had been lost, he restored it from his recollection. Seneca complained of old age, because he could not repeat as he once did, 2000 names in the order they were read to him. On another occasion, when, at his studies, 200 unconnected verses were pronounced by different pupils of his preceptor, he repeated them in a reversed order, proceeding from the last to the first uttered.

When Theodore Parker was in the Divinity School, he had an idea that his memory was defective, and needed to be improved. He accordingly hung an immense chronological chart in his room, and gave himself the task of committing the contents to memory. He commenced with the year 1, and learned all the names and dates through every period of history, from the time of Adam, through that of Nimrod, Ptolemy, Soter, Heliogabalus, and the moderns. Theodore Parker was a ripe scholar. He could read thirty-four different languages, but he studied too much, overworked his brain, and thereby shortened his life.

The verbal memory fails the soonest. Girls have a more retentive memory than boys, and children will commit to memory and recite verbatim more easily than adults. The reason is, that young persons have not commenced to think, and the mental energy is not absorbed by the reasoning faculties, so they remember those things of which the senses take cognizance, especially what they hear. When the reflective faculties are exercised, the perceptive lose their power, and the memory is more feeble, unless the mind has been well disciplined and stored with facts and statistics. Sometimes, girls have the perceptive faculties more prominently developed than boys, and, generally, they have a larger organ of language, which enables them to remember words and names more readily. A little girl and boy entered into competition with regard to remembering verses in the Bible for a particular lesson in the Sabbath-school; the boy learned 250 verses, but the girl committed 500. A girl in the State of New York, could repeat the entire New Testament from Matthew to Revelations; she had a remarkable facility for committing to memory. Those who are successful

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in this respect will be broad between the eyes and have prominent Constructiveness, Ideality, Language, and the perceptive faculties. To keep the verbal memory fresh and good, it is necessary to communicate what we have heard as nearly as possible in the same language, to learn different languages, commit to memory choice passages in speeches and poetry. Practice is necessary to insure a good memory. Much depends on the organization.

I believe that in another life we shall have it in our power to recall every impression that has been made upon the mind. The walls of the mental house are built up by these layers of thought, and in proportion to the clearness and vividness of the impression, to that extent shall we be able to reproduce it. The fault is that we do not take the trouble to recall the past, and it, therefore, fades from memory. A business man will remember the transactions of the day, those persons with whom he has made bargains, and the nature of his business; while the literary man will read a book on history or philosophy, and will treasure in his mind every important fact or principle he finds in it, to be used when occasion requires. John Quincy Adams was enabled to remember all the speeches made in Congress for twenty years, and he could correct an inaccurate quotation from any one given during that period; his word was never doubted, for it was a common saying "that he was a walking vocabulary." He had large Order, and the perceptive intellect was so prominent, that he systematized every thing he heard, and his physiology was in such a healthy state, that the mind acted freely. The power of the memory in insane persons is very remarkable. When the normal state returns, they can recall a vast amount of the images which troubled them during their illness. The late Rev. Robert Hall, of Leicester, whose eloquence and oratory were never surpassed, was attacked with insanity while he was preaching in the pulpit. When he returned to his normal condition, after a lapse of years, he remembered every thing that had taken place during his affliction. On his recovery, he gave the following admirable advice to those who have the management of lunatic asylums: That they should exercise great kindness in the treatment of the insane, because they have such exquisitive perception, that their sufferings are aggravated a thousand-fold by unkindness.

CONDITIONS FOR A GOOD MEMORY.

What are the conditions of a good Memory?

1. A phrenological organ as the medium of mental manifestation.

2. Good Health.

3. Systematic Cultivation of the Faculty.

4. Strict Attention, with a Determination to Remember.

5. Endeavors to recall what has been Learned.

While each organ remembers for itself, there must be a fair degree of Eventuality, which is located in the center of the forehead, to give a memory of the common affairs of life. In proportion as this organ of memory is developed, to that same extent will there be a foundation laid for the favorable action of the mind in other respects. All the faculties can be cultivated so that their growth may be perceptible to the observer. There must also be a vigor of constitution, strength of organization, a full cup of life, and a fair amount of vital stamina. When the body is healthy, the mind is strong and the impressions are clear and vivid.

The systematic culture of the mind is an essential condition to good memory. If you wish to remember the contents of a book, read it methodically; then, one idea will suggest another, till you can recall the whole.

It is impossible to dwell too strongly upon the efficacy or importance of system in the education of children. There should be method in all they do, viz.: rising, bathing, eating, playing and studying. If this lesson is taught in childhood, much valuable time will be improved that otherwise would be lost. Great attention should be paid to cleanliness, and the faculty of Order should be cultivated.

When children attend school without care in this respect, they do not receive much profit from their lessons; hence, fail in remembering them. When I was lecturing in Northampton, England, I said to my audience: "If you have a bad boy in town bring him to-morrow night to the lecture, and I will tell you why he is bad and how he should be trained." Accordingly, at the close of my lecture, the committee sent a boy to me from the audience; a dirty, ragged, careless boy; one that looked as if he had no friends. He was chosen because he was considered to be a bad, troublesome boy. I remarked "that I should not be surprised if such a dirty boy was bad, for he certainly had no friends to care for him properly, or he would not have come to the lecture in such a plight; and the first thing I should do, by way of reforming him, would be to wash his face, comb his hair, clean his shoes, and teach him to cultivate self-respect." Parents and teachers may not be able to prevent their children from wearing ragged clothes, but they can always manage to have them clean. When a boy loses his self-regard,

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he becomes very negligent with reference to his conduct; and if he once has the reputation of being bad, he will not make much effort to be good.

The school-room should be a very model of neatness; the windows should be clean, and the walls free from cobwebs and dust. The children should be taught either to take off their heavy boots in the ante-room and replace them with slippers, or to walk very quietly to their seats with as little noise as possible. They should arrange their books so that they will know just where to find them, that no time will be lost, and they will then be able to commence their studies at once. They should not be allowed to throw paper on the floor, but should have a particular place for it. If children form habits of system while young, they will go out into the world prepared to fill posts of eminence. Margaret Fuller, afterward Marchioness d'Ossoli, taught a model school in Rhode Island before her marriage. She was a very successful teacher, and was remarkable for her discipline and order in the school-room.

It is very important to study with the intention of remembering. A boy has a lesson to recite to-morrow; he learns his lesson for that purpose. He will easily remember it till after the time of recitation has passed, and then he forgets it as readily; whereas, if he had learned it with the idea that he must remember it as long as he lived, it would be very different. Perhaps he studies it on Saturday to recite on Monday; he finds no difficulty in retaining it for that length of time. An actor was called upon suddenly to learn a new drama for the next night. He committed it, and played it successfully, but had to re-learn it every time he played it, because the impression faded from his mind as soon as the specified occasion for which he performed the task had elapsed. If you attend a lecture with the intention to recall it on your return to your home, you will listen with more attention, and will gain many more ideas than if you go merely to pass a pleasant hour. It is a bad practice to study for five, ten, or fifteen years without applying that knowledge. The greatest benefit would result from education in a school where the pupils were obliged to study in the morning and experiment in the afternoon with the knowledge gained. They would then be more thorough, and understand what they learned. A young lady may have a "finished education," and yet may not be able to use her knowledge practically. A young gentleman may have graduated at Cambridge, and yet be unfitted for the practical duties of life.

CAUSES FOR A POOR MEMORY.

I have thus delineated the conditions for a good memory; let me now give you various causes or reasons why some persons have a poor memory.

First, they may have over-worked their brain and exhausted the energies of the nervous system. A majority of the people tax their minds to the utmost, and instead of re-invigorating themselves after exhaustion, continue their labors till their systems are deranged by excessive mental application, and the brain loses the power of receiving or retaining the impressions made upon it. Many have disqualified themselves for labor by over-charging their brain with more than it can do. It requires great presence of mind, much firmness and decision of character, for an ardent, enthusiastic person to take rest when work presses upon him and opportunities for labor multiply; and he frequently continues in business till sickness entirely disables him from pursuing his calling.

Inactivity of mind is another fruitful source of a poor memory. However strong and vigorous the mind may be, originally, unless exercised, it is like gold and silver laid away in a napkin, which becomes tarnished, though, if used daily, they would be bright for years.

Irregularity of life is another reason for a poor memory. If persons are subject to extremes, sometimes getting up early and sometimes late in the morning; if they indulge in excesses of any kind or trifle with their organization so as to impair its power, they can not expect to have clear ideas on any subject—especially a good memory. It is important to live systematically and methodically if we would preserve the brain in a good condition.

Dissipation destroys the memory. When the nervous system is over-stimulated by alcohol, tobacco, opium, or by any thing that excites the brain, the result is unfortunate. It may increase the brilliancy for a time, but soon the constitution becomes affected by the over-stimulation, and the mind will be subsequently more dull and obtuse than ever.

Sickness is a great drawback to the memory. Mental impressions are like the daguerrotyping process. If all the chemicals, solutions, and mixtures necessary for the plate are in the laboratory, and properly applied, and the sky is clear, there will be a distinct picture of the object on the plate. If any of the chemicals employed in the process are wanting, there will not be a satisfactory result, but a dull, brown, indistinct picture. So with the individual who is sickly

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and debilitated, whose stock of vitality is feeble; the mind is obscure, and the pictures made upon it are not clear and vivid. A person in health, with a small organ of Eventuality, will have a better memory than one who has naturally the organ larger, but is constantly complaining of illness. There is no profit in being sick—save to the doctor. How common is it for persons to say that they had a first-rate memory till they were ill at a certain time!

When sickness comes, if, instead of drugging, you should recover by attention to the laws of life, obeying those which you had broken, you might regain the tone of your mind, and memory would be restored; but some people think that they must take medicine when well to prevent their being ill, and certainly when ill to recover health. When there is imperfect digestion, or bad circulation of the blood, you should not displace the disease by sending the difficulty to another part of the system or by inducing a secondary disease; you should strive to restore every part to its normal condition. We rarely find physicians at the present day who believe that medicine cures—they say that it *helps* nature. If you can get along without it, you will have a better memory. Physicians often give medicine because the people ask for it, but they should teach them a better doctrine—to obey the laws of life and health. Then, the advice of one who has made a great expenditure of time and money to obtain the knowledge necessary to give information, will be appreciated and remunerated. It is the young doctor that administers the largest doses; the young parent who whips the child most severely; while the old physician gives hygienic advice, and the old father counsels his child. The old clergyman advises the sinner to return from his evil courses through the motive of love; but the young clergyman injudiciously pours out the thunders of the law. In the one case, it is the youthful energies that govern, in the other, wisdom and experience control. The physician and clergyman should go hand-in-hand; one to teach the people how to live, and the other how to die.

Indulgence in light and frivolous reading will induce a poor memory. Many individuals spend most of their time in reading novels that they do not wish to remember, but they read them for mental dissipation. This has a great tendency to blunt the memory. The desire of the reader is not to learn the moral teachings of the work, but to find out the plot of the story, with no idea of remembering what he or she reads. The consequence is that, when they endeavor to tax the mind in earnest, it is impossible to do so, for bad habits of thought, attention, and memory, are not easily remedied.

Another cause of poor memory is a want of attention in any special direction. Bayard Taylor has a wonderful memory by natural endowment, but he has cultivated it in the direction which has distinguished him beyond other travelers. He has large Locality, Individuality, and Comparison which aid him greatly. I told him fifteen years ago, that his superior gift was to travel, to remember places where he had been, and afterward, to describe those countries he had seen. He has since that time traveled in nearly all parts of the world, and he has given more graphic and interesting descriptions of places than the majority of authors. But he traveled with the intention to remember what he saw, in order to describe it. He thus exercised his natural gifts, and the result is his marvelous attainments. He is constantly engaged to lecture, and many young men may envy him, his fame, and opportunities for usefulness; but if they will only develop and exercise their own talents as perseveringly as Bayard Taylor has done, they can succeed as well, perhaps, in other channels of life, for which they may be better fitted.

AIDS TO THE MEMORY.

I have stated that each faculty remembers for itself, that it is also a fact that one faculty may help another to a very great extent by the law of association. Mr. Stokes, of London, teaches a very fine system of Mnemonics, which is based on the principles of a combination of the faculties; the larger aids the smaller, and one remembered fact suggests another. He has produced very satisfactory results from this method. Some persons remember by association altogether. If Comparison is largely developed, it causes persons to trace resemblances, and one fact readily suggests a similar one; so one faculty enables an individual to recall facts connected with another. I examined the head of a gentleman in Hamilton, Canada, before an audience. At the close of my remarks, he said, "You have not mentioned my memory at all. Is it good?" I replied, "Your memory is peculiar, and I would prefer to say nothing respecting it."

"But I should like to know."

"Well, I must say that your phrenological developments are rather marked, for you have large Acquisitiveness and Eventuality, combined with rather small Conscientiousness. The result is, that if you owe a man any thing, you are liable to forget it, but if another man owes you

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a debt, you will remember it for many years; in fact, will never forget it. In the one case, money comes into your pocket, which Acquisitiveness remembers; and, in the other, the money goes out of it, which small Conscientiousness prevents Eventuality from recording." The audience were amused, for it was true of him, as I afterward learned, that he would never go out of his way to pay a debt, but would not scruple to be at great pains to recover any money which another person owed to him.

Individuals who have large Combativeness will remember all the insults they have had, and every incident connected with the encounters in which they have engaged, and the opposition they have overcome. Heenan and Sayers are able to describe every blow they have received or given. They may forget things of an ideal or intellectual nature, but to the end of their lives they will probably take cognizance of all that pertains to fighting and physical contention.

When Approbativeness is large, a person will remember the compliments given to him from time to time, while large Benevolence retains the recollections of benefits received and conferred. Large Conscientiousness will remember acts of injustice perpetrated, and any derelictions from duty. Locality remembers places; Individuality, objects; Order, the arrangements of things; Comparison, the association of ideas. Eventuality remembers actions and the condition of things. Those who have defective Individuality will be unable to recall the common events of life.

Children, generally, have large Eventuality; and one way to educate them is to tell them stories and let them try experiments.

Mothers, if your children have the central portion of the forehead fully developed, they will have large Eventuality, and will want to see every thing that you do.

If a baby has large Eventuality, and you attempt to put it to sleep by singing and walking across the floor, it will be so much entertained, that it will keep awake to listen and see how you do it; but you can soothe it by closing your own eyes, and from the force of imitation it will soon follow your example and go to sleep.

One way to aid the memory is to review the past. Suppose you have attended a course of lectures; at the close, attempt to think of what you have heard. "Well," you will say, "the subject of the first lecture was, 'How to Read Character.' In that lecture, physiognomy, physiology, and phrenology were particularly explained, while signs of character in the face, in the form, and general build of the body, and in the shape of the head, were pointed out and illustrated. The second lecture was 'How to Rise in the World.' Explanations were given as to the mode of rising in the world, and the objects we should have in view. The influence of ambition was described, and the various kinds of ambition were stated, etc." In this way you might review the subjects of every lecture that you had heard, and you would find it to be a material aid to your memory by pursuing this course. At the close of every day, spend fifteen minutes in thinking over the events of the day. At the close of the week, think of the transactions of the past week; also review the events of the month and the year, and you will strengthen the powers of the mind.

On every occasion try to be self-possessed. Many individuals are defective in this respect. Some children fail in reciting their lessons from no other reason than that the blood rushes to their brains, in consequence of their fear of making mistakes. Thus the mind becomes confused, and though they know their lesson they can not recite it. Sometimes individuals make great blunders at parties for the want of self-possession. A diffident speaker will often make a mistake before an audience from the same cause. By all means strive to secure self-possession. Know what you intend to say or do, and be sure that you are equal to your task; and do not feel, because you have failed in one attempt, or have made one great mistake, that you will be annihilated. Never mind if people laugh at your blunders; try again till success comes.

Another aid to memory is a correct impression made early on the mind of the child. You wish your child to have a good memory. What is to be done? A stranger comes into the house to visit you. Do not send your child into the other room while the stranger is present, unless he has called on business of a private nature. Take your child on your knee and introduce him to the visitor. "Look, my son, and see this gentleman. He is a tall man, has black hair, deep sunken eyes, full cheek-bones, a small face, long chin, long neck, long hands, long limbs, and is rather spare. He looks as though he could work. Would you like to know the name of this gentleman?" "Yes, papa," the child would reply. "Well, my son, the name of that gentleman is John Smith." After an hour, another gentleman comes in to see you. Call in your son again, and say to him. "Do you see this gentleman? he is a short, thick, stout-

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built man, he has sandy whiskers, very little hair on the top of his head, he has full eyes, a full cheek, a short neck, short body, looks as if he lived to enjoy himself, and works only when he must. Would you like to know the name of that gentleman? It is Mr. John Jones." That boy will always remember the description of John Smith, and he will never confound him with John Jones. He will tell you that John Smith was tall, had black hair, deep sunken eyes, prominent cheek bones, a long neck, a long nose, a long chin, a long body, and looked as though he could work; while he will describe Mr. Jones as a short, stout man, with a round, full face, full eyes, sandy whiskers, a rotund body, and looked as though he would enjoy himself whether he worked or not. The boy will, by these different associations, always be able to recall them, whereas, if he had been simply introduced, he would not have formed a distinct idea of them. Try this or a similar method with your children, and you will then perceive the truthfulness of the statement.

Some recall by understanding the thought or idea. Professor Bush, one of the most learned linguists in the city of New York, was in the habit of recalling those subjects which he comprehended. He remembered languages because he understood their formation and derivation. He had a predominance of the reasoning faculties; and frequently when I have asked him a question, he has put his hand to his forehead and said, "Let me think about it for a moment." He would soon recall the idea or fact, and express it in his own language. When he wrote, his articles were burdened with thoughts, sentiments, and emotions, rather than with facts and statistics. A gentleman who edited a newspaper in which the crimes of the country were recorded, had a retreating forehead. He did not think and reason, but he could sit down and talk to you as long as you wished in reference to what was going on in the town. He remembered every fact and statistic concerning the bad men of the country, and what he wrote was simply a record of occurrences.

You plainly perceive that some remember by seeing, others by thinking, each according to his organization. Lavater had great perceptive faculties, and remembered what he saw. His valuable work is filled with the results of his extensive observations. Daniel Webster remembered thoughts, ideas and words, because his mind was not only stored with facts, but he had a large and comprehensive brain.

One way to cultivate the memory is to travel and become acquainted with the external world. If your child is deficient in the perceptive faculties, let him go abroad and see different countries. He will thereby accumulate a fund of information which will be a substantial basis for his philosophy. It is in vain to expect that a child will remember, unless he has the organization expressly adapted for memory, without special cultivation of those powers of the mind, in which he is deficient.

The weaker faculties should be strengthened by exercise. It was wisdom in Prince Albert to prescribe an extensive tour of traveling for the Prince of Wales. He has more of the observing than reasoning intellect; and by the course of education which has been adopted for him, his practical talents have been developed, which will lay a good foundation for the exercise of his reasoning faculties and judgment in after years. The mind should be developed according to its peculiar requirements. Some need one kind of stimulus, while others want a different training. Each should strive to discover his or her necessities, and supply the deficiency. The advantages of a good memory are too great to allow this subject to be neglected, and every collateral aid should be welcomed in order to develop the mind, so that it can be a lasting treasure-house in which useful knowledge may be stored.

The world around and about us is so full of individual objects, that we have only to open our eyes to see at every hand the wonders of creation. But how many are there, who, "having eyes, see not; having ears, hear not." The faculties of the mind should continue vigorous as long as life lasts. The reason why memory fails in old age, is, that the body loses its power and efficiency, health is gone, the person ceases to observe as in his youth; hence, the cerebral organs have not as great activity.

The great lesson of life should be to discipline the mind and body, so that each may be harmoniously developed.

On examination of a witness as to the locality of the stairs in a house, the counsel asked him, "Which way did the stairs run?" The witness, a noted wag, replied: "One way they ran up-stairs, but the other way they ran down stairs." The learned counsel winked his eyes, and then took a look at the ceiling.

"Bob, you say you believe most diseases are contagious. How long have you entertained such notions?" "Ever since I sat alongside of a blue-eyed girl and caught the palpitation of the heart."

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Winter Sports for Boys and Girls.

BY J. B. F. WALKER, M. D.

Written for all the very good little Children who read THE HERALD OF HEALTH.

THE earth is full of spirits bright,
Which seem to shed an angel light.

The sky looks down with eye serene
Upon this virgin winter scene.

The snow-birds warm, in coats of gray,
Are searching for their food to-day.

With fol'age white, instead of brown,
The distant woods are loaded down.

The towering pine shoots up its green,
The maple trees are seen between.

The hill-side rough is smooth as ice,
The flakes have done their work so nice.

When first I woke and saw this sight—
The cream-like snow, so soft and white—

It made my eyes to sparkle bright,
And filled my soul with strange delight!

Jack Frost has been at work all night—
He's fond of fun, the jolly sprite!

I'll bring my sled from out the barn,
I'm sure a ride could do no harm.

There is no sign of wind or storm;
The cockles of my heart are warm.

With mittens, cap, and sled to steer,
What need a soul like mine to fear?

I love the air so fresh and pure,
To brave the cold and thus endure.

I love to climb the hill-side steep,
And reach the foot with magic sweep!

'Tis fun to dash the rocks between,
And rush along as if by steam.

The exercise will do me good,
'Tis for my body more than food.

Then let me slide now, while I can;
A few snows more and I'm a man!

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Spectral Illusions—An Autographic Case.

BY J. E. SNODGRASS, M. D.

THE books are quite sufficiently replete with examples of spectral illusions of the class symptomatic of delirium tremens, while there is a paucity of another class whose origin is not so readily explainable, although they are of by no means uncommon occurrence, if I may judge by what I have observed and experienced.

Believing it to be the duty of medical men to add, whenever they conveniently can, to the record of intellectual science, I propose to describe a spectral illusion by which I myself was visited a number of years ago. If not equal in interest to the celebrated case related of himself by Nicolai, the Berlin bookseller, without which no treatise on spectral illusions would be considered complete, it may at least serve as a companion for it. I mention his case simply because in it, as in my own, the forms of human beings, animals and birds were those presented to the diseased imagination. We have his assurance, further, that "none of the figures had any distinguishing characteristics. They were neither terrible, ludicrous nor repulsive," as spectral figures are very apt to be, especially when the result of alcoholic indulgence. On the contrary, we are assured that "some were even agreeable." Here, as we shall presently see, they similate the personal experience which I now proceed to put on record.

I had been severely attacked, at the time referred to (the spring of 1855), by pleuro-pneumonia, which had assumed a decidedly typhoid form. It was after the disease had expended its force, and convalescence had commenced, that the symptoms in reference showed themselves. On the floor of my chamber was a carpet, one of whose figures—the only one of any prominence—was what was probably intended to represent an olive branch. All of a sudden, in the day-time, I imagined the carpet to be an African forest. Wild though it seemed to be, and filled, of course, with venomous reptiles, as well as savage beasts of prey, the scene was inviting instead of repulsive—at least, I felt no terror whatever. On the contrary I surveyed it calmly, and called the attention of my attendants to it as a picture of rare interest, as I imagined it to be. There were trees of dimensions befitting the location. Many of these seemed to be prostrate and limbless from the decay of long years, while others were only partially deprived of their limbs. They laid very thick, while the ground was free of weeds, so that each tree or passing form was rendered distinctly visible.

In the midst of this forest a lady was walking leisurely along, apparently with a sense of complete security. A thought of her peril and singular recklessness passed through my mind, as just then a lion arrested my attention. I detected the fact that he had espied her, and was moved to make her his prey. I felt intensely apprehensive, as I saw him place himself *en couchant*, with his body as flat upon the ground as he could, beside a dead tree, so as to closely resemble it, and await her nearer approach. I trembled more and more for her safety, as I saw her approach nearer and nearer to the cavernous and voracious jaws of the frightful creature. At length, just as she came within reach of him, a bird, which had been as much deceived as was the lady as to the real object before them, lit upon the mane of the lion. Annoyed by the bird's presence there, he shook his mane to get rid of it. This motion revealed to the lady the fact of his presence, whereupon, stricken with horror, she gave a sudden spring and escaped from what promised to become sure and swift destruction—escaped to my ineffable relief and joy.

I called the attention of my attendants to the actors in this imaginary forest-scene, who seemed as plain and distinct to my vision as the finger wherewith I pointed them out to them. And when they assured me that there was nothing of the sort within my view I became exceedingly indignant, and resented their contradictions in the most excited tones, insisting that bird, beast and lady were all there. Nor could they, as hour after hour I proclaimed their presence for several days, dissuade me from the fixed belief that they were verities, instead of the hallucinatory fictions of a fevered brain.

Not till several months after the terrible illness during which this strange illusion fastened itself upon my disordered and over-excited sensorium, did its tendency to return die away. Meanwhile any figure in a carpet resembling the one which originally served as a foundation for it, no matter where I met with it, would instantly reproduce it in more or less force, for it became fainter at each reproduction. When it finally ceased to return, so that I could hope for riddance of its curious visitations, as may be imagined, I felt a most grateful sense of relief. Not that the ineffably strange image was uninviting—for, on the contrary, it had a peculiar fascination for me—but because I regarded its non-recurrence as unmistakable evidence that my brain and general nervous system had re-

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turned to that balance of manifestations inseparable from an approach to either corporeal or mental health in any degree deserving the name.

Cause and Effect.

ALMOST the first thing that a child learns is that like causes produce like effects. Repeated falls teach that safety from contusions may be secured only by a due preservation of personal equilibrium; the attractive flame of the candle fails to attract itching fingers after the smart of the first contact; and, in a word, countless acts that seem due to the promptings of native instinct are the natural results of the process of induction which is constantly going on, either consciously or unconsciously, in the brain of every rational being. The highest development of the inductive process is found alike in those simple statements of well-established facts which from their triteness have become axiomatic; as, "Man is mortal," "Water quenches thirst," and in those magnificent generalizations of natural laws deduced from many thousand physical phenomena by a long array of philosophers, extending from Pythagoras to Tyndale. It is worthy of observation that no one of these expressions of physical truths, no enunciation of physical laws could have been prolific but from a hearty belief in the truth of the simple formula, "Like causes produce like effects."

Upon no other basis could philosophers have ascribed to the same law of gravitation the fall of a ripened apple, the regular oscillations of the pendulum, the ebb and flow of tides, and the majestic revolutions of the planets in their unseen orbits; nor, without an implicit trust in the undeviating constancy of the laws of Nature, could we imagine what would be the result of a single action, however trivial to us, or unnoticed by the world. God, in his providence, has left nothing to the domain of chance, but, in his inscrutable wisdom, has rendered our finite knowledge certain in regard to all the operations of nature where the proximate causes can be perceived and understood. What we are accustomed to call chance is but the result of forces acting unexpectedly, or under conditions not anticipated by us.

Not merely in the interpretation of physical phenomena are we guided by this relation of cause and effect; but also in the more mysterious operations of the mind which are so controlled by psychological laws that we are always justified in assigning the actions of rational beings to the influence of perhaps unknown but definite causes. Our innate belief in the correspondence between guiding motives and resulting actions leads us, at once, to inquire the why and wherefore of each and every voluntary act. We have a melancholy proof of this, that even deeds of generous charity are often scrutinized, by a cold and uncharitable world, to detect the appearance of ulterior and mercenary motives.

Nor are vital phenomena, intermediate between and to some extent controlled by the rational acts of the mind and the soulless laws of inanimate matter, left in the slightest degree to the direction of a blind and fickle fortune. In regard to mental and vital phenomena, we may be often unable, through our ignorance or dullness, to trace many effects to their real causes; but our incapacity in special cases is rather the exception which proves the rule. Our willful blindness often prevents our seeing what would otherwise be patent, as none are so blind as those that will not see. So, too, our heedlessness passes by as "mysterious providences" many a startling accident, whose causes an intelligent man would not have far to seek. Nevertheless, as the world advances in science, the acknowledged domain of law becomes daily more extended, and the realm of chance by consequence more restricted. It is gratifying to note that what was necromancy to our ancestors, and effected only by dealings with the Devil, has become merely dexterous legerdemain to our children, and harmless chemical reactions to us. Doubtless, in coming generations, the increasing knowledge of the human race will clear up many a problem too intricate for the present age to solve.

Another result of our inductive reason is that adequate causes are required to produce desired effects. A boy can not fly his kite successfully unless the kite is well made, with due proportion of body, tail and string, well balanced, properly adjusted, and all finally dependent on a favoring breeze. So many conditions for so simple a thing! Nor, in after years, will he in weightier matters accomplish his ends unless such precautions are taken as will place the result beyond a peradventure. No man of sound mind, at the present day, supposes that any exception to this law will be made in his favor; unless, with shame be it spoken, when we believe the goodness of God will somehow overrule our intemperance in eating and drinking, our rioting in exuberance of health, our repeated violations of the plainest physiological laws, so that we shall not suffer the merited consequences of our misdeeds. With this marked exception, every man, as a matter of course, ex

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pects to expend labor to attain results, and expects that his labors will bear some definite proportion to the result desired; that what costs little will be worth little, and *vice versa*. Even in the days of the pseudo-science, Alchemy, the professors of the occult art, although foolishly laboring for some elixir of life or some universal solvent, were never so demented as to suppose, in the first place, that the elixir or solvent could be obtained by insufficient means; or, secondly, that much gold or long life could be procured by very small quantities of the alkalent.

This truth is beautifully illustrated by the laws of chemical affinity, which teach that each element unites to form compound bodies in proportions that are definite, fixed and invariable. No possibility of excess, when the least excess is rejected; no place for chance, when every atom has a definite size, shape and weight; no guess-work of the kitchen is allowable in the laboratory of Nature. For instance: to form an ounce of water, exactly so much and no more of each of its constituents is taken as is represented by their equivalents—that is, eight parts of oxygen to one of hydrogen. If now this ounce of water be employed in rusting iron, it will produce exactly four ounces of the protoxide of iron and liberate one-ninth of an ounce of hydrogen, nor would more iron rust be formed if the iron were unlimited in amount, unless the water were likewise increased in amount.

The experience of every life is a fresh illustration of the truth that no desired result can be attained without sufficient means, and, at last, we become so assured of its truth, and of its invariability, that apparent exceptions excite our surprise and become legitimate objects of investigation. Nor do we limit the application of the truth to merely physical phenomena; but, as in the general statement of the law, apply it to vital forces and even to mental powers. The basis of sound medical doctrine is found only in a well-understood relation of cause and effect which exists between physical agencies and vital forces; and, in the consideration of psychological phenomena, we are wont to attribute the keenness of the sense, understanding and reason, the force of the will, the passions and the affections to adequate causes, either present or remote—present, as when aroused by alcoholic liquors, opium, or some pressing exigency, or benumbed by narcotics or by sudden grief; remote, as inherited from progenitors, or resulting from some abnormal condition independent of present control. S. A. N.

How to Keep a Husband.

Not in the way usually done; that is the way to lose him—lose his attentions, his affections—and once lost he will never return, or only in form, and this a woman can never endure.

The only way to keep a husband, after he is won, is to continue to win him. Love, any passion, will die if left alone. It requires constant attention—feed the flame or the fire will go out. The wife is but to continue the wooing which the girl so successfully commenced.

The chief danger to matrimonial happiness is familiarity—all becomes known, and the thing that was seen at a distance, through the enchantment of fancy, now is a matter of plain fact—

"A woman planned
To warn, to comfort and command,"

and not a spirit seen through the glamor of the mind.

It is said "Familiarity breeds contempt," and this is not inaptly applied to marriage. Reserve is thrown off; the bad as well as the good appears, and the "angel" sinks into something below it, and thus the thing is not what was anticipated. It is no more nor less than disappointment. If marriage is to begin with a disappointment, it is certainly not a favorable omen.

This is the general aspect of the case. How much then does it stand a wife in need to see that this charm is not broken—that the delusion (which is the secret of the success of all art) is retained. The "angel" must still be continued, now a ministering form, yet an angel. Remove the angel from the woman, and she is a drudge.

Too much familiarity, then, is to be avoided. Modesty here comes in, as usual, to the woman's aid. The shy, yet faithful ministering spirit, daily in attendance, charming, winning—winning back to his house the husband when duty has called him away, making his home ever pleasant, as a woman knows, or ought to know how to do before she becomes a wife.

We know such homes. They are few, we regret to say; but there are some. The husband spends his evenings there instead of at the club. It is *home* for him; it is more than that—it is the society he finds there that lured him so fascinatingly when he was yet among the mass of men which now has come to his threshold, because she wanted to be where he was. *He* is

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her all. And if she wishes to keep him she must continue to be, as much as possible, what she once was. But as the charm, in a measure, is broken by contact, she must resort to additional means to retain what she won under other circumstances. She must clothe herself with new attractions—of mind and of social quality; she must improve, advance; there is no standing still in marriage as in religion. She is therefore to be the attracting influence, developing new beauties, especially if the husband is of a progressive nature.

But there are other things that aid. These are an attendance to the little niceties that make home attractive—neatness and order; an adjustment of the household concerns to the wants of the husband, which it is the wife's instinct to know. If, in addition to these, she is growing in knowledge and the graces of the mind and heart, she will constantly have something to win, to attract; it is her sphere, and if she neglect it, it will be at the expense of her happiness.

HOME COMFORT

Is wanted by most men. It is this that secures the young wife's attention, who would otherwise be indulging in fancies and in longings that could not be realized, and which would make her unhappy.

She is taken from her early associations, from the sphere of her accustomed thoughts and prospects. Now her prospects are bounded by the four walls of home and the monotonous society of her husband. Her mode of life is changed, but not her nature, her aspirations; these, from habit, are still running in the old grooves. They must of necessity receive a change, and this change should be so directed as to engage her attention and secure her interest. She must be interested. And what can the husband more desire than to see his wife contented with his home and heart.

It is for him, and not her, to see that her home, the new sphere of life, is made engaging. How is this to be done? It is not an easy matter always to determine. He must be governed by circumstances—the disposition of his wife, the tendency of her mind, etc. By all means he must avoid monotony, for this will set her to brooding, and that is a dangerous thing. Her attention, therefore, must be engaged. In various ways this may be done—most of all, direct it to the making pleasant her own and her husband's home. If not instructed, instruct her, or see that she is instructed, in the best way of keeping house One of the chief inducements to housekeeping, as to all business, is success. As she is supposed to have some accomplishments, she will be won over by the attraction which neatness has in the home department—a fresh, tidy room; a clean, well-aired kitchen and cellar; a table with dishes and viands to correspond. The corresponding of the viands is one of the chief things. And if she does it (it matters little how taught), a smile of approbation from him will do wonders, both in an effort to do still more and in occupying her mind, all of which invariably induces habit. When once household duties have a charm, half of the battle is won.

Then, the mind is to have instilled (if young) many other things that will have a tendency to prevent brooding, wandering. Entertaining occupation accomplishes much, whether relating to the table, the parlor, literature, or any other employment. Indeed, variety is a necessity. But let the concentration be on the innermost tablets of home—the corner at the heart, so to speak. This will secure the young husband's success, not only in the beginning, but through life.

The man must see for himself—see that he engages the attention of his wife, her ready co-operation; her willing, spontaneous action. He must win her to these. Nearly all depends upon him; she looks up to him; he is the head of the family.

"But the woman must see to the housekeeping—it is her place."

A great mistake. The mechanical part may belong to her or her attendants. But she must have encouragement; she must have a home, and without her husband's society she can never have it. Without his approbation, without his aid (in various ways, which he knows best how to bestow), she will be discouraged, and consequently unhappy.

It is the starting-point that is the main thing. Once establish home-feeling and the future will be easy—there will be home-comfort. F. G.

THE TEACHER TAUGHT.—Dr. Arnold once lost all patience with a dull scholar, when the pupil looked up in his face and said, "Why do you speak angrily, sir? Indeed, I am doing the best I can." Years after the doctor used to tell the story to his own children, and say: "I never felt so ashamed of myself in my life. That look and that speech I have never forgotten."

A CONNECTICUT pedler asked an old lady, to whom he was trying to sell some articles, if she could tell him of any road that no pedler had ever traveled. "I know of but one, and that is the road to Heaven," was the reply.

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An Invalid's Experience.

BY PROF. G. F. ROOT.

[THE Song Messenger contains an account of the experience of an invalid by George F. Root, the well-known musician and composer, which will, we think, be read with interest. We are permitted to make the following extract. There is a certain class of invalids who are greatly benefited by moderate and regular lifting, where it is done under a physician's prescription and so as to suit the individual case.—ED. H. OF H.]

For twenty years I have neglected symptoms that I neither understood nor realized the importance of. On the third day of an exciting convention—near the close of a hard week of teaching, or when unusual business of family cares weighed upon me, a certain pressure at the head, increased action at the heart, and other sensations not easily described, but extremely disagreeable, were apt to follow. But a little rest, or sleep, or change, and my good constitution recuperated, and I was well again.

In 1850 it was thought best to stop work for some months, and I went to Europe. This set me going for several years, and I resisted the attacks of my old enemies with more ease, but as the years went on they came oftener, and last spring they came to stay.

I exercised, fished, made little excursions into the country, but all to no purpose; my enemies were firmly seated and would not go; then I wound up my affairs as well as I could and started for Willow Farm, hoping the magical air of the old home would drive them out.

But no—some days a little better, but on the whole going down rather than up.

"Try the Isles of Shoals," said my friends, "perhaps the salt air of the open Atlantic will help you." So to the Shoals I went, and passed as pleasant a week as it was possible for one in my state to do. There were Mr. George J. Webb and family, Mr. William Mason and family, Messrs. Lowell Mason, Jr. and Henry Mason, of the firms of Mason Brothers, and Mason & Hamlin; and, beside all, the dear old Doctor gave us a day from some professional tour in New England, to our great surprise and pleasure.

I was better here, and now it just occurs to me that it may have been because I *lifted* so many fish (explanation further on); however, there was no permanent improvement, and I gladly accepted an invitation to go on the trial trip of a new ocean steamer, then near completion in New York City.

On our return I went out to Orange, N. J., and spent about three weeks with Dr. Mason. What pleasant rides and talks, with occasional calls at Mr. William Mason's, where Mr. Webb was visiting! Every thing was done for me that kindness could suggest and abundant resources carry out, but still I was no better. I decided to go back to Boston and see what was best to do next. My friends said, "Go to Europe."

If there had been a railroad I would have considered the proposition, but the uneven surface of the ocean was an obstacle not to be overcome; so what do you think I did instead? I lifted! Every day (Sundays excepted) during the month of October, I spent half an hour or so in Professor Butler's establishment lifting iron weights, and doing other things of his new and singular system. I began the month with 370 and ended it with 600 pounds, and every day grew better. Every day the circulation became more orderly, and the congested places relieved—digestion improved, and my spirits rose proportionately. I purchased the necessary apparatus, and the right to use it, and continue to lift daily at my house.

Now, dyspeptic or brain-weary reader, do not rush at the first heavy weight you can find, with the idea that straining at it will do you good; it is only by lifting in such a way that the pressure is perfectly equal on all parts of the body that the benefit is to be derived; but it is wonderful how penetrating and thorough the exercise is when so done—how it rouses to action the torpid or sluggish organs and relieves the congested ones.

It should, however, be said, that as there is no way back from disorder to order, either in the spirit or in the body, but through pain and conflict, there are times when this exercise hurts, and the weak places shrink from it, as does the natural heart from a mortifying confession or an humble apology, and as all progress is, in detail, apparently irregular, some days you seem to be going backward rather than forward, and perhaps feel as if you were worse instead of better. This, however, is only an appearance—not a reality, at least in my own case, and with all in the institution with whom I have conversed, and they are there, both ladies and gentlemen, for all sorts of troubles, especially if certain hygienic rules which they recommend, shall be obeyed.

So, dear friends, I greet you, one and all, and hope to do my part in our pleasant relations more conscientiously, vigorously and successfully than ever before.

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How to Bathe—No. IV.

BY E. P. MILLER, M. D.

THE health, vigor and beauty of the body, and the elasticity, cheerfulness and enjoyment of the mind, are as effectually secured by the use of the bath as by any one method known to man. Man needs, in truth, to be "born of water," in order to be rid of many of the physical ills and evils to which he is exposed, and thus be enabled to secure the pleasures of both body and mind which he is capable of enjoying, and which it is both his right and his duty to enjoy.

The mass of the people of this age do not, as yet, fully appreciate the pleasures and benefits that grow out of a proper use of the bath.

Yet we sometimes flatter ourselves that our Health journal has done something to enlighten the people upon this subject, and that thousands are now reaping the benefits of our instruction.

Twenty-five years ago when The Water Cure Journal was first published, there were but very few bath-rooms in the country, and those were found only in the homes of the wealthy. A bath-room was looked upon as something that the common people could not afford, and the bathing among that class was not for the purpose of cleanliness, but for a good swim in the creeks, ponds or rivers.

At the present day, however, no house is considered complete without its bath-room with hot and cold water, and all the appliances requisite for a delicious bath. The majority of new houses in all our large cities have their bath-rooms and many have one on each floor. Even our tenement-houses, built for the accommodation of the poor, have conveniences for bathing. Bathing-rooms have been attached to all our large hotels and boarding-houses, and to nearly every barber's shop in the country. Water Cures, with conveniences for giving almost every conceivable kind of bath, arranged with special reference to treating diseases, have been established all over the land. Fashionable watering-places and summer-resorts have sprung up like magic at innumerable mineral springs, and all along our sea-shores, where tens of thousands of pleasure-seekers annually resort; and the facilities for bathing at these places constitute some of the most prominent attractions to visitors.

The city of Boston has taken the lead in an important branch of this great sanitary reform, and established commodious free Public Baths—improvements which will work wonders for the future health, intelligence and enjoyment of its citizens.

New York is entertaining the idea of constructing similar sanitary accommodations for the benefit of her residents, and we hope soon to see all our large cities following the example of Boston and giving their working-people the opportunity for personal cleanliness and purity. This would do much to rid the world of vice and crime, for to be clean increases a man's self-respect; so that in many instances he would be ashamed to do those deeds of darkness which his very filth now engenders. It would be more effectual, too, for the preservation of health and removal of disease than all the pill-bags and drug-shops in the land.

Much of the reform already working in this direction is due to the advocates of Hydropathic practice in the treatment of disease, and is a natural outgrowth of that practice, and when the virtues of water as a preventive and curative agent shall be fully known and appreciated, the labors of the apothecary will be at an end, while those of the doctor will be changed from a giver of drugs to a teacher of the laws of health.

Sir Astley Cooper used to say, "Give me a bottle of opium in one hand and calomel in the other and send me to the country, and with these two drugs alone I will beat the country practitioners all hollow." Dr. Edward Johnson says 'if Sir Astley Cooper were now alive, I would undertake to beat his calomel and opium "hollow" with no other remedies than the shallow bath, the sitz bath, and the wet sheet.' In fact, I am of the opinion if Sir Astley were in practice to-day, the members of his own profession would frown upon him, and talk of malpractice were he to use calomel and opium as freely as he used to do.

Dr. Johnson further says, "Place me in the heart of a large town; let me have my average of all sorts of cases, new and old, acute and chronic, slight and severe, and give me the shallow bath, the sitz bath, and the wet sheet, and no other bath whatever, and I would undertake to cure or relieve more patients than are now cured or relieved by the ordinary drug treatment two to one."

THE SHALLOW BATH.

For this bath it requires a tub of wood, tin or iron, about five feet long, two feet wide, and one and a half deep, the bottom being four or five inches shorter and three or four narrower than the top. The water in this tub should be about four inches in depth. After bathing the head and face, the bather is to sit down in it,

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the limbs being extended, and at once proceed to rub himself as vigorously, energetically and rapidly as possible. The arms, the chest, the legs and feet should all receive their share of the brisk rubbing, and if an attendant is present he should at the same time rub the back and shoulders; if there is no attendant, the bather should have a large sponge, and filling it with water squeeze it repeatedly over the neck and shoulders, letting it run down the back. In the absence of a sponge, a coarse towel, a yard or more in length, may be used, and after dipping it in the water a few times and pressing it out as in the use of the sponge, it may be thrown across the back and one end grasped above the shoulders with one hand, the other end by the other hand below the waist, and then drawn quickly in various directions across the back till it has received its full share of the general rubbing. This operation may continue from one to ten or fifteen minutes, according to the condition of the bather and the temperature of the water; or, if it is prescribed by a physician, as long as in his judgment the diseased condition of the patient requires.

If the patient rubs himself as actively as possible it will quicken his circulation, prevent a tendency to chill, and secure a better reaction after the bath. On coming out of the water a large sheet should be thrown over the shoulders, and with this he should rub and be rubbed as vigorously as possible until dry and then dress, and if able go out for exercise in the open air; if feeble, he should be wrapped up warmly in bed an hour or more. This bath is one that is generally the most useful of all bathing appliances in Hydropathic establishments, and is frequently used after fomentations, wet-sheet packs, etc.

The shallow bath is a better tonic than quinine or iron, a safer stimulant than wine or brandy, and when properly used a more effectual alterative than calomel or cathartics. It is very useful: 1. To cool the blood in the hot stage of fevers, and in many forms of inflammatory disease; 2. It is effectual in overcoming any local congestion of the internal organs; 3. It is of use in resuscitating a person after a nervous shock, or in spasmodic diseases: such as fits, convulsions, apoplexy, etc.; and 4. It is useful to overcome and subdue the excitement of a debauch or an attack of delirium tremens. It produces different effects according to the temperature and length of time it is employed. It may be used cold, cool, tepid, warm, or hot, as the constitution of the patient, the difficulty to be removed, or the effect desired would indicate. It is often given warm at first, and made cool or cold before the patient is taken out. The cool or tepid is the best and safest temperature at which this bath should generally be used. It may be given in a common wash-tub, or in a hip bath tub, though in these the limbs must of course be flexed.

THE HALF BATH.

This bath is used in precisely the same way, and for the same purposes, and is given in the same manner as the shallow bath, differing from it only in having a greater depth of water. The water in the half bath is a foot or more in depth, instead of four inches. It can not be quite so vigorously and quickly given, as the greater quantity of water interferes somewhat with the active rubbing. Yet it is equally useful, and many prefer it to the shallow bath.

THE FULL BATH.

In the full bath we enjoy one of the luxuries of bathing. For this bath a tub is required nearly or quite as long as the body, and two feet or more in depth—a slope at the head of the tub is very convenient if not absolutely requisite. The tub is filled with water to such a depth that the bather will be submerged, all except the head. The method of giving it is similar to that of the shallow bath; the bather, however, is lying instead of sitting. It may be given in almost all cases where the shallow bath would be applicable, by having the water a little warmer, the temperature being adapted to the condition of the bather. It is *the* bath for cleanliness and refreshment, and is well adapted for an evening bath. After the toils and fatigues of a day of labor, either mental or physical, the full tepid or cool bath will cleanse the skin, remove the soreness from the muscles, the stiffness from the joints, and calm the excitement of the brain and nervous system, thus giving preparation for a quiet, refreshing sleep, more effectually than tonics, stimulants or opiates.

The warm or hot full bath taken on going to bed is one of the most successful means of breaking up a cold.

The hot full bath is also very useful in relieving the acute pains of neuralgia, rheumatism, gout, and some other painful inflammatory affections. It will also sometimes cut short the cold stage in chills and fevers. The hot and cold full bath are very powerful applications and must be administered with discretion. Yet there is little danger to be apprehended from their use compared with the indiscriminate use of medicines so common among the mass of people at the present day.

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Days of Boyhood.

BY F. H. GUIWITS.

I'm sitting in my easy chair,
Beside the stove, to-night;
Without, the scolding winds are high,
The earth with snow is white.

The fire is talking to itself,
The kettle sings a low
Sweet song, which leads my memory back
To twenty years ago.

I was a little shaver, then,
And loved my ball and kite,
My skates, my gig, my little sled,
My down-hill rides at night.

When morning broke, my father's call
Awoke his boys from sleep—
I was the youngest, and allowed
My warm bed late to keep.

And breakfast done the dinner-pail
Came from the pantry shelf,
And was well filled with healthful food
For Betsy and myself.

"Now off to school," were mother's words;
With mittens, sash and hood,
All warmly clad, we sallied forth
Across lots, through the wood.

The path wound like a little stream
Among the maple trees,
And in the light snow were the tracks
Of squirrels and chickadees.

The school-house was a mile away
And built of logs unscored,
And rude seats lined the walls, from which
Declined the writing-board.

* * * * * * * *

We made snow houses and snow forts—
With snowballs made our wars—
Made snow men, and put in their mouths
Icicles, not cigars.

We hid each other's caps and books,
Put pins in schoolma'm's chair,
Made goblins on our slates, and stuck
Quills in each other's hair.

Thus mirth and mischief claimed a share
From school-hours every day,
Till roll-call came at four o'clock,
Then all for home—hurra!

Laws and their Penalties.

BY REV. HENRY WARD BEECHER.

The laws of the household, which are imposed not by the State, but by those who are for the time being the magistrates of the household, are the first laws with which we in our infancy become familiar. They are representative and educatory. We gain our first notions of moral duty through these household laws. And they are not more necessary for the welfare of the family than for the education into higher spheres of law of those who begin their moral course in the family.

Then come laws in all the separate spheres of business. Each business has its own regulations. Some of them are mere conveniences, and may be kept or not. Some of them are stringent—so stringent that if a man violates them he will unquestionably receive the penalty. It may not be inflicted by the hand of the magistrate; but if it is not, it will in some way or other be inflicted by the public sentiment of that part of the community in which he dwells, and punishments of public sentiment are generally more severely administered than those which are executed by public officers.

Then there are social laws that are not written in a book, that are not enacted by legislatures nor executed by magistrates, but that are enacted by custom and executed by public sentiment. This is a curious and almost unexplored realm. We can not tell how it is, but certain things after awhile come to be duties. Nobody has much debated them; there has not been a concourse of persons to say whether it shall or shall not be a duty to do this or that in society; but it comes to be a public sentiment, and he that obeys it is rewarded, while he that disobeys it finds public indignation breaking forth on his head. It is more convenient to submit to the requisitions of society than not to. So strong is this tendency that it oftentimes develops itself in morbid directions.

Fashion institutes laws which are frequently most exacting, and for reasons the most ridiculous; and people, rather than experience their penalties, obey them. These are a morbid outgrowth of that law-tendency which exists in the human species, and which belongs to society.

Then come the laws of society as a civic organization—laws respecting business and property. These are the laws of the statute-book, or the common laws of the land, which are multitudinous, ramifying in every direction, and touching men at every point. In respect to these laws it may be said, that they are either the en-

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actments of human tribunals, that they are laws which are enacted in nature, or else that they are laws which convenience requires, and which men have found out to be good, better or best.

There are many laws of society which, if you break, you break also natural laws. Many of them are mere conveniences, and are to be obeyed because they are convenient; but disobeying them does not entail serious consequences. Many of those laws which are artificial, which spring from artificial conditions of society, and not from nature, are highly important. Many of the laws of society carry two penalties—the artificial, conventional penalty; and also the natural, because they include in them a natural law. The punishment of sin against the laws of society is secular and civil, and therefore it is not inevitable. A man may break a law of society and hide the fact; or, if the fact is known, the doer may be unknown. Concealment is therefore one of the temptations of transgression of the laws of society. If a man breaks a civic law, and is detected, he may escape conviction. It is not easy to prove even that which you know to be true. If a man be convicted he may evade punishment—and the great want of our community is not severer punishment, is not better statutes, but the simple certainty of punishment. That which tempts men to commit so many misdemeanors and petty crimes, is the fact that the probabilities are that they will get whatever good there may be in the commission of the crime and escape the penalty. And if the laws of society were laws which were merely artificial and conventional, and depended for their penalties wholly upon the arrest and conviction and punishment by the civil officers of the offender, it would be almost impossible to make a case upon the conscience of many men. But fortunately, though a man may escape the civil officer, the most important laws of society are on two foundations—the conscience of society, and underlying natural laws. And those natural laws carry their own punishment with them.

Now, all our ideas of sin in respect to laws are very largely derived from our experience in regard to society-laws. And yet, the guilt is less in the transgression of the laws of society than anywhere else. As a general fact, dangers are fewer there than anywhere else. Ordinarily speaking, wrongs may be more easily remedied there than anywhere else. And if a man's notion of the sinfulness of the infraction of law is derived from what he knows of mere human laws, he will have a most shallow, inadequate and mischievous conception of sinning and its penalties. For it may be said, generically, that he who sins, sins against his own soul—and that, though no man sees him; though no officer detects him; though no witness testifies against him. He that breaks a valid law of God, whether it be enacted in nature, in the physical globe, in his own body, or in his own spiritual being, and whether it appear in society, or custom, or neither, sins against his own soul; and the damage is in the man himself, whether he knows it or not.

Men are subject to the great material laws of the globe in which they dwell; and there is not a material law that a man can break and not sin. The thought would be worth every thing to this world, that sin means the infraction of laws which God made of every kind. You think it is a sin to break into your neighbor's house. It *is* a sin; but there is no natural law on that subject. You think it is a sin to carry off your neighbor's ox or his cloth without compensation. It *is* a sin, greater than you think; but, after all, it is a law of society that you have broken. And to break those laws on which the very potency of your bodily organization is founded, to break those laws on which your mind-powers turn, is no less a sin. All the laws of earth are moral laws. All the laws of the globe which report themselves in your strength and in your economy are moral laws, and for you to break them is to sin.

If a man drinks and eats to excess he sins against his own body. There is no penalty attached to it in the ordinary sense of the term. It is true that the magistrate has no power to execute sumptuary laws. He has no right to say to you, "You shall not eat six times a day." A man says, "I will eat as much as I please; and there is no law against it." Yes, there *is* a law against it. Do you ask whose it is? It is God's. Do you ask where it is written? In your stomach. You will find out by breaking it where it is written!

A man says, "I am under no master. If I please to sleep eight hours a day, it is my business." Yes, and God's. Do you say that there is no law against it? Yes, there *is* a law against it—a law that is more authoritative than if you had found it in a statute-book made by man—a law on which the very health of the body turns. It is said that a man is his own worst enemy because he drinks to excess; and it is supposed that that states the whole case. It is supposed that a man has a right to himself. But no man in this sense has a right to himself. A man has within certain bounds a right to his liberty; but no man has any more right to break the

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ws of eating and drinking than to break mag-
terial laws. Yet there is no conscience on that
bject. Though God is marking the guilt of
ansgression by its pains and penalties, men
ever hear the voice of Sinai that is in them.
f it had been preached in the pulpit, or if they
ad seen it in a law-book, they would have
ought that perhaps there was sin in it; but
ough they suffer the pain, and God is saying
o them in every ache, "You are breaking the
w, and have broken it," they have no con-
ience about it.

Late hours, fashionable indulgences, that fill
ne with all manner of buzzing pains—about
ese a man, the next day, merely says, "I had
pleasant time last night and now I am paying
r it." The idea that he has sinned does not
ccur to him. A man may be so drunk as to
ot every organ in his body against him; but if
e is not so drunk as to stagger, and people do
ot know that he is drunk, he does not feel as
ough he had done wrong. Society forbids
at he should be so drunk as to stagger, but if
e is drunk so that he knows it, and nobody
lse does, his conscience is not burdened, because
e says, "You do not expect a man to be perfect
n this world."

It is the same with excess in all the passions.
The passions are God's gifts of mercy to us.
We may make them burn like furnaces; we may
ake volcanoes of them; we may deluge the
oul with their lava. They are great mercies.
Excess in them, however, is transgression. But
here is the light of experience in one's self, or
n others, so that no man need sin. If he does
in, he sins against the law of his own body.

Men are almost without conscience in respect
o air, food, over-taxation, neglect of every
ind. They are perpetually committing sins
at are in turn mothers of other sins. A great
any spiritual ailments spring from sins com-
itted against the body. Many social infelici-
es, such as irritableness, an unhappy temper,
oroseness, are frequently the concomitants of
imple indigestion, or overwork, or an unduly
rcited state of the nervous system. Thus men
egin by a violation of the laws of God in the
ody, and that extends itself to violations of the
ws of God which regulate the disposition; and
ese involve a great number of moral traits;
nd the ramifications are infinite.

Now, in respect to all these transgressions of
atural law, it may be said that men are ac-
ountable not as they are to society. There is
lways in every just judge's bosom a discre-
onary power. For instance, if a child is ar-
aigned for theft who could not, under the cir-
cumstances, have understood the rights of prop-
erty, the judge and the jury look upon him
more leniently than they would have done if the
circumstances had been different, and the pen-
alty is graded according to the child's knowl-
edge, and according to the motives which actu-
ated him. But this is in society-law. Nature
does not know any such thing. Nature makes
her laws and says, "The soul that obeys shall
live, and the soul that transgresses shall suffer
the penalty;" and there is no gradation of that
penalty. If you have swallowed a poison, it
makes no difference that you can prove that you
did not know that it was poison. That has
nothing to do with it. If a man rides or sleeps
in a car or chamber that is unventilated, or lives
in a damp dwelling, and if pains overtake him,
if vertigo seizes him, if his brain is poisoned, or
if inflammations and rheumatisms attack him,
it is in vain for him to go and implead Nature,
and say, "I did not know that I was doing
wrong, and I will not do it again." Neither
your protestations of ignorance nor your prom-
ises of obedience will make any difference. A
man that breaks a law of Nature must take the
penalty. Whether he is young or old, black or
white, ignorant or knowing, the whole penalty
comes down on him.

That is not all. The punishments for the vi-
olation of natural laws can never be evaded;
for they are self-executing punishments. The
laws of society are subject to modifications and
re-enactments, and are executed with the inter-
vention of appointed officers or tribunals; but
natural laws have no intervention. They take
care of themselves. If a man violates a natu-
ral law he suffers. He is not arrested by a con-
stable; he is not brought before a court; he is
not indicted by a jury; no verdict is passed and
no sentence is pronounced in his case; he is not
handed over to the officers; he is not confined
in prison; there is no penalty inflicted upon
him by human power; but he suffers. If you
over-work, instantly the head aches. If you
over-tax yourself, the reaction tells the story,
and you know that you have transgressed be-
cause the penalty falls down on you.

Nor is the case different because the trans-
gression of natural law is relative to a man's
stamina and strength. That is, what is trans-
gression for one is not for another. If I carry
a hundred pounds, and my strength enables me
to carry two hundred, I do not violate natural
law; but if my neighbor, who can not well
carry more than fifty pounds, carries a hundred,
he violates natural law. A man's temperament
and constitution grade obedience in him.

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In every man there is a relation to natural law, and he ought to be acquainted with it. If he is not he suffers the penalty. At any rate he suffers the penalty if he violates it. And in this regard we may say that natural laws are inhuman. That is to say, they are not human; for no sorrow or reformation has any effect on the past or the future. If a man violates my house and takes away my property, it is in my power, if I catch him, to say whether I will disclose it or not. If I find a man stealing my goods, and I arrest him, and he pleads with me, and says, "I did it to alleviate the sufferings of those that I can not endure to see suffer," in view of the motive by which he was actuated, I may say to him, "Go, and sin no more." Nay, I may actively employ myself in giving him the means of relief from the temptation to steal. But when a man violates the law of Nature, it makes no difference how good a plea he can make; all his sorrow, all promises of amendment, and all his good dispositions are as nothing. There is the fell necessity. He must suffer.

Many a young man goes on sinning and sinning against the laws of his own body, and because sentence seems to be deferred, he thinks he is not sinning—especially if he does not come under the rebuke of society-law and public sentiment, or under the rebuke of his fellows; and by-and-by the penalties begin to execute themselves. And then it is too late for him to avert the evil. Many a man finds out at thirty-five years of age that he is an old man; that his marrow has been sucked up; that the generating power of his nervous system has been burned out or rotted out; and he thinks he will reform, and means to reform, but it is too late. And then he begins, in his premature and crippled state, to marvel, in the after disappointments of life, at the mysteries of Providence, and to wonder why some men have such easy lives, and he has such a hard one; why some men have such privilege and opportunity, and he is so hedged in and crippled; why some are so free from sufferings, and he suffers so much. It is simply a case in which he has gone on violating natural laws, the nature of which was to defer their penalties, but which never took their eye off from him, but watched him, and followed him, and seized him at the proper time, and executed their commission in full. And the man that violates the laws of Nature in the structure of his own body or mind, may be perfectly certain that those laws will inflict their penalties on him both here and hereafter.

Agassiz on the Development of Man

—Prof. Agassiz, than whom on scientific subjects few men living are entitled to more respect has recently delivered a course of lectures in Boston on his favorite theme. The closing lecture had reference to the theory of the progressive development of man from a lower order of animals. His lecture is thus reported by a correspondent of The Springfield Republican:

"Prof. Agassiz is a sturdy opponent of the development theory, and is not willing to believe himself a lineal descendant of even the highest species of monkey. His Brazilian travels had taught him more clearly than ever the belief in a wide and intentional distribution of species—both lower and higher species. The trees, the reptiles, the fishes, the animals, the birds of Brazil are of varieties strikingly distinct from those of our latitude. Although birds are gifted with such facilities for locomotion, those of Brazil have used their wings not to distribute themselves but to congregate at home. These birds are of as distinct varieties as the fish, or trees, or men. If some men are derived from the monkey, it can at least be proved that such was not the origin of the Caucasian race, since we find no fossil remains of monkeys in the region from which this race is known to have emanated. It is true, we find some bones of monkeys in Greece and in England, but these are not the points from which our race proceeded. Where then are the bones of our ancestors? Further, while the gorilla is a contemporary of man, how can he be looked upon as his ancestor? The question of races has been a delicate and awful one to touch. A man may be accused by his fellow students of participating in the general prejudice against color. But now that slavery has been abolished, it seems at length proper to speak frankly the results of our scientific inquiries. Prof. Agassiz proceeded to assert that the different races of men are as distinct as the races of lower animals, and proved his statement by well ascertained facts. The progeny of two animals of the same race, whether brute or human, is invariably like the parents. The progeny of a union of two races is invariably unlike either parent; instances, the mule and the mulatto. To him who studies the construction and harmonies of the outward world, and perceives in all, not the distributions of accident, but the plan of a thinking mind, it becomes evident that we human beings are in truth the children of God, and not the children of monkeys."

Luck slips downward to indigence. Labor strides upward to independence.

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Tecumseh, the Indian Chief.

Detroit can boast of an artist of national putation. It is the residence of Mr. J. M. anley, the justly celebrated painter, whose ctures were destroyed about two years ago at e great fire in Washington, when the Smithnian Institute was burned.

On my way West I halted at his studio to see s great historical picture of Red Jacket Speakg to the Indians of his Tribe. While looking th wonder and admiration at this remarkable ort of genius, this perfect poem in oil and lors, Mr. Stanley remarked that he had an unblished paper in relation to the character of ecumseh, written by Mr. Coffinberry of Conntine, Mich., and at my request he (Mr. Stanv) handed it to me for publication. The etch is the result of an interview with Gen. arrison, and will be read with interest by l who desire to know more of the peculiarities id habits of the earlier Indians.

G. W. B.

THE LETTER.

J. M. Stanley, Esq.—*Dear Sir:* I transcribe low, from my diary, so much of my conversation with Gen. Harrison as relates to the rsonal appearance of the renowned Indian ief, Tecumsie.

EXTRACT.

I said: "General, I presume you retain a vid recollection of his personal appearance 'ecumsie's)."

He replied: "Yes, I do; but you have not tten his name correctly. His name was not *-cum-sie*, as you generally find it printed. The dians called him *Te-cumpth-e*, accenting the ond syllable, and scarcely sounding the final as if to pronounce the name in two syllables. ow his name came so incorrectly into print I n not account."

I said: "Will you favor me with a descripn of his person?"

Gen. Harrison replied: "Certainly; there s but little in the external appearance of Tecmpthe to distinguish him from any other In-an except his eye. He was a small man, bev the medium stature of his tribe; he was of n habit, yet wiry and compactly knit. His ysical action was quick and energetic when t affecting the stoic. His complexion was y dark; his eye—that I can not describe; it s small and twinkling and never at rest; ier Indians, when they compose themselves o their affected dignity, will sit with their s fixed on one object for a long time without a change. Not so with Tecumpthe; his eye was never still a moment; it was ever darting and flashing like lightning, piercing and penetrating, now here, now there. It was the eye of a treacherous villain, as he was, and was significant of low cunning and meanness. I never saw any thing to admire in the character of Tecumpthe, but much to condemn and despise. Of that magnanimity which the world ascribes to him he had none."

I then reminded the General that he had omitted to describe his facial features, and said: "What was there remarkable in his physiognomical lineaments, aside from his eye?"

"Nothing," replied the General; "his forehead was rather low, but broad; his nose was large, high and rather finely cut at the nostrils—his nose was above the aquiline, yet not a true Roman nose; his cheek-bones were pretty high, yet he had rather a long face; his lips were deeply compressed; his mouth large, when open; his chin broad, square and prominent; his cheeks were hollow, and appeared to have fallen in from the loss of teeth; his neck was short, skinny and wrinkled; his hair glossy and finer, I think, from its glossy luster than you generally find among the Aborigines."

"How did he wear his hair?" I inquired. To which he answered:

"That I do not remember."

"Did he wear any ornament in his ears or nose?" I asked.

"Not any," he replied.

"Did he wear any badge or mark to distinguish him from his people?" I inquired.

"Not any; he dressed plainly; his mein was simple, easy and unpretending, and his presence any thing but imposing; he affected a calm, quiet deportment that his eye contradicted at all times."

The foregoing description, at the time it was given to me by Gen. Harrison, was contrary to the ideal which my fancy had presented to my mind of Tecumsie. Gen. Harrison cherished no respect for the memory of the chief, and was unscrupulous in his denunciations of Tecumsie's treachery and cowardice. I fear he has not done justice to either his true character or his *personale;* such as I find it I transmit it to you, with the hope that it may stimulate your genius to transmit to posterity, through the canvas, your own ideal, if not a true image, of one who, notwithstanding Gen. Harrison's deprecations, I regard as a patriot, and one whose magnanimity of soul prompted him to sacrifice himself to redeem his down-trodden people.

Truly yours, S. C. COFFINBERRY.

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Solar Ray Surgery—A New Discovery.

BY AUGUSTUS BARNES.

Dr. Ellsworth of Hartford says: "Take a rabbit and shut him from the sunlight, and he will die of consumption in a few weeks. The tubercles will be just as perfectly formed in his lungs as in the human species, and the symptoms in every respect will be the same." This would show that sunlight is indispensable to health. All animal creation enjoy the sun's rays as well as its warmth. The aboriginal tribes of all countries, especially those of the temperate and cold regions, bask and bathe in its genial rays. Fruit which grows on the sides of trees exposed to the sun is richer to the taste and their cheeks are fairer than those hidden among the branches where the sun's rays can not penetrate. Children who are allowed to sport in the sunshine are much healthier than those who are deprived of its glowing influences. It has been suggested that the difference was consequent on the amount of dirt upon their hands and faces; but this can not be, for scoopsfull of the same material might be thrown upon the fourth-story parlor babies of the cities without producing any improvement upon their weakened, shadowy little persons. But give them the bright sunshine without a speck of dirt, whether on the ground or top floor of city or country, and the improvement in their health would be so rapid as to astonish the anxious and solicitous parent.

As I look upon the roofs of dwelling houses it occurs to me how easy it would be to change the dark and gloomy attics into the most pleasant, inviting and cheerful rooms in the entire house, by a simple substitution of skylights with blinds. One apartment could be here constructed for both sun and water bathing, as it is better that both should be in the same room. The simplest lounge or the most luxurious divan, as the tastes and means of the occupant permitted, with blinds above or beneath the sash of the skylight which could control the light at the pleasure of the bather, would be all that is necessary for the purposes of sun bathing. This heretofore desolate place might be made still more pleasing and attractive by the addition of a conservatory of flowers and an aquarium for fishes. The finny tribe are as fond of bathing in the sunshine as birds are of bathing in the water.

Were a dwelling-house to be erected in accordance with my wishes, I would have the roof steep enough to allow the free passage of water to the conductors; one-half of the roof should be constructed of glass extending from the eave to the apex, with blinds covering the sash; s that the blinds could be turned over on to th roof in one direction and the sash of glass in th opposite; thus, the sunlight could be diffuse through the room to suit circumstance or pleasur

The Hygienic properties of the chemical ray of the sun have been my study for the last thirty eight years, and I have so far succeeded in estab lishing a permanent and well-digested theor that I can remove cancers in their earlier stage tumors, *nævus maternus* (or mother's marks). I matters not whether the latter are red, black purple, brown, or other color, or whether the cover the entire side of the face, or large pro tuberances appear, I remove all by a lens an the simple rays of the sun, without starting drop of blood, or leaving a scar but for a shor time. There is less pain attending this opera tion than by common surgery. Uncomely mole that disfigure the face of many persons can b made to disappear and leave the face as fair a Nature intended it, nor do they ever reappear This treatment produces no ill effects, for ther is no mineral or chemical poison in the rays o the sun.

ADVANTAGES OF THE SUN'S RAYS OVER ALL OTHE CAUSTICS AND THE LANCET.

1. There is no mutilation of any part, nor i a drop of blood ever drawn. The sun's ray will cauterize a vein or an artery so as almos instantly to stop their bleeding.

2. There is no after dressing needed, excep for cancers.

3. There are no bad effects resulting from pois oning, for the sun's rays are not poisonous.

4. There is no scar left, after a sufficient time has elapsed for the healing process; and th redness caused by the burning will disappear in from one to six months.

5. Those who have been subjected to both systems express themselves as feeling less than half the pain under the sun's rays.

6. No detention from business is required.

7. There is no fainting under the operation.

8. Anæsthetics are rarely required.

9. The quickness and permanence of the treatment and the simplicity of the operation are remarkable. It is easily controlled, and the operator can burn to a considerable depth, or so slightly as to only destroy the cuticle, stopping the cauterization at whatever stage he pleases.

10. The remedy is to be found wherever the sun shines, requiring no preparation, no grinding, no mixing, but is ready every day and free to all.

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Readings and Notes from New Books.

THE DURATION OF LIFE IN PLANTS AND ANIMALS.—In continuing our readings from "Life—its Nature, Varieties and Phenomena," we can not do our readers better service than to copy a portion of the chapter on the above topic:

"The longest-living mammal, after the whale, appears to be that affectionate, docile, and sagacious creature, the elephant. Nothing is known positively as to its lease, but the estimate of one hundred and fifty years is certainly not beyond the mark.* The rhinoceros and the hippopotamus are reputed to come next, a maximum of seventy or eighty being assigned to each of these huge brutes; then, it is said, follows the camel, a meager, dry, active, exceedingly hardy animal, whose useful life extends not infrequently to fifty. The period, reckoning by decrements, between fifty and thirty, is reached by few. The stag, longeval only in romance, dies at thirty-five or thereabouts; the leopard, bear, and tiger, fail fully ten years earlier; twenty-five or thirty is the ordinary maximum of the horse and ass, though the severe treatment of man rarely allows them to reach even this. The mule, it is worthy of notice, is stronger-lived and becomes older, a circumstance anticipated in plants, where hybrids frequently live longer than their parents. The cause is probably the same in both, and to be found in their infertility, whereby their whole vigor is left at liberty for self-maintenance, instead of being expended in two directions. Many leases expire between twenty and ten. The former seems to be the ordinary maximum of the lion, as reached in menageries, though when unconfined it evidently lives longer, for it has sometimes been found without teeth. Twenty is the limit also with the bull, despite his great strength, size and solidity; the dog and the wolf seldom pass eighteen; the sheep, the goat, and the fox, rarely live more than twelve. The maximum of the domestic cat is said to be ten; that of the rabbit, hare, and guinea-pig, seven or eight; that of the mouse, five or six, and of other such little animals about the same. As to the leases of the remainder of the four-footed creatures of our planet, except a dozen or so, zoology is entirely uninformed, and until they shall have been ascertained, of course nothing like a proper list can be constructed. The animals which have been mentioned are certainly among the chief, and indicate the scope and limits which a table of ages, when completed, will exhibit; but so far, the list is only like a boy's first map, unfurnished except with the names of the seas, the metropolis and his native town. One thing is plain—that man, regarded as a member of the animal kingdom, has no occasion to murmur at the shortness of his lease of life, but should rather congratulate himself, seeing that he enjoys a considerably longer term, even in his ordinary duration, than the great mass of his physiological fraternity, while it is pretty certain that there is not an animal of his own size that does not return to dust before half as old.

"The scale of ages attained by birds is much about the same as that of mammals; but taking one with another, they probably live longer in proportion to their bulk. No creatures are better adapted for longevity; they are peculiarly well clothed, for no covering can be more complete, or better calculated to preserve warmth, than their soft, close-lying feathers; and as these are renewed periodically, they are maintained in the best possible condition. Many birds also cast their beaks, and acquire new ones, a most advantageous exchange for them, since they are thereby rendered so much the better able to feed themselves. Beside these peculiarities, birds live almost entirely in the fresh air, and their habits are cheerful and sportive, conditions eminently conducive to long life. As to the particular terms of life which obtain among them, Flourens says he knows 'nothing certain.' There is plenty of evidence, nevertheless, that such birds as the eagle, the vulture, the falcon and the swan, far surpass all others in longevity, and attain ages so remarkable as often to exceed very considerably that of man. Even the crow is reputed to live a hundred years, and the raven no less than ninety. There have been instances of the parrot living for sixty years a prisoner, and its age when captured would have to be added. Pelicans and herons are said to reach forty to fifty years; hawks, thirty to forty; peacocks, goldfinches and blackbirds, about twenty; pheasants and pigeons about the same; nightingales, fifteen; the robin, a little less; domestic fowls about ten; thrushes, eight or nine; wrens, two or three.

"Concerning the ages of fishes, even less is known than about birds. It is vaguely believed of them that they are longeval. The reasons

* An elephant aged one hundred and twenty years was put to death in London, in July, 1855.—*Times, July 23.*

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for this opinion are, that the element in which they live is more uniform in its condition than the atmosphere, and that they are less subject in consequence to those injurious influences which tend to shorten the lives of terrestrial creatures; and secondly, that their bones, being of a more cartilaginous nature than those of land animals, admit of almost indefinite extension, so that the frame is longer in growing to maturity. Gesner gives an instance of a carp, in Germany, which was known to be a hundred years old; other writers assign to this fish as many as a hundred and fifty, and to the pike a longevity even greater. Hufeland remarks that natural death occurs among fishes more rarely than in any other part of the animal kingdom. 'The law of the transition of one into another, according to the right of the strongest, prevails here far more generally than elsewhere. One devours another—the stronger the weaker. This regulation,' he continues, 'is a proof of divine and exalted wisdom. If the innumerable millions of the inhabitants of the waters were to remain when they died a single day unentombed, they would speedily diffuse abroad the most dreadful pestilential evaporation. But passing, while scarcely dead, into the substance of another living being, death exists less in the water than on land—the putrefaction takes place in the stomachs of the stronger.'

"Reptiles attain surprising ages. The tortoise, which is so slow in growing that in twenty years an increase of a few inches is all that can be detected, has lived, even in captivity, above a century. One placed in the garden of Lambeth Palace, in the time of Archbishop Laud, lived there till the year 1753; and its death was then induced seemingly through misfortune rather than old age. The enormous creatures of this kind, natives of the Galapagos, undoubtedly live twice or thrice as long as the common species; an individual possessed some years back by the London Zoological Society, had every appearance of being at least a hundred and seventy-five. Even these immense ages were probably far exceeded by the great fossil testudinata of the Himalayas. It is easy to see the cause of such longevity. The same law which obtains in the mechanics of inanimate matter, operates in the organisms of vitalized matter, namely, that what is gained in time must be lost in power. The active habits which in short-lived animals accelerate the vital processes, and bring the lease to an early close, here are no longer found. The tortoises have no excitable nervous system to wear out the durable materials encased in their impenetrable armor; they spend the greater part of their lives in inactivity, and exist rather than live. By analogy, it may be inferred that the loricate and ophidian reptiles reach an age fully as advanced as the tortoises. The crocodile, large, strong, vigorous, inclosed in a coat of mail, and incredibly voracious, is, without doubt, exceedingly long-lived. The larger serpents, also slow in growth, and passing a considerable portion of their lives in semi-torpor, are also unquestionably longeval. Feeding voraciously, at long intervals, so familiar in the case of serpents, seems invariably associated with prolonged life. As regards the amphibia, Smellie refers to a toad known to have been at least thirty-six. The frog, which, by reason of its slow growth, in this climate, at least, is incapable of producing young till its fourth year, reaches, however, what in proportion to this late puberty is the very inconsiderable age of no more than from twelve to about sixteen.

"Insects, for the most part, are short-lived, especially after their last transformation. Some, after acquiring their wings, live only for the remainder of the day. In calculating the ages of insects, of course they must be reckoned from the hatching of the egg. Different species exist two, three, and even four years in the grub state; then a considerable time in the chrysalis; the winged state being merely that of completed maturity. That which especially marks the latter is the fitness of the creature for propagation; and this, as the period of its bloom, is also the briefest. The ephemeræ, in their winged state, are not even creatures of a day. Scarcely a single gnat, as such, survives a week; not half the beetles, nor any of the grasshoppers nor tipulæ, those long-legged dancers of the autumn, enter on a second month; a fortnight sees the death of almost every kind of butterfly and moth. One of the longest-living insects is that brilliant beetle, the *Scarabæus auratus*, or rose-chaffer, the only one that feeds upon the flower from which it receives its English name."

We might continue our Notes and Readings from this work almost indefinitely, but space forbids. The book is one which should find its way into the library of every student of life. We can hardly conceive of a better work for reading aloud in a family of young and grown-up persons during the long evenings of winter. It will give much information, suggest many valuable thoughts on manly, intellectual and moral growth, and improve the taste of the young and thoughtful, leading them from the frivolous to the useful and beautiful.

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General Topics of the Month.



NEW YORK, FEBRUARY, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

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BY M. L. HOLBROOK, M. D.

MEDICAL CONSERVATISM.—There is a right and a wrong conservatism. As it should be, conservatism would only be called into use to preserve from decay or destruction what is true and good. Conservatism, as it often is, labors to preserve from change and destruction what is of itself bad. Every person, therefore, should be conservative so far as to preserve the good and prevent any changes from good to bad in institutions or customs. Conservatism does not hinder one from being either radical or progressive. Indeed, the most radical men of the age are often the most conservative, because they labor most earnestly for the preservation of truth and whatever is good in society, in the customs and habits of the world. We point out this distinction because there are many who believe that to be conservative in any sense is to be fossilized and fogyish and opposed to progress or change. Nothing could be further from the truth. When, however, mankind abuse this tendency of the mind, and endeavor to oppose the doing away of what is unfit longer to be tolerated, they make conservatism a fearful evil. As our world is constituted, it is eminently becoming and right that old things shall pass away and new things take their places. Animals and plants, becoming old and unfit for their destined uses, decay, and their remains help to rear and build up other animals and plants, that there may be newness continually. Indeed, this very process becomes one of conservatism, for the old plant is by change made over into new forms of beauty and life, and thus preserved continually. It is or ought to be so in the world of ideas. Whatever is essentially bad should be eradicated, and those who undertake by conservatism to preserve it, only injure themselves by contact with what is decaying and filthy. There is a great deal of conservatism in the medical profession which is of this latter class. It attempts to preserve from decay modes of medical practice which have no foundation in nature, and which ought to go out of use; and the effort which is spent to maintain them should be used to build up what is better.

Suppose that all the intellect that has been used to defend and maintain a system of poisoning sick people to cure them had been used to build up and perfect a system of medical practice having its foundation in natural law, and its remedies in whatever had a normal relation to human life, we should have everywhere to-day, in full practice, a system of treating diseases without poisoning the patient and wasting his vitality, as well as one that would be instrumental in building up and purifying the body. We shall some day have such a system of practice, universally recognized—sooner, perhaps, than the most sanguine believe. It is written in the very nature of things; it is acknowledged by hosts of eminent medical men, and believed by thousands who are not yet strong and bold enough to accept it altogether in practice. It becomes all who would aid medical progress to use their voices, their pens and their efforts to build up the true practice of medicine, instead of by a false conservatism to preserve longer what is not true, and is doing so much to injure and destroy thousands of the human race.

NERVOUS CHILDREN.—We live in an age of nervousness. Too many of the children born now, instead of possessing a balance of the temperaments, have a preponderance of the nervous system, with large brains, active minds, and too little heart, stomach and lungs. This comes from the greater activity and use of the brain now, compared with the body, than formerly. It is a misfortune, but only one of the results of violated physical law—the iniquitie

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of the parent visited upon the children. Such children are rarely an honor to their parents, are difficult to rear and liable to brain disease and premature death. They should be treated with great carefulness. Give their bodies a chance to grow. If the mother is healthy, let them nurse till they are two years or even older. Feed them regularly on wholesome food, and as much as they can well digest. Cultivate in them a desire to sleep as much as possible. Let them live quiet lives, having abundance of plain, wholesome food, fresh air and good sleep, cool heads and warm feet, with absence of much mental excitement, and they will, to a great extent, outgrow this tendency and become healthy men and women. Some of the brightest and most useful citizens of the present day were children of this class, and would have died but for a wise system of care on the part of their parents, who allowed their bodies to grow and catch up with their brains during the period of growth. Parents should understand this: that the body grows only till the age of twenty, or, perhaps, in some cases, a few years longer, and if they would secure healthy bodies for their children, they should give them every possible chance to grow during this period. It is difficult to make much improvement afterward. A child will outgrow a weakness and inherited tendency to disease, when five years old, that he could never overcome after thirty. We repeat: if you have children with a preponderance of the brain temperament, let their bodies have a good chance to develop and restore a balance of organization when they are in the growing stage of life.

LECTURE BY PROF. E. L. YOUMANS.—Prof. Youmans has recently returned from Europe, where he has been studying the educational institutions of the country. During his absence he lectured before the learned men of London upon the scientific study of human nature. The same lecture has recently been repeated in New York before a highly appreciative audience. He spoke of our present defective system of education, and we are permitted to quote the following:

"The method of regarding man, which tradition has transmitted to us from the earliest ages, is at the outset to cleave him asunder, and substitute the idea of two beings for the reality of one. Having thus introduced the notion of his double nature—mind and body as separate, independent existences—there grew up a series of moral contrasts between the disjointed products. The mind was ranked as the higher, or spiritual nature; the body as the lower, or material nature. The mind was said to be pure, aspiring, immaterial; the body gross, corrupt and perishable; and thus the feelings became enlisted to widen the breach and perpetuate the antagonism. Having disrupted his nature into two alien entities, and sought all terms of applause to celebrate the one, while exhausting the vocabulary of reproach upon the other, the fragments were given over to two parties—the body to the doctors of medicine, and the spirit to the doctors of philosophy, who have agreed in but one thing, that the partition should be eternal, and that neither should ever intrude into the domain of the other.

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"Cerebral action has an enormous rango of limitation, due to the variable volume of the mental organ, but it is also modified in numerous ways and numberless degrees by accompanying physiological conditions. The brain is an organ of power; power depends upon change, and change upon circulation: the lungs and heart are, therefore, immediately involved. To high and sustained mental power, ample lungs and a vigorous heart are essential. And these organs, again, fall back upon the digestive apparatus, which, if feeble, may impair the capacity of a good heart, sound lungs, and a well-constituted brain. Digestion, and even the caprice of appetite, thus stands in direct dynamic relation to intellectual results.

"If the poisonous products of bodily waste are not constantly swept from the system, the cerebral changes are disturbed and the mind stupefied. Foods, drinks and drugs affect specifically the appetites, passions and thoughts. To become exhilarated, man foolishly charges his blood with wine; to exalt the sensations, he takes hasheesh; to secure a brilliant fancy and luxurious imagination, he uses opium; to abolish consciousness of pain, he breathes chloroform.

"Those fluctuations of feeling, with which all are more or less familiar, the alternations of hope and despondency, are vitally connected with organic states. In high health, the outlook is confident; there is joy in action and courage in enterprise; but with a low or disturbed circulation, thin, morbid blood, and bodily exhaustion, there is depression of spirits, gloom, inaction, paralysis of will and weariness of life.

"The doctrine of the persistence of energy and the mutual convertibility of the various forces, is now accepted as a fundamental truth of science; nor is there any ground for regarding the vital forces as an exception to the principle. That the organism can not create its own power, that

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its energy is entirely derived from the food ingested, and which, in this point of view, is merely stored force, is beyond question; and the source being thus limited, that its expenditure in one direction makes it impossible to use it in another, is equally evident. This principle applies, even in a more marked degree, to the cerebral system. Every one who knows that hearty digestion and violent exercise lower the mental activity, that is, the forces are diverted from the brain, and thrown upon the stomach and muscles; and for a like reason, protracted and energetic bodily exertion are incompatible with high mental activity.

"That the purely intellectual powers are subject to limitation, is unquestionable. All minds are fissured with incapacities in one direction or another—clipped away on this side or that—all are fragmentary. There may be great mathematical ability, but no imagination; fine poetical gifts, but no logical faculty; large executive power, with deficient judgment; proficiency in language, and failure in music. Whewell had a powerful memory for books, but a very bad one for persons. Sir William Hamilton cultivated the love of philosophy at the expense of his power of origination and organization. Prescott was so irresolute that he could only spur himself to his literary tasks by the stimulus of betting with his secretary that he would do a certain amount of work in a given time. Theodore Parker was loaded with erudition, 'but exclaimed on his premature death-bed, 'Oh that I had known the art of life, or found some book, or some man, to tell me how to live, to study, to take exercise.'

"These phenomena find no explanation in the old hypothesis of mind as a vague, spiritual entity; they throw us back immediately on the organism, whose acknowledged limitations offer at once a solution of the mystery. These mental inaptitudes may be either organic deficiences or a result of concentrating the cerebral energy in certain directions, and its consequent withdrawal from others. Thus viewed, every attainment involves the exercise of brain-power—each acquisition is a cerebral growth.

"The one great physiological law upon which bodily and mental health are alike dependent, is the alteration of action and repose which results from the limitation of power. The eternal equation of vital vigor is, rest equals exercise. That tendency to rhythmic action, which seems to mark all displays of power in the universe, is conspicuously manifested in the organic economy, allowing the muscles of respiration eight hours' of repose out of twenty-four, and six hours' rest to those of the heart. The cerebral rhythm is diurnal. Except that rest which parts of the brain may obtain when other parts are in action, the organ finds its appropriate repose in sleep. 'Half our days we spend in the shadow of the earth, and the brother of death extracteth a third part of our lives,' says the eloquent Sir Thomas Browne; that is, the periodicities of cerebral action are defined by astronomic cycles. Exercise and repose are equally indispensable to mental vigor: deficiency of exercise produces mental feebleness; deficiency of rest, disease."

CHANCES OF LIFE.—The chance of a child born in almost any American city of living to manhood is rather slim. It is not very much better in the country. If we were to throw out of the count the children of the poor in our cities who live in basements and badly-constructed tenement-houses, there would be but little to be said in favor of a country-born child. In the city one-third do not live a year; one-half do not live five years. We have become so used to this that we do not appreciate how frightful it is, how contrary to nature, how opposed to an enlightened public sentiment. We are told, however, that, with this fearful mortality, it is not as bad as formerly, and that three centuries ago scarcely one-fifth as many as now reached the age of twenty-one years. The question arises in the mind of every thoughtful philanthropist as to whether this great mortality of children is not unnatural and wicked. What is the remedy? We venture to present a solution of this question, which really is the most momentous one of the day, in a brief paragraph.

A careful education of each parent in all the laws of the body; not merely in the dry details of anatomy and physiology, but in the relation and practical bearing of these sciences on human life. It would include the training of every woman for motherhood; it would include the full instruction of every person in all that relates to the care of children. In other words, a comprehensive system of physiological education for all who are to become parents. Why not make physiological knowledge the basis of all education? Until educators take this matter in hand; until physicians, moralists and statesmen, see in this wholesale decay of the race the fate of families and perhaps the destruction of nations, the few who have foresight to know that no other question has equal merits must agitate, must sound the trumpet of alarm, must labor and must wait patiently until public sentiment is educated up to a state which is not, as now, both barbarous and heathenish.

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PHYSICAL EFFECT OF BRAIN LABOR.—A Paris correspondent of one of the London journals stirs up a question long mooted in regard to the effect of hard brain labor on longevity. He notices that most of the talented men of France reach a mature age.

"Look, for instance, at some of the men of the Academie Francaise: M. Viennet, although 89 years of age, is yet in the full enjoyment of his intellectual faculties. M. de Segur, at 86, is as alive to all that is going forward as he was 30 years ago; de Pongerville, 76, completed the other day the revision of his fine translation of 'Lucretia,' the fourth edition of which has just appeared; Lebrun, at 82, is as hale as ever; Villemain, the father of the academy, whose election took place in 1821, is 76; every now and then we hear of his being seriously ill, but for all that he has not the remotest idea of either vacating his *fauteuil* or of giving up his functions of perpetual secretary, which he fulfills with the most assiduous punctuality. Lamartine is 76, yet his step is elastic, and he holds himself as upright as when he saved the country from red republicanism in 1848. Flourens, 88, has been ill for ten years, yet attends regularly. Count Charles de Montalembert, and Ponsard, the popular poet—although both ill—are still in the full possession of their brilliant faculties. M. Guizot, 80, and M. Thiers, 69, still represent the July monarchy with all their wonted vigor, and each of these veteran Orleanist statesmen enjoy robust health. Berryer, 74, the staunch legitimist, is as bright and active as any man of half his age; Victor Cousin, the delightful biographer of the celebrated women of Louis the XIV's time, although suffering from chest disease, preserves his health by an annual visit to Cannes during the winter. The Duke de Broglie, 82, son-in-law to Madame de Stael, is still as polished and strong as though he were made of steel."

Many of our distinguished American authors have attained to great age without the loss of that healthy vigor which makes the pen palpitate with vitality. William Cullen Bryant is 72 years of age, and he is as erect and elastic as he was forty years ago, and he writes as well now as he did then. Thurlow Weed is about 75, and he can do as much literary labor in a day as he could half a century ago. James Gordon Bennett, editor and proprietor of The New York Herald, is nearly 80 years of age, and yet he shows no signs of declining vigor. Halleck, the poet, must be on the verge of 80, and Charles Sprague, the banker-poet, is an octogenarian. Dana, the poet, must be 80 years of age. We have many other noted men, in all departments of literature, who are upward of 80 years of age.

A POINT OF MANNERS.—It is a principle in republics that a majority shall rule, but it is not thereby made true that minorities have no rights. If a majority are not intelligent or wise enough to decide that smoking and chewing tobacco are vicious habits, we suppose that they will smoke and chew; but need they be so low in the scale of manners as to puff their disgusting smoke into every body's face, whether they like it or not?

There is hardly a city in the land where well-dressed people, who are by nature polite and kindly disposed, would not be ashamed in a drawing-room to be constantly violating the rules of good breeding, but who on the streets puff the smoke of their pipes and cigars into the faces of any who may be in proximity to them. It is neither decent nor mannerly. It is only recently that we knocked a cigar from a man's mouth for puffing its smoke in our face. And though perhaps a majority of men smoke, or have had their senses so blunted and perverted that they are not offended by it, yet there is a minority who do not care to have their senses outraged by the filthy, disgusting weed, and whose rights should be respected. We go for banishing smokers from the streets and from society until they can learn good manners.

AMERICAN WINES.—The manufacture of American wines is yearly on the increase. Medical men indorse their use for health purposes, the newspapers advertise them in general terms for nothing, and the people drink them and think they do themselves no wrong. Even Temperance people think that, in some way or another, their use is going to promote the cause of Temperance. In consequence, there is no vigorous opposition to their manufacture, but, on the reverse, a strong tide of influence in their favor.

But a day of reckoning will come. If ours ever becomes a wine-bibbing nation, the fault will be, first, that of the doctors, who ought to know better than to teach that alcohol, in any of its forms, has any normal relation to the body; and second, that of the press, who sanction and brought into notoriety the delusion. All history proves that wine is a mocker, physiology teaches it is a poison, and experience that its use is injurious and fatal to the highest interests of man.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Jaundice.—This disease is called, by medical men, Icterus, and means a yellow disease, or to become yellow.

It is not in reality a disease of itself, but is by far the most common symptom in nearly all the diseases to which the liver is subject.

Jaundice is caused by the presence of bile in the blood, and is considered a distinct disease only when it can not be traced to some well-defined difficulty in the liver.

The presence of bile in the blood generally arises from one of two causes: 1. From some disease or derangement in the liver which causes a cessation of the biliary function, compelling the elements of the bile to accumulate in the blood. 2. Some obstruction in the gall-bladder, or gall-ducts, which prevents the passage of the bile, into the intestines after it is formed, in which case it is re-absorbed into the blood.

It will readily be seen that jaundice may be a symptom of simple congestion, of active inflammation, or, in fact, of almost any derangement either in the structure or functions of the liver. Consequently, it may be only of a mild form, which will readily yield to simple diet and a few warm baths, or abate even without any treatment at all; or it may be of a protracted and obstinate form, which can not be cured by any treatment whatever, but is sure to end fatally; or again, it may assume an intermediate form, which is curable, but only by a long and tedious course of active and persevering treatment.

It is important to ascertain what form of disease is producing the obstruction, in order to decide as to what are the chances for recovery, and what course of treatment it may be best to pursue.

SYMPTOMS.—Yellowness of the white of the eye and of the skin, brown or blackish color of the urine, light or clayey appearance of the feces, bitter taste in the mouth, furred tongue, slow pulse, drowsiness, giddiness, peevishness, loss of appetite, and deranged digestion, especially if meat or fats are used.

There is usually loss of strength and depression of spirits, but not much fever, unless severe inflammation is present; a dull, heavy aching, with a sense of constriction, when congestion is the cause; or more severe pain, accompanied by great tenderness, when it is the result of inflammation. Sometimes the skin changes from yellow to dark brown, giving rise to what is called black jaundice. Jaundice is sometimes observed in new-born children, but it generally disappears without any treatment.

TREATMENT.—When the jaundice is due to any special disease of the liver, the directions given for the treatment of that disease should be followed; but if it can not be traced to any especial cause, then the general health must be improved, and the skin, the kidneys, and bowels brought into active exercise, so as to remove the bile from the blood, by promoting its elimination through these natural channels.

If the patient has a sufficient amount of strength, I would recommend the wet-sheet pack, the vapor bath, or hot-air bath, so as to promote perspiration, and these may be followed by a thorough sponge bath or tepid full bath. Fomentations over the liver, wet compresses over the stomach and liver, or the wet bandage at night are very beneficial. The hot and cold hip bath alternating, or hot and cold spray to the liver, will be useful. The rubbing wet-sheet may be employed to good advantage. The bowels should be kept open daily, by enemas if necessary. The electric bath or dry electricity is very useful in this complaint. The diet should be very plain and simple—no meat, butter or grease of any kind should be used; avoid, as much as possible, milk, eggs and sweets. Plain food, such as fruits and grains, eaten but twice a day, will be best for persons troubled with liver difficulties. I have seen remarkable cures of some cases take place in four or five days under Hygienic treatment.

Allopathic physicians would administer sulphate of soda, taraxacum, nitric acid, senna, resin, podophylum, benzoic acid, colchicum, hydrochloric acid, calomel, aloes, squills, capsules of pig's bile, opium, belladonna, hyoscyamus, and quite a number of other medicines, all of which are recommended by medical authors; while the Homœopaths would give aconite, belladonna, chamomilla, china, digitalis, mercurius, nux vomica, pulsatilla, sulphur, etc., all of which, in our estimation, are much more likely to disturb the natural functions of the organs than to remove disease.

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Cirrhosis.—This word comes from a Greek word meaning yellowish, and it is applied to a certain disease of the liver, because, upon examining this organ, in cases where it has proved fatal, it presents the grayish-yellow color of impure beeswax. It is sometimes called granular hardening of the liver, hob-nail liver, and gin-drinker's liver. When a student at Bellevue, I saw, in the course of a few months, as many as thirty cases of cirrhosis in the wards of the hospital, all of which were traced directly to the use of spirituous liquors.

This disease is generally caused by the use of alcoholic stimulants; yet it is often produced by vinegar, cider, coffee, and other substances.

Nearly all stimulants have a tendency to produce congestion of the liver; congestion leads to inflammation, which becomes chronic, causing a thickening of the connective tissue, followed by contraction, which compresses the secreting cells, suppressing their action and diminishing the size of the entire organ, so that the liver, in this disease, becomes smaller than in health.

Symptoms.—These are, perhaps, more obscure, in the early stage, than the symptoms of congestion or inflammation; but as the disease progresses there will be dull pain in the right side, some tenderness on pressure, loss of appetite, deranged digestion, enlargement of abdominal veins, flatulence, dryness and roughness of skin, sallow complexion, debility, and loss of flesh. After a time the liver becomes so much contracted as entirely to obstruct its action, and there will generally be an effusion into the cavity of the abdomen, causing dropsy. Hemorrhage of the stomach and bowels may occur, in some cases, as one of the earliest symptoms, and may be so profuse as to cause death.

Treatment.—It is only in the earlier stages that the treatment can be any thing more than palliative; for when the disease is far advanced it is sure to terminate fatally.

Avoid stimulants, coffee, tea, spices, vinegar, and condiments of all kinds. Use fomentations to the liver and stomach, followed by hip baths; hot air or vapor baths, followed by tepid shallow or half baths; the electric bath and dry electricity are often beneficial; but more reliance must be placed upon the avoidance of what will cause the disease; upon a moderate, plain diet, and upon pure air, than upon any external treatment.

If dropsy is present, it may be greatly relieved by the Turkish Bath. In this disease the condition of the patient and his amount of vital force must be carefully considered, and treatment prescribed accordingly.

Atrophy of the Liver.—This is a wasting or contraction of the liver. There are two forms of this disease—acute and chronic—which differ very much in their character, and are in no way connected.

Acute atrophy is generally very rapid in its course, and results in complete destruction of the cells of the entire organ. It is sometimes called softening of the liver. Pregnant women are most liable to suffer from it.

Causes.—Impure blood from bad habits of living, the use of medicines, alcoholic stimulants, sexual excesses, malaria, impure air, fits of passion, etc.

Symptoms.—In the first stages there will be loss of appetite, thirst, drowsiness, depression of spirits, fatigue, tenderness of the abdomen, irregularity of bowels, and slight jaundice. These may last for days or weeks, or many of them may be wanting, and the symptoms of advanced stages make their appearance suddenly. These are marked jaundice, vomiting of mucus, then of matter resembling coffee-grounds.

Treatment.—Avoidance of the causes, with proper attention to diet, a warm bath to cleanse the skin occasionally, pure air, regularity of the bowels, and all those Hygienic measures which are calculated to produce a purer and better quality of blood, are the most reliable means to be used in this difficulty. The blood is the great fountain in which is found the material for every part of the body. In a good supply of healthy blood you have the elements of which healthy tissues are made.

Chronic Atrophy.—This disease results from those conditions which tend to obstruct the circulation of the blood through the liver, thereby interfering with its nutrition.

Symptoms.—Impaired digestion; flatulence; diarrhea, alternating with constipation; pale-colored stools; dry, sallow skin; loss of flesh and strength; wasting, perhaps dropsy; and finally, there may be fatal exhaustion.

Treatment.—Avoidance of rich food, sugar, fermented drinks, coffee, tea and spices, and also over-fatigue. Use only plain, simple food, warm clothing, wet compresses to the stomach and liver, fomentations occasionally applied to these parts, tepid hip baths, rubbing wet-sheet, applications of electricity, and rubbings and manipulations of the parts. If there is dropsy, give hot-air baths. The warm and cold spray, alternately applied for a minute each, for ten minutes a day, will increase the circulation in this organ, and sometimes do much to restore it to a healthy condition.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

Constipation.—"Will you please inform me through THE HERALD what I shall do to cure myself of constipation of the bowels? My occupation is sedentary, I being confined to my office from seven to eight hours a day. I live about as people generally do, except that I use neither alcohol nor tobacco. Can I treat myself at home, and continue my business? Is there any kind of pills which you would recommend?"

The relief which pills and cathartic medicines of any kind afford is merely temporary, while the effects of their continued use are very deleterious. They exhaust vitality very rapidly, and aggravate the difficulty they are given to relieve. Shun them as you would a pestilence. To effect a cure a radical change in diet must be made, using plain, coarse food, which must be thoroughly masticated. Fruits and bread made of coarse, unbolted or Graham flour, should constitute the basis of the dietary. Fine flour bread, milk, spices and condiments, rich pastry, cakes and the like should be religiously abstained from. As much active exercise should be taken as circumstances will permit, in addition to which the patient should knead, shake and manipulate his bowels for half an hour or so every day. An excellent exercise for this difficulty is to have a pair of rings suspended at about the height of the top of the head; then, with the feet on the floor, the hands hold of the rings, and the elbows and knees straight, swing the body slowly around in a circle from ten to thirty times; then reverse the motion the same number of times. Another valuable movement is to inflate the lungs fully, forcing the abdomen out as far as possible, hold the breath, and percuss the abdomen with the palms of the hands. Repeat from five to ten times. The mode of breathing should also be attended to. Most persons of sedentary habits acquire the habit of moving the chest *only* in breathing, instead of contracting the diaphragm and swelling out the abdomen at each inspiration in the natural manner. Notice how animals or young children who have not been cramped and fettered by clothing breathe, and "go thou and do likewise."

Position During Sleep.—"Which is the best position during sleep, on the side or back?"

Upon the back, as there is less compression of the chest, and cramping of the body and limbs.

Itching of the Skin.—"I am troubled with an itching of the arms and legs, which comes on at the beginning of winter and leaves me in the spring. My general health is good, and I eat and drink of every thing which is set upon farmer's tables. What is the cause and remedy?"

The cause is the eating and drinking of every thing which comes in the way, which, of course, includes fried salt pork and grease, *ad libitum*, sausages, mince pies, doughnuts, hot buckwheat cakes swimming in butter and covered with molasses, old hard cider, etc. etc. The remedy consists in abstaining from all such articles of diet as tend to clog the system and render the blood impure; in frequent bathing and active, out-of-door exercise. The reason why this difficulty is felt more in cold weather than in warm, is because more exercise is taken in the summer, and the skin is more active and throws off the impurities in the system with greater ease. Also, a less amount of injurious food is usually eaten.

Baldness.—"What is the cause of baldness, and how can it be prevented and cured?"

Baldness is caused—at least nine times out of ten—by wearing close, unventilated hats and caps, which keep the head too hot and weaken the scalp. There are scores of bald-headed men where there is one bald-headed woman; and who ever saw half-a-dozen men who were bald below where the hat comes? There are other causes which sometimes produce it—such as intense mental excitement, violent fevers, etc. To prevent it, maintain the general health, and keep the head well ventilated. When the hair is gone, and the scalp presents a shiny appearance, it can never be restored; but where such is not the case, the best treatment is to bathe the head in cold water, and follow it with a thorough rubbing and manipulation.

Clothing.—"How often should persons change their under-clothing?"

The oftener the better. There is a great deal of effete matter which passes off through the skin and is retained in the clothing, and which necessitates a frequent change. There is no danger of people keeping themselves or their clothing too clean. There should be nothing worn at night which has been worn during the day.

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Boils.—"What is the cause of boils, and how can they be prevented and cured? Are they an indication of health, and is it desirable to have them?"

Boils are the result of impurity of the blood, which is generally produced by an excess of food, imperfect digestion, torpidity of the liver, or an insufficient amount of pure air. They are not an indication of health, but they constitute one of Nature's processes for regaining health. If the blood is impure, it is better to have it purified by means of boils than not at all. The way to prevent them is to live healthfully, especially with regard to diet and out-of-door exercise. As to treatment, it is generally best to let them "work out their own salvation" in their own way. A simple water-dressing is sometimes useful to lessen the pain; and, when deep-seated, it is occasionally necessary to use the knife after the matter has collected. The pain can also be lessened by living very abstemiously upon coarse bread and fruits, and by bathing and out-door exercise.

Oysters.—"Are new oysters, without pepper, salt or other condiments, wholesome, and would you recommend them for dyspeptics?"

I would not recommend oysters for dyspeptics or for those who are not dyspeptics. It is true, there are some kinds of food which are harder to digest, but there are many which are easier of digestion, and far more suitable for weak stomachs as well as strong ones. One of the greatest objections to the oyster as an article of food, and one which every thinking person will admit upon a little reflection, is its uncleanliness.

Perfumery.—No one has a right to do for his own personal gratification that which is unpleasant or disagreeable to others. A certain kind of perfume may be pleasant to some, while to others it will be disagreeable or even sickening; therefore, a person has no more right to use perfumery while in the company of others than he has to puff tobacco smoke into other people's faces. A person who will do either neither knows what true politeness is, nor cares for the comfort and welfare of others. If one wishes to smoke or use perfumes let him do it in private, not in public.

Liquid Food.—"Does water or other liquids drank at meals retard digestion?"

Liquids of any kind taken into the stomach with the food check digestion by diluting the gastric juice, and it has to be absorbed before the digestive process can proceed.

A Lawyer Querist.—A new subscriber—a lawyer, by the way—sends a list of fifty-three questions, some wise and some otherwise, and ranging through the vast fields of Physiology, Pathology, Hygiene, Chemistry and Morality, to be answered in THE HERALD. To answer them all properly would require a good-sized volume, therefore I must beg to be excused, and would refer the querist to Graham's "Science of Human Life," Combe's "Constitution of Man," and the "Hydropathic Encyclopedia," for the information which he seeks. Such of his questions as are of general interest will be answered whenever space will permit. Let querists bear in mind that those questions which are short and to the point, and are most appropriate for the pages of THE HERALD, and of the greatest general interest to its readers, will be answered first, while others which are less so will have to wait, and those which are private in their character must remain unanswered.

Perspiration.—"What preparation will prevent the odor that arises from sweating under the arms?"

Take the two gases, oxygen and hydrogen, in the proportion, by weight, of eight parts of the former to one of the latter. Combine. The result will be a colorless liquid known by the name of water. Apply this freely to the affected parts every morning. If the case is very serious, the addition of a little soap will hasten the cure. N. B. If a few drops of the preparation should reach other portions of the skin, no serious results need be apprehended.

How to Have a Sweet Breath.—"What is the cause of a bad-smelling breath, and what is the best way to cure it?"

It is occasioned by an impure state of the blood and derangement of the digestive organs. To cure it, remove the causes which produce it by living plainly and abstemiously, taking a good deal of exercise in the open air and sunlight, keeping the skin free and open by frequent bathing and rubbing, etc.

Gymnastics.—"Can you tell me if there is any school where Gymnastics are taught with sufficient thoroughness to enable its pupils to teach Physical Culture successfully?"

There is such a school at Lexington, Mass., of which Dr. Dio Lewis is the Principal, whom address for further information.

Cold Feet.—For the cause and means of cure for cold feet, see THE HERALD OF HEALTH for October, 1866.

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Healthy Spices and Condiments.

EMULATE the cucumber—be cool.

THE man who was lost in slumber found his way out on a night-mare.

AN enthusiastic architect, having received an order to build a summer-house, wishes to contract for a load of sun-beams.

"WHERE is the East?" inquired a tutor, one day, of a very little pupil. "Where the morning comes from," was the prompt and pleasant answer.

A LADY in London recently called at the shop of a maker of chimney ventilators to see if he had any contrivance that would make her husband stop smoking.

A MODERN French writer says: "A physician prescribing to a sick man always reminds me of a child snuffling a candle—it is ten to one but he snuffs it out."

THE editor of an Eastern paper, a bachelor, says: "The reason why women do not cut themselves in two by tight lacing is because they lace around the heart, and that is so hard they can not affect it."

"YOU would be very pretty indeed," said a gentleman patronizingly to a young lady, "if your eyes were only a little larger." "My eyes may be very small, sir, but such people as you don't fill them."

A GENTLEMAN, dining at a hotel, was annoyed by a stupid waiter continually coming hovering round the table, and desired him to retire.

"Excuse me, sir," said Napkin, drawing himself up, "but I'm responsible for the silver."

A MAN recently broke off a marriage because the lady did not possess good conversational powers. A wicked editor, in commenting upon the fact, says: "He should have married her, and then refused her a new bonnet, to have developed her powers of talk."

THE celebrated French physician, Dunmoulin, on his death-bed, when surrounded by the most distinguished citizens of Paris, who regretted the loss which the profession would sustain in his death, said:

"My friends, I leave behind me three physicians much greater than myself."

Being pressed to name them, each of the doctors supposing himself to be one of the three, he answered, "Water, Exercise and Diet."

Publishers' Department.

This Number.—"Onward" is our motto. To make each number of THE HERALD OF HEALTH better is our constant aim. The present month's issue, we think, will compare favorably with any that has gone before.

The first article, by Prof. R. K. Browne, on "The Sources of our Muscular Power," will be found worthy of a careful reading. The new discoveries in Physiology in reference to the sources of muscular power are very interesting, and it is to be hoped will, when fully completed, prove valuable.

Horace Greeley's article on "Buildings for the Poor," shows his humanitarian and practical spirit, and will please not only his friends but every one who is interested in the elevation of the poor. We ask for it a careful reading.

"Memory," a lecture by Prof. L. N. Fowler, is in his usual very entertaining style, full to the brim with practical thoughts, and, though lengthy, no one will on reading it say that it is too long.

"Brain and Body," by Prof. Sizer, is on a subject of which we can not know too much, and on which most people know too little. Read it carefully.

"Laws and their Penalties," by Rev. Henry Ward Beecher, discusses a question which, if we were all to understand and live up to, would prove invaluable to us, and we would rarely find ourselves miserable or sick. Mr. Beecher knows better than most ministers the high value of obeying the laws of the body. Much of his success as a preacher comes from his being a good physiologist. We shall publish an article from Mr. Beecher every month during the year.

"An Invalid's Experience," by Prof. Root, well known as a composer and teacher of music; "Spectral Illusions," by Dr. J. E. Snodgrass; "How to Keep a Husband, by F. G.; several poems of exceeding interest and spirit; "Cause and Effect;" "How to Bathe," by Dr. Miller; Topics of the Month; Home Treatment; Notes to Correspondents, etc., complete the feast of good things for February. Our storehouse for March will be equally as good and full.

To the Reader.—Friends of the cause of human improvement who may see a copy of our magazine, are requested to lend a helping hand in extending its circulation, if only by their own names. Our aim is to do all the good we can in extending a knowledge of the laws of the body and brain. Many a person has cause to bless our labors, because he has better health from learning how to live, and better children from knowing how to rear them. Half the children born die before they arrive at five years of age. Why? Because of ignorance on the part of parents. Teach them the laws of life, and they would swell the lists of living men and women and bless the world.

Our Illustration.—The fine cut of a boy with his sled, engaged in the sport of coasting, represents a new invention by Mr. Lindergreen of Boston. It has certain improvements which make the sled easily guided by the young rider. Coasting is a healthful exercise, and the boys will all thank Mr. Lindergreen for his neat and useful invention. Address him at Commercial Wharf, Boston, Mass.

A Sewing-Machine for Nothing.—It will be seen that we give a Sewing-Machine of Wheeler & Wilson's make, worth $55, for 30 subscribers and $60.

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What Our Friends Say to Us.—

"Your journal is now really a valuable magazine, and reflects great credit on its Publishers. I like the name. The title, JOURNAL OF PHYSICAL CULTURE, I think particularly appropriate, and you merit it; and surely, when we have scores of journals devoted to agriculture, horticulture, the culture and development of swine, cattle and the brute creation—some with an immense circulation, a journal teaching the grander, nobler science of man-culture, the art of improving and developing ourselves physically and intellectually, should take the lead of all of them. J. F.

"COLLINGWOOD, C. W."

CONFISCATION.—The following note from the Publishers of The Prairie Farmor shows what we have found to be the case in very many other newspaper offices—namely, that our journal is liked so well that people confiscate it whenever they can lay their hands on it. How much better to subscribe and have it regularly.

"Messrs. MILLER, WOOD & Co.—*Dear Sirs:* Your journal has been of so much interest the past year that many of the numbers have been confiscated by visitors, and as we should like to bind this year's numbers, we would be obliged if you will send them to us.

"Yours truly, EMERY & CO."

A LIFE SAVED BY READING THE HERALD OF HEALTH.—"SPRINGFIELD, O., *December* 21, 1866. MILLER, WOOD & Co.—*Gents:* I would inform you that I have not received my HERALD for November, and as I have preserved them through all its changes for about eighteen years, I wish to have it.

"I was a poor dyspeptic, pronounced by my physician to be in the last stage of consumption, had night sweats, a violent cough, was given up as incurable, and I made my will, supposing I would die in a few weeks. I settled with my physicians and every body else, and was expecting that a few days more would close up my earthly career. Just at that time I got Dr. Shew's "Water Cure Manual," and soon after The Water Cure Journal, and without any other information I treated myself as well as I could from reading those works, and in less than six months my health was quite good, and in twelve months I had good health, and have had, with but slight exceptions, ever since. I am now in my 67th year, and I farm, and did husk corn day after day this fall with young men and made a full hand, and I found I could lead the most of them. I credit the above works with my good health, though I have quite a library of books on the system you advocate in your journal. I expect to read THE JOURNAL while it advocates its present principles.

"A. MOREHOUSE."

Sexual Physiology.—

Our new work on Sexual Physiology is already meeting with a rapid sale Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Special Request.—

Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Notices from Our Exchanges.—

"THE HERALD OF HEALTH is a regular visitor to our family, where a quack doctor is never seen. It costs us the simple sum of $2 per annum, while the quack might cost us more than the price of a hundred geese. Which is the best? We say, Take the former all the time.

"Reader, give us a call and leave the required sum, and you shall be made happy and healthy—not by burning yourself to death with poisonous drugs and narcotics, but by learning the true secret of health."

The Radical, in speaking of THE HERALD, says:

"We do not hesitate to speak well of this publication, and to wish that it might have its place in every household in America. Young men and young ladies might find it more profitable reading than very much of that which now occupies their time. Parents would be greatly assisted by it."

Premiums.—

Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

Write Plainly.—

All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

Agents Wanted—

We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

Back Numbers.—

Those who wish to be sure of back numbers had better subscribe at once, as we will not agree to furnish them during the entire year. Our editions for the last six months of 1865 were large, but it was not so large as the demand, and several of the numbers are out of print.

Books.—

On sending in orders for THE HERALD OF HEALTH, our friends will find it convenient also to look over our book list on another page. We can also procure any work published in New York, and send the same at Publishers' prices.

Sewing Machines.—

Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as New Years' Presents.

Samples.—

Those who receive THE HERALD as a sample are respectfully requested to send us their subscription for a year. It will be a constant help in every household where found.

Herald for 1863, 1864 and 1865.—

We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25.

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PREMIUM LIST FOR 1867.

As will be seen by our Prospectus on the fourth page of the cover, our Premium List is more valuable than ever before. The following is an abstract of it:

For 30 *Subscribers and* $60,

We give a "Wheeler & Wilson Sewing-Machine," worth $55, or a Silver Watch of the same value and of American manufacture;

For 15 *Subscribers and* $30,

"Webster's Pictorial Unabridged Dictionary," worth $12;

For 10 *Subscribers and* $20,

Each member of the Club will receive a copy of "Lincoln at Home." This Picture is 19x24 inches, and a very valuable one, being well engraved on steel;

For 6 *Subscribers and* $12,

One copy of the "Hydropathic Encyclopedia," worth $4 50.

For 4 *Subscribers and* $8,

A Gold Pen worth $3;

For 3 *Subscribers and* $6,

A copy of the "Hand-Book of Hygienic Practice," worth $2;

For 2 *Subscribers and* $4,

[One of whom shall be a new subscriber], one copy of "Lincoln at Home," worth $1.

These Premiums are all valuable ones, and priced at just what they sell for in market. Owing to our taking a large number, we are enabled to offer very great inducements to our patrons. We hope our friends everywhere will help to extend our circulation.

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that for a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Sexual Physiology.—"This is a handsome, new and elaborate work, discussing in a thorough and scientific manner the whole subject of sexual physiology, law of sex, theory of population, etc. Every page and sentence is worthy of thorough study. An original work, well written, philosophically elaborated, and beautifully illustrated, it is by far the ablest work on the subject that has ever appeared, and one of the most valuable contributions to our literature. It is adapted to both the scientific and popular mind. It should be in the hands of every man and woman in our country. It is an honor to the author and to our age.—*Eclectic Medical and Surgical Journal, Philadelphia.* Price by mail, $2. Address

MILLER, WOOD & Co.,
No. 15 Laight Street, New York.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of Job Printing: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Clubs.—Every friend of our magazine and the cause we advocate should see to it now that our cause is nobly sustained for the coming year. We are bound to make the journal a good one, and one that can safely be put in the hands of all with the assurance that its teachings will improve their health and habits. Let each one not only re-subscribe, but get one, two, ten or twenty new names.

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of The Herald, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for The Herald, Books, and Baths.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

October Number for 1865.—We will thank all those who have the October number of The Herald for 1865, and do not wish to keep it, to mail the same to us.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

Literary Notices.

Carpenter's Lincoln.—Pictures of Abraham Lincoln have been multiplied to such an extent that hardly a person in any part of the country but has an engraving or photograph of him. Among the many steel engravings that of Carpenter's, engraved by Halpine, is the best. We regard it as a work of art much superior to Marshall's, though less expensive. The opportunities which Mr. Carpenter enjoyed for studying Mr. Lincoln's face, during the six months he was engaged in painting his great picture, "The First Reading of the Emancipation Proclamation before the Cabinet," are such as no artist ever enjoyed. Those who were familiar with Mr. Lincoln's face agree that he improved his opportunity to advantage. The family of the President regard the painting from which this engraving was copied as the most perfect ever executed, and have made every effort to induce Mr. Carpenter to part with it. The picture is published by A. J. Johnson, 113 Fulton Street, New York, and sold only by Agents. There are, perhaps, few pictures that will be in greater demand, and as a work for canvassers could hardly be excelled. Price, from $5 to $15, according to the style of the engraving.
G. E. & F. W. Woodward, 37 Park Row, New York.

Woodward's Architecture, Landscape Gardening and Rural Art—Edited and published by

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FOREST TREES.—By Andrew S. Fuller. Published by G. E. & F. W. Woodward, 37 Park Row, New York.

These two works, from the enterprising house of G. E. & F. W. Woodward, are designed to fill an important place among books on rural taste. The first one contains 58 designs and 176 handsomely made illustrations of houses, barns, gates, plans for ornamenting and laying out gardens and grounds, making roads, well and cistern houses, fountains, hitching posts, etc. etc. The variety is large enough for satisfying the farmer, gentleman-gardener and professional man, and for men of large and small means. It is, however, chiefly intended for those of moderate means. We would have added a chapter on the Bath House and another on Ventilation, and perhaps a few hints on the planting of trees. Aside from these omissions, the work meets our favor, and will, in part, supply a never-failing demand. We are glad to know that it is but the first of a series of annuals to be issued by this house.

The second book, on "Forest Trees," by the well-known horticulturist, Andrew S. Fuller, gives minute directions for planting and growing the most common trees of the forest. Forest culture is in its infancy in this country, but in the Great West there is need of it, and so, too, in the East, where the waste in this direction has denuded so much country. The book is a needed and valuable one.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.

GOOD BOOKS FOR PRESENTS.

NEW PHYSIOGNOMY, with One Thousand Illustrations, $5, $8, or $10. It is a beautiful book. ÆSOP'S FABLES, People's Pictorial edition, tinted paper only $1. ILLUSTRATED FAMILY GYMNASIUM, $1 75. HOW TO WRITE, HOW TO TALK, HOW TO BEHAVE, and HOW TO DO BUSINESS, in one vol., $2 25. THE PHRENOLOGICAL JOURNAL for 1867, only $2. Address FOWLER & WELLS, 389 Broadway, N. Y. feb-tf

HOME OF HEALTH.

The Proprietors of the New York Hygienic Institute would like to find a suitable place, somewhere within thirty or forty miles of New York City, for a Health Institution. Among the indispensable requisites of such a place are pure air and an abundance of pure, soft spring water. We should prefer a mountain scenery, near a lake, where there was enough of cultivated land for gardening purposes. Address

MILLER, WOOD & CO.,
15 Laight Street, New York.

NEW PATENT WATER-CURE APPLIANCES.

To Water-Cure and other Physicians and Patients. If you want to cure diseases speedily and *very* successfully, or pursue home-treatment, get Dr. S. M. Landis's celebrated "*Patent Compound Electro-Magnetic Hot and Cold Air Bath*," being a Complete Water-Cure and Electrical Establishment in a portable box resembling a wardrobe; also his "*Patent Compound Male and Female Magnitude Syringe and Organic Bath.*" Without these you are behind the age of Hygienic Improvement; or go to his office, *corner of Thirteenth Street and Girard Avenue*, or Mrs. Dr. Landis's Institute, 1631 *Vine Street*, Philadelphia, Penna., where they cure all diseases speedily; or send 15 cents for "*Medical Guide*," etc. jan-3t



GRANITE STATE HEALTH INSTITUTE,
HILL, N. H.

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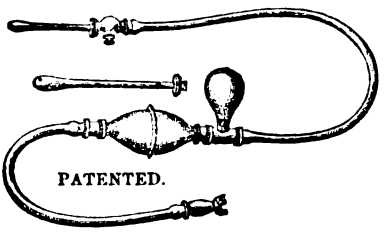
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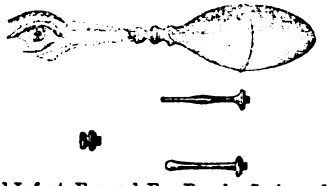
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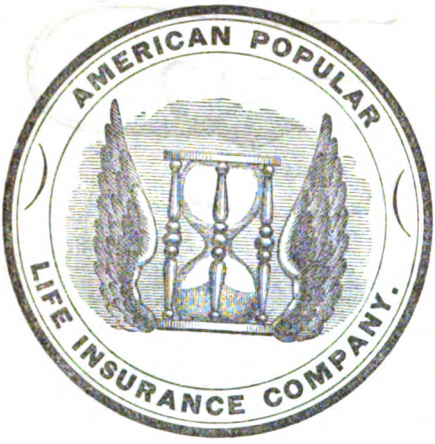
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DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

MARCH, 1867.

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General Articles—Hygienic and Miscellaneous.

Length of Days.

BY REV. H. W. BELLOWS, D. D.

WE are often called to contemplate the brevity of human life; it might sometimes be more affecting to consider its length! Though our days be as nothing in comparison with God's, yet a human life, extended to its natural term, covers a large section of recorded time. Less than thirty lives of seventy years carry us back to the time of our Saviour. There was lately living a man who had seen the Pilgrims. Our Union is only one life-time old. And what changes in society, what wonderful developments, have not the hoary heads still living and moving among us been permitted to behold! Can we call that period short which has changed us from a feeble colony into one of the great powers of the globe? Can we deem that life a shadow which has turned all the sands that have run out while the great tale of the last two generations has been told? "Are there not twelve hours in the day?" said our Saviour, when admonished of the need of hastening his movements toward Jerusalem. A day, to him, who knew how much had often been done for eternity within its twelve hours of light, was no brief season. Ask the toiling laborer, whom the dawn lights to his work and the twilight to his rest, if the day is short; ask the weary apprentice, who watches for the blessed shadows that are to release her from her ill-paid task; ask the student, plodding at his exhausting labor of the brain into the night-watches; ask the imprisoned invalid—who says in the morning, "Would God it were evening;" and in the evening, "Would God it were morning"—if the day is short! And, of these days, it takes how many to make a single year! How slowly changes the new-born babe into the lisping child; how many and patient the years of pupilage; how long and weary the season of apprenticeship! And then comes the broad, high plain of middle life, full of enterprise, work and experience. Ah, with what strained and tired muscles does the brave man cross that dusty common; the mid-day sun beating on his head; the manly burden pressing on his back; too proud to sit beneath the proffered shade by the wayside or drink from the brook! And then comes the ample season of declining life, when man, with slackened pace, walks down the hill, meditating upon the mistakes and sacrifices and sorrows, the triumphs, successes and possessions of his more active career, not without full space for reflection. And, finally, old age—calm, tranquil, slow, when the pulse flags and the eye dims, and as if jealous of its likeness to death, refuses sleep, and there is leisure enough to live life over again and again before laying it aside for ever. But threescore years and ten are a long period; short in the power the imagination has to leap them at a bound and light upon youth, but long in their transit; long in the sum of their thoughts and labors, their sorrows and joys!

It is well to think of life as long! To view it from the outset in all its successive portions,

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and to remember that we hope and expect to reach its natural term. The days of our years are threescore years and ten. The human constitution is characteristically framed for that period of time; and they who die before it die prematurely, by violent disease, hereditary unsoundness, or accident. There is a corporeal preparation for seventy years of life. For so long thy tent, O man, is pitched here! subject, indeed, to an unexpected strike; but, if folded sooner, struck in violation of the general orders. Seventy years art thou to bear, it may be, the burden of life; for so long a period to dwell in this tabernacle of flesh; to be acquainted with its weakness and its strength; to have the charge of its passions and desires; to encounter all the varied casualties or ordinary conditions of earthly life. The nights and mornings of seventy years are to visit thee, and many thousand times shalt thou lie down to the sweet or bitter reflections; so many thousand times shalt thou rise to the good or evil purposes of thy daily life. For so many tens of thousands of hours shalt thou keep the company of thine own spirit; heeding or hindering thy conscience; on good or ill terms with thyself; glad or sorry in the returning light of the sun; cheerful or sad in the darkness of the unfailing night. But is this protracted human life of ours not worth some wise ordering from the beginning? Seventy years of virtue and usefulness; seventy years of vice and injury! Is it a small matter which a man chooses and lives?

Duration is a most important element in the dignity of all enterprises and experiences. Could a man be sure that he was to live seventy years upon the earth, and to pass in it through all the periods of a maturing and decaying life, would he not frame his course with some generous and broad regard to its issue? It marks the thoughtful and prudent man, that he makes temporal provision for his old age. Would it not be a still higher token of wisdom to find him making moral and spiritual preparation for the coming season of leisure, reflection and necessary review of life—for the inevitable period when we all have to live very much within ourselves, in the close society of our own hearts and minds; when hope yields to memory, and enterprise to reflection, and society to solitary musing? To those of us not cut off in our sins or our usefulness before our time that season will come! We are either now near to our end, or we are preserved against that trying period of life, when no position or circumstances can make us any thing but meditators on the past. Be sure that seventy years will give you ample time for two things—to do much good or evil, and to reflect upon one or upon the other! Be sure that long life is to bring all of us many years of remorse or of blessed and innocent complacency! Be sure that the bones of threescore will ache with the sins of our youth, or rest pleasantly from the virtuous labors of our earlier years!

The days of our years are threescore years and ten! Threescore is a long period, but in those destined to complete the appointed time up to that date, human energies do not necessarily or usually cease their activity. Man is still a busy being, who tries, perhaps, to conceal from himself that he is not as vigorous and enduring as ever. But God has added ten years to that sum, as if it were an especial grace—so much thrown in, after the laborer is no longer required, as a benefit to himself. And in that ten years, the Indian summer or else the sharp, lingering winter of life, what peculiar fruits of good and evil are brought forth? Well may the moral grand climacteric be fixed within that period. Then it is without disguise to himself that a man finds out how he has dealt with his own soul—to what harvest his sowing has come, tares or wheat! Then it is that paternal fidelity or negligence brings either in the children the crown of glory or the gray hairs with sorrow to the grave! Then do the eyes water with tender love or bitter grief, and the wrinkles form themselves into settled smiles or settled frowns. Then is the stooping frame bowed down with the weight of blessings and honors, or bent beneath the burden of disappointment or from the want of support. Then, too, are intellectual and moral powers reporting their story of use or abuse—the well-disciplined and richly-stored understanding retains the strength and dignity and delight of active wisdom, while the neglected and impoverished intellect sinks into fatuity and apathy. Then, too, the senses take their revenge or enjoy their triumph! And old age is hale and beautiful in its time, or decrepid and repulsive long before it sinks into the grave.

The days of our years are threescore years and *ten!* My brethren, the world has reason to bless God for those ten added years. Not merely for the tranquil joy, the unimpassioned serenity and unbroken peace they often bring to their possessor, but also because they begin the period of old age, and give the world the chastening wisdom, the reverential regards, the kind, mild, sanctifying influences which characteristically belong to that season! Whatever may be the inward regrets and remorse of an

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old age following upon an unfaithful life, its evil remains essentially confined to its immediate victim! For, with rare exceptions, age is respectable and venerable in all its representations. The tenderness with which the world forgets the scandals that once beset a life, now hallowed by age, is among the sweetest relentings of our nature. It is more true of the aged, even, than of the dead: "Let no evil be spoken of them." Who has not seen the third generation gathering with veneration about the hoary head, whose snows conceal the memory of many vices known to his cotemporaries, as the mantle of winter hides the barrenness of the desert! Errors of the aged are not present errors. They live, for the time, lives of innocency and sanctity. They have outlived the stormy passions and the tempting appetites of life, and be the past what it may, the *now* is a season of gentleness, inoffensiveness and benignity. How much does life draw of the influence that tempers the ferocity of its lusty prime, of the oil that beats down the stormy waves of emulous manhood in its contests for the prizes of life, from the two fountains that play at the opening and the close of the highway of our being—from childhood and old age! It was the beautiful promise of God by his Prophet Zechariah, when he predicted the return of prosperity to his holy city, and it should become a city of truth and a mountain of holiness, that "There shall yet old men and old women dwell in the streets of Jerusalem, and every man with his staff in his hand for very age. And the streets of the city shall be full of boys and girls playing in the streets thereof."

The active travelers on the jostling track of life have bathed in the smiles of the infants they left on their hearths, have been anointed with the holy oil that venerable parents have dropped into their palms, hot with the strained muscles of passion and rivalry. What guardian angels sit together at the domestic hearth, where the venerable mother watches a daughter's child, while the middle aged moderate their voices and their haste, in order to catch the low prattle of infancy or the mild garrulity of age! What blessings does not the old man, who sees the fourth generation creeping to his knees, shake from the almond tree that blossoms on his head upon the children's children, at find only a wiser child and better playfellow in the earthly being they most revere!

We believe old age is almost a religion. By faith, Jacob, when he was dying, blessed both the sons of Joseph, and worshiped, leaning upon the top of his staff." Old age is a long dying, a protracted death-bed. Jacob is old and bent. He looks not up into the skies, like hopeful youth, but steadily down upon the grave, and upon the children that chiefly hinder his willing progress to it. He lingers to bless the sons of Joseph. He worships, leaning on the top of his staff. It is a worship in itself. We seem to behold a priest in every staid old man. His staff is a sacred symbol. His bowing form an act of worship. We are all the sons of Joseph and wait for his blessing. Alas, if there be nothing in the inmost heart of old age answering to the sentiments of piety it inspires in others! A godless old age! An unbelieving old man! Ah, cover! ye white hairs, ye trembling knees, ye staid and solemn looks! cover from our eyes the insupportable spectacle, and let us believe in every case that old age is as truly venerable and pious as the natural vestments of its priesthood present it to our eyes! Jacob worshiping, leaning on his staff, and blessing the sons of Joseph! let this be the constant picture of the aged in every household.

Is it not true that the very aged linger for our sakes, not their own? Their task is done; their capacities of keen enjoyment over; their friendships beyond the dark river; their hopes transferred to heaven! Yet they stay and bear the labor and sorrow of their protracted existence for our sake, that the reverence of the world may not die out; that we may have some human objects of universal respect; some being in our own form whom we do not need to know in order to love; who check the impatience, the forwardness, the confidence of manhood—remain to give us the lessons of their experience; to connect us with the hallowed past out of which they have come, and with the solemn future nearest whose threshold they stand. We owe them a debt! They are the few scarred veterans left from the great struggle of life in which thousands have fallen! Venerable men, hallowed women! we know your value to us We bless you! We crave your blessing on us before ye depart!

Where ought old age to be revered and cherished more than in a land whose only antiquities are hoary heads? And when is irreverence and neglect of the homage due to the aged more often the theme of regret? Ye who occupy the scene of active life, take care that ye run not rudely against an old man's form Bless God, ye families, if he permits the old age of your parents to hallow your households! Children, revere the very beggar in the streets who carries fourscore years upon his trembling limbs The very barbarians honor the aged

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To My Mother.

BY NELSON SIZER.

Mother dear! thy locks, now snowy
With the frosts of many years,
To my fond eyes with light are glowing—
Light from beyond the realm of tears.

Thy soft eyes, which smiled upon me,
Caught their luster from the sky,
Though dimmed by time, now beam as fondly
As when they blest my infant eye.

Thy loving heart, that knows no changes,
Fed from founts beyond the spheres,
Glows with a pure, unfalt'ring ardor
For all the loved of early years.

In that home beyond the river,
Where decay can never blight,
Immortal youth and beauty fadeless
Shall crown thee with celestial light.

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

In my first article I said: "Thousands are to-day enjoying good health, who, but for such exercises, would have been in consumptives' graves."

A lady nearly forty years of age, who has read my two articles, has said to me that I have not placed before my readers nearly all the benefits to be derived from such exercises. She said: "Those who faithfully follow your instructions will not only improve their health, but they will have better forms, better complexions, and, in many cases, better because more regular features."

She then gave me the result of her own experience, and it is to give that experience to my readers that I refer to this subject again.

Some fifteen years since she was an invalid, with no prospect of recovery. The upper part of her chest was narrow, measuring eleven inches, from the point of one shoulder to that of the other, across the front of the chest. Her liver was enlarged and pressed upon the lower part of the lungs; her digestion was very imperfect, her skin sallow, and her extremities cold.

Some lady friends who had given this subject some attention, merely as a matter of health, prevailed upon her to change her mode of dress, so as to give perfect freedom to the organs of the chest, and to spend a few minutes daily in inhaling and exhaling pure air according to directions which they gave.

As she was in a city, she was to go to an upper story, where the air is purer than in a lower story, or even in the yard, and there inhale and exhale thus: Standing as I directed in my first article, she was to inhale through the mouth, closing the lips so as to leave the least possible aperature, until the lungs were filled to the utmost capacity, when she was to close the lips and exhale slowly through the nose. For a time she placed a quill between her lips and inhaled through that, so as to prevent her from filling her lungs too rapidly. The weather was cold, and, as she did this in an unwarmed hall, she was, at first, obliged to wear a thick shawl while exercising.

The first effect was to excite a cough whenever she commenced the exercise; but by perseverance she soon overcame that tendency. After a short time she found that the exercise gave her warmth, until in a few weeks she could warm her hands and feet by stepping into a cold place, where there was a pure atmosphere, and inhaling and exhaling in that manner.

The cause of this is obvious. The blood, better oxygenized than usual, was sent bounding through her arteries to every part of the system.

But more than this—in three months she measured fourteen inches across the upper part of the chest, where, when she commenced this exercise, she measured but eleven inches. The swollen liver had resumed its natural shape, so that at the waist she measured less than before. Her sallow complexion had become bright and her dull eye sparkled. So much for the improvement of the looks.

Her voice, too, improved, and, though she has given no other attention to the improvement of her voice than such as is derived from this simple exercise, which she still continues, it is clear, pure and strong, leaving the impression upon the hearer that she has at some time cultivated it with care.

When such prices are paid for beautifying (?) the complexion as are daily given, this should be no small consideration. At what cheap rates may the looks be improved!

I shall offer no apology for making this digression from the didactic course that I had marked out for myself. I may at some future time name other cases.

I hope those who have studied the previous articles have now such a practical knowledge of the orotund quality of voice, that they recog-

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nize it when they hear it, and that their vocal organs can produce it at their command.

It is now necessary for us to practice upon the unobstructed vocal elements of speech, or upon those elements that are usually represented by the vowels.

The order of arranging the unobstructed vocals, which I have used, and which I believe to be the best, because the natural order is the one introduced by Isaac Pitman of Bath, Eng., and the one accepted by phonographers generally. I will use it here:

FULL VOCALS.

1. E, as heard in *Me*, *Eel*.
2. A, as heard in *May*, *Ale*.
3. A, as heard in *Case*, *Hair*.
4. A, as heard in *Far*, *Are*.
5. A, as heard in *Saw*, *All*.
6. O, as heard in *No*, *Own*.
7. Oo, as heard in *Noon*, *Ooze*.

STOPPED VOCALS.

1. I, as heard in *Tip*, *It*.
2. E, as heard in *Pet*, *End*.
3. A, as heard in *Back*, *At*.
4. A, as heard in *Class*, *Ask*.
5. O, as heard in *Not*, *Odd*.
6. U, as heard in *Cut*, *Up*.
7. Oo, as heard in *Foot*, *Hook*.

COMPOUND VOCALS.

1. I, as heard in *Bind*, *Isle*.
2. Oi, as heard in *Boy*, *Oil*.
3. Ou, as heard in *Thou*, *Out*.
4. U, as heard in *New*, *Tune*.

Before commencing to practice upon the vocals, unaccompanied by other sounds, let the words that are used to illustrate those sounds be pronounced again and again, until the ear fully recognizes the sounds that are represented by the italicized letters in those words. There is more need of attention to this than is generally supposed. There are sections of our country where there are few who do not confound the fourth full vocal with the fifth; few who would not pronounce the first syllable of Garden and Gordon alike. In the same manner the fourth stopped vocal is confounded with the third, while both are pronounced so nearly like the third full vocal that one does not know, except by the context, what words are used. And even the first, second and sixth full vocals are often used so carelessly, that it is with difficulty the best ears can be sure what words the speaker intends to pronounce. I know persons who so confound the sixth full with the sixth stopped vocal as to leave an uncertainty as to the word used, and even if our words are understood we pain every cultivated ear around us by such slovenly pronunciation. Therefore, I would again urge careful practice upon the illustrative words, and upon other words in which the same sounds are used.

Having accomplished this, let these sounds be expressed singly and in an affirmative voice, as though replying to the question, "What did you say?" Repeat such sound several times say three times, in pure tone and three times in the orotund quality of voice. Let each repetition be a little more forcible than that which preceded it, as would be the case if the question that I have supposed were repeated.

If the reader supposes he is not accustomed to enunciating elemental sounds singly, I would say that he does thus enunciate the fifth full vocal every time he pronounces the word Awe, and the sixth whenever he speaks the word Owe, and the first compound vocal each time he pronounces the word Eye.

In practicing upon the stopped vocals it should be remembered that they must be enunciated in a very brief space of time. They are never prolonged in words that are properly pronounced, and when practiced upon singly they should receive no more time than they do in words. It is from this fact that they are termed "stopped or abrupt vocals."

Now introduce some short, pithy sentence, as

"Rise, fathers, rise, 'tis Rome demands your help!"

And read it with force and energy. Having read it several times as directed, read it, enunciating the vocals only, or the sounds represented by the italicized letters below:

"*R*ise, F*a*th*e*rs, *r*ise, '*t*is R*o*me d*e*m*a*nds *y*our h*e*lp!"

In the following example stopped vocals are brought under emphasis. It should be read first by pronouncing the words and afterward by enunciating the vocals, which are again represented by italicized letters:

"B*a*ck to th*y* p*u*nishment, f*a*lse f*u*gitive!"

Select many such passages and read in this manner.

By no means let these exercises supersede the exercises before recommended, but continue to practice those daily, and add these to them.

"BEFORE love comes in at the door," it would be well for him to peep through the key-hole. He might see something that would prevent him from entering.

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Letters to Ladies.

BY MRS. R. B. GLEASON, M. D.

LADIES—As I look over THE HERALD OF HEALTH, I see that it has able writers on all the general Health topics, such as Diet, Dress, Exercise, Amusements, Bathing, etc., so I conclude it is for me to look after the "bits and ends." It is woman's province to look after little things, as well as little ones—to keep toes in stockings, buttons on shirts, dust out of corners, and the like.

Now health, whether to be *re*-tained or *re*-gained, depends much on little things, and these little things come largely under feminine care or control. To ascertain the causes of woman's manifold physical disabilities, and the cure for the same, has been my constant thought, my steady work, for the last twenty years. During this time I have studied bodies more than books, so what I have to say will savor little of the library—more of every-day life. Hence, the suggestions gathered during my long sojourn amid the sick sisterhood will be given you *not* in the style of scientific papers, but simply as motherly hints health-wise. So you will please "play" that you are being written to by a familiar friend, and accept the "I" and the "you" the same as if in my own autograph, instead of a printed sheet.

Those who reverence the body, and rejoice in its length and strength of days, have been glad to note that statistics show that the average length of human life is on the increase.

But there is one class who are still out of the reach of sanitary helps, and *the* very class, too, who seem to be most within reach of them—that is, the wives and daughters belonging to the best of families—yes, and to the "very first families," too.

The Cincinnati Times has recently compiled some curious statistics concerning American women between twenty and forty years of age. A table is given, founded upon the returns of burials of males and females between these ages in forty-five cemeteries situated in Ohio, Illinois and Michigan, the places of burial having been selected with due regard to their representative character. The figures from this table are: males, 806; of females, 1,289—showing that, at least in the West, fifty per cent. more women than men die between the ages of twenty and forty. The Times makes still further deductions, as follows:

"1. That in the oldest yards of the country, in which the first settlers buried their dead, the number of the sexes who died between twenty and forty years of age, were the most nearly equal—in many cases the males outnumbering the females, while in the new yards, at the same places, the females greatly outnumber the males.

"2. That in private or select yards, where the upper classes bury exclusively, the number of female dead, during this period of life, is very greatly in excess of the males.

"3. That in yards where the foreigners chiefly bury their dead, the males usually exceed the females between those ages."

But not only do the "cities of the dead" in the West tell this tale of the frailty of women of this age, but those in Central New York, the very garden of the world, confirm the same sad story.

Two years ago several of us were looking about leisurely in Mount Hope Cemetery, and when we were in the best part of the grounds my husband called our attention to the fact that just about there we found more fine monuments to *young* wives and *only* daughters than to any other class. We then all reviewed that section of the cemetery with reference to this one point, and were surprised to find so large a proportion of these young women, ranging from 18 to 30 years.

The choice stones, so beautifully carved, told us the sleeper beneath had lived in a home of affection, intelligence and wealth.

Somebody says "there are sermons in stones and books in every thing." Now, Rochester gravestones have given us a grave subject in more respects than one. As a city it may well be proud of its intelligence, and rejoice in its excellent health regulations. Then, too, it gets many a fresh breeze from old Ontario, only six miles to the north, and is neither large nor closely compact. The farming country about is so rich and extensive that food for all classes must be more abundant, and of better quality, than in most cities, either large or small.

Then, why are its women, who are so "well to do" in every other respect, so poorly off in health, in life-force, that they die in the beauty of girlhood or in the bloom of early womanhood?

But we will leave marble monuments, with their facts and figures (which we own are sometimes false), and talk of the invalid band whom we have served for a score of years. During this time we have heard more of "General Debility" among our ladies than of General Grant even.

And the worst of it is that the women who suffer under "General Debility" are not likely to be allowed to leave his service, unless some new health regulations are instituted for them.

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It seems that increase of wealth has not brought increase of life or health for our women.

Indulgent husbands and fond fathers furnish washerwomen, cooks, nurses and seamstresses to meet those family wants which were once met by the mother of the house, aided by growing daughters, and still, with all this help, our women are worn out by family cares, and fade and fail early, despite summer renovation at the springs, the seaside or the mountains. One husband tells me that his wife is "too delicate" to keep house, and, as soon as she is recruited at the Water Cure, he thinks they had better board.

Another tells me that he thinks boarding does not agree with his wife, and when we get her once cured they will go to housekeeping. Now, I do not expect either of these women, whether they keep house or board, to *remain well when they get well*, unless we can permanently correct certain physical or mental habits—one or both—which had more to do with their chronic infirmities than their labor or their lack of it.

"Man is the architect of his own fortune," we say, and so is woman of her own health. We can slowly and surely build up or rapidly demolish. In this age, so rife with fashion and folly, she does more of the latter than the former.

Despite the flood of physiological light, she is out from under the reign of instinct and reason, and will seldom listen to science; hence, women are, in more ways than need be, the "weaker vessel." It is true, woman has her mental and physical peculiarities, which make her in some respects more sensitive, more impressible, more excitable than man; but in many cases these natural differences have been abnormally increased. Horace Greeley said of Thomas Carlyle, that he had "nursed his oddities until they had become deformities."

We see many ladies who seem to us to have done the same—that is, their peculiar impressibility of system, which *should* have been their grace, has become a grievance to all those most nearly allied to them. My worthy father, now in his 81st year, and still fresh and cheerly, says that women's constitutions have changed in his day. They used to be sick, but now they are only nervous; they used to get cross sometimes, but now they are only nervous; they used to get weak and tired, but now they are weary and nervous. Some years since Mrs. Childs told the story of an old lady who was sick, and had some peculiar symptoms which the attendants could not comprehend, and some one suggested they might be nervous. "Oh, no," said the old lady, "that can't be, because I was born before nerves was in fashion!" Most of the women I meet were born *since* that time; however, to this rule there are some happy exceptions.

Among the photographs of friends I find two faces rich and ripe; one taken at 50, the other at 60 years of age; one the mother of ten children, the other of thirteen; both of them real working women, housekeepers and mothers, not in name merely, but in deed, and still these two faces are less expressive of wear and worry than that of many a woman at 30 years of age. Faces like these strengthen our faith in the physical possibilities of womanhood, that the modern wife might be like the one in the first Eden—a help-meet, a suitable assistant. Then why is she so very often sickly, so sensitive, so sentimental that her husband don't know what to do with her, and so brings her to a Water Cure and says: "Now, if she were only well, we should be the happiest couple in the world. As it is, when I come home from the store or office, and want a cheerly, chatty time to rest me, I find my wife overworked and worried about the servants and housekeeping, and she feels grieved that I don't sympathize with her or relieve her, and I don't know how to do *either*, though I am ready to employ a doctor or hire girls when she desires."

To show what are "the little foxes which spoil the vines" about the social hearth is the object of these letters. More than this, we want to quicken the conscience of our country women on this health question. We want them to feel that a sin against the body is a sin in the sight of Heaven. An Indian once said that something about Jesus had gone into his ears, and he wanted to hear more, so that it would go down into his heart. Now, women can never be helped health-wise until it becomes a *heart* matter. Many of them *know* much better than they *do*.

Much good seed has the goddess Hygeia sown during the last twenty-five years among the common people, where it has been heard gladly. Why have our women been so little benefited? Have they been stony-ground hearers, or has there been no depth of earth, or have gay birds or vain ones prevented the seed from taking root and bearing healthful fruit?

God has given us the body as a garment for the spirit, in which to do our work in this world with the promise that, if we do it well, we shall have a new and more glorious one, when we go to one of the many mansions Jesus has promised to prepare for "the pure in heart."

ELMIRA WATER CURE, N. Y.

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The Chemical Phenomena of Vitality.

BY GEORGE H. TAYLOR, M. D.

THE human body exists for the purpose of giving origin to several kinds of force or power, the instruments of which are the various organs. These forces may for the present purpose be enumerated as *muscular*, whether displayed with reference to objects outside the body or within it; *sensation*, as pleasure or pain; the *emotions*, and the various powers of the *intellect*.

It is a generally well known principle of physiology, that the system yields none of its several products of force without a due and corresponding amount of chemical change in the *instrument* of such force. In other words, vitality is represented in chemical acts. The system yields not force only, but also something of itself to the atmosphere, and receives from it at the same instant a certain amount of its oxygen in return—the latter act being the end and aim of the respiratory function.

But it is not so generally understood that this act of oxidation in the system fluctuates in the precise ratio of the fluctuations in the aggregate manifestation of power.

The statement here announced, if it be shown to be tenable, is of the utmost importance. It affords a key to the meaning of those irregular vital phenomena with which the physician has chiefly to do, and which he diagnosticates and treats as the varied aspects of disease. It affords a simple and rational explanation of the vital needs, and how the supply of these is modified by the different kinds of treatment to which the system may be subjected, however contradictory they may seem.

Abundant evidence of the correctness of the principle here stated is derived first from physiology, a few obvious facts from which source I will here present.

During rest the respiration becomes slower; during sleep, slower still, the pulse falling in a corresponding degree, while the elimination of waste products diminishes accordingly.

During activity, whether of muscle, mind or emotion, whether in pleasure or in pain, the chest heaves and takes in air, apparently, in the precise ratio of exertion. If you prepare to strike a heavy blow, you not only take a very deep inspiration, but you place the contents of the chest under pressure—hold the breath—to *force*, as it would seem, an increased solution of oxygen by the alkaline fluids of the system. The worker, whether of mind or body, must have abundant chest room and chest mobility—in fact, acquires these by work.

Pathology affords equally direct evidences of the truth of the principle now under discussion.

Every acute disease is characterized by a *diminution* of the usual products of oxidation—carbonic acid, water and urea, and by a very large increase of incompletely oxidized organic compounds. These compounds, not having acquired the aeriform and the fluid states, are consequently retained in the system, and appear at all the emunctories and secreting glands. Fever is the retained heat of partial oxidation, and is impossible when the heat produced is dismissed the body with the oxidized aeriform product, which always takes place in health. The excited pulse and respiration of fever—an evident effort to secure oxidation—fails for awhile (during the run of the fever) to compensate for loss of attraction of the fluids of the body for oxygen, by reason of this change of equality.

Every chronic disease is also characterized by diminished use of oxygen by the system. This is shown by the characteristic dry skin; by the tendency to local congestion; by the diminution of the power at the command of the person so suffering; by the decreased mobility of the walls of the chest, including the diaphragm and abdominal walls, and by actual determination of the product of oxidation passing from the skin, kidneys and lungs. (See Lehman, Simon and others, on this subject.)

The evidences of the truth of the principle here asserted, derived from *therapeutics*, appear to me to be far greater than those derived from all other sources combined. In current therapeutics, what is the effect of cathartic drugs but to restrain nutritive materials from passing from the digestive cavity into the system, while respiration, continuing meanwhile unabated during this form of fasting, reaches further in its effects than it otherwise could? In a similar way, tonics and stimulants, affecting the blood-vessels which they enter, increase for the time the amount of blood reaching the aerating capillaries, and of course cause a temporary increase of the products of oxidation.

So of other classes of drugs. Saline materials probably increase the alkalinity of the fluids, and consequently intensify thereby their attraction for oxygen, and increase the amount of this material they will take up; alteratives will act by a chemical power of their own, effecting a more complete destruction of non-vital and, indeed, of illy vitalized matters, while the long list of sedatives wherewith the ill-informed invalid is wont to beguile his restless hours, and with which the physician is so willing the pa-

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tient should be temporarily cheated with the idea of the wisdom of medical science—these are well known to have the effect of diminishing the amount of food the patient is willing to consume, thus allowing in many cases the respiratory function to fulfill its duties more completely than is its wont. The drawback on all this practice is that nothing is so much as intimated of the fearful and permanent sacrifice of *vitality* caused by thus rudely forcing it into collision with its everlasting and proclaimed enemies.

The Water Cure is a therapeutic system, based almost entirely on the curative effect secured by increasing the respiratory and therefore the oxidizing function of the system. This is done, both locally and generally, by the impression of temperature upon the reflex nervous system. Neither the body or any of its parts can yield up its heat, either in small or large degree, without a corresponding increase of the use of oxygen in the system, to the extent of producing an exact complement of the heat lost. All this, with much minuteness of detail, I showed in the columns of the old Water Cure Journal; but I am sorry to say that it was to my cost, being about *fifteen years too early* with my demonstrations.

This practice, eminently useful and direct as it is in certain cases, like that of drugs, is not without its drawbacks, spite of the qualifying hygiene usually introduced with it. It increases cerebro-spinal nutrition and, consequently, nerve development, often to an extraordinary and very prejudicial extent, especially if due cautions are not well understood and applied.

The reader will not infer from the foregoing that the writer considers that facile and abundant oxidation is the only requisite of health. On the contrary, it is conceded that there is much beside to be done. But it is still insisted that no remedial or hygienic measures, of whatever kind, will be of any permanent utility while this condition is denied. This is the most important and the prelude of all other means; and it is firmly believed that when the simplest condition for the supply of air is fully complied with, the importance of most other vaunted remedies will dwindle into insignificance.

We live at the bottom of an immense sea, of which oxygen is the chief constituent. Nature intended that, whatever else might be our wants and deprivations, *this should not be among them*, or that, when by chance such should exist, no indirect and round-about method should be employed for the purpose of securing this indispensable requisite of life.

Letter from F. R. Elliot on the Value of Fruit as Food.

EDITOR HERALD OF HEALTH—*Dear Sir:* Your request that I would write you somewhat of the value of fruits as food came to hand in due course of mail, but I have had so much to occupy my time that I could not sooner record my views. And now I do not expect to say any thing more than what has been told again and again; for, since the day that Eve first tempted Adam with the apple, fruit has been grown, and the children of men have eaten and been blessed thereby.

Under the beneficent control and guidance of a good God, the object of primal sin has proved a great blessing; for, if disease and death came from eating of "the forbidden fruit," health and length of days has been and may be found in well-regulated enjoyment and use of that upon which the interdict of the Creator has not been passed, and which his open hand has lavishly scattered over the face of this fair earth.

Of the advantages that would accrue, not only to individuals, but to the nation, from a greatly increased culture and more general use of all our choice fruits, in the promotion of health and happiness to our fellow-creatures, none but those who have enjoyed both the culture and use can truly appreciate.

Physicians, however much they may differ in opinion on some subjects, uniformly agree in this—that the free use of fresh and perfectly ripened fruit is calculated to promote and preserve a healthy state of the human system. Under this belief I have been educated, and for half a century and over have practiced; and whenever, from some irregularity of habit or other cause, I have created an irregularity and unhealthy tone to my system, I have sooner found relief by abstaining from meats, and using very freely of ripe fruits, than from any other means.

In grape countries—and, by-the-by, while I speak now of "over the water," I may, perhaps, be excusable for saying that such has been the interest excited in grape culture in this country within a few years, that we may safely expect ere long to class our own beloved States as the "grape country," there having been the past three years not less than thirty thousand acres planted with the grape—but, as I was saying, in grape countries they speak familiarly of the "grape cure," and grapes are advised to be used largely as an article of food, for the reason, I presume—although I am no true chemist—that they contain a large quantity of grape sugar,

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which nearly resembles milk sugar in its character and composition.

If science guides the physician, and directs cooling acid fruits, even during the height of fever, and ripe figs and berries during convalescence, as is often the case, then certainly the remedial virtues possessed by fruits, when in season, should be sought for and freely used to preserve and promote life when in ordinary health. I once had a friend sick, very sick, with yellow fever; he was on shipboard, and [fortunately—ED.] no medicines or physician. Oranges were plenty on board, and the captain gave him freely of them, and to their use his recovery was attributed.

Of the value of fruits in component parts for support of the system, analyses have been made of many of them, from time to time, and I have records thereof. All have more or less of albumen and casein—flesh-forming matter—and of sugar and extract thereof—the substance of fat; but, as the apple is the principal and comparatively cheap fruit of our country, and almost always obtainable in every section, I will glance at the components of that as shown by Prof. Salisbury, in which he shows that, as compared with the potato, the apple contains three per cent. more of water than the potato. That the dextrine and sugar in the apple take the place of the starch, dextrine and sugar in the potato, and that these are the main bodies in the apple and potato, which go to form fat.

"The apple is richer in nitrogen compounds than the potato. In albumen the apple is richer than the potato, while in casein the reverse is the case. The aggregate amount of albumen, casein and gluten, in good varieties of the apple, is more than double that of the same bodies in the potato; hence, the apple may be regarded as richest in those substances which form, muscle, brain, nerve, and the other tissues. The difference between sweet and sour apples appears to be, that in the first the fat-producing, and in the other muscle-forming compounds abound. No two varieties are alike equally valuable, but invariably those that are the most agreeable to the general palate, and by the pomologist classed as best, are the richest in nourishment for the body."

I am well aware that in cities there is much prejudice against a free use of fruits, many considering them as questionable luxuries. I am also aware that these prejudices have their foundation in the immature or half-decayed condition in which much of the fruit is that is exposed there for sale. Sickness and disease come, doubtless, from the use of such fruits, but no more than from the use of unsound potatoes or other food, and yet who ever heard of the potato being unfit for daily food, because one or more families had suffered from eating of those that were unsound? Who ever heard of children, accustomed to the free use of ripe fruits daily, eating too much or becoming sick therefrom? I certainly never did. My observation has shown me that in families where, commencing with strawberries, the children are in the habitual use of fruits as a daily food, and that freely at their option, there is more of natural, vigorous health, and less of disease, than in families where only fruit is procured and dealt out occasionally as a luxury.

Good fruits are always grateful, even to the sickly and pallid appetite, while those in health revel, as it were, in its delicious aroma and sprighty juices.

As a rule, fruits aid in digestion, serve to restrain the appetite for more gross and stimulating food, and their free acids act in neutralizing or rendering soluble the earthy matters in the blood, and carrying them off rapidly through the natural channels.

But there is one other point in which a free use of fruits as a daily food is of immense importance, and that is in lessening the desire for alcoholic drinks. He who eats of fruit in the morning, before the palate is affected with any thing else, and continues to eat of fruits during the day as often as the craving for some stimulus occurs, will in a few days lose all desire and love for alcoholic drinks, and soon come to consider them as rather unpalatable and poisonous than pleasant beverages.

SEVERE.—A newspaper in Paris recently made a well-known doctor the victim of his joking friends, by running the following sentences together: "Dr. — has been appointed head physician to the Hospital de la Charite.—Orders have been issued by the authorities for the immediate extension of the Cemetery of Mount Parnasse; the works are being executed with the utmost dispatch."

THE Spaniards have a proverb: "Stones fit for a wall will not lie on the road." Prepare yourself for something better, and something better will come. The great art of success is to be able to seize the opportunity offered. Cheerful, patient perseverance in your lawful calling will best help you to do this. "He that hath to him shall be given, and he shall have abundance.'

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Resources of Michigan.

BY GEO. W. BUNGAY.

In the sisterhood of States it is difficult to find one more charming and beautiful than Michigan. She is young in years, rich in resources, and her educational system, commencing in the common school and culminating in a university, makes her one of the most accomplished and graceful of the group. I can not agree with my friend Tilton of The Independent, that the East is the nation's brain and the West is the nation's heart. The East and the West "are one as the sea, but distinct as the waves." Each one has a heart and brain of its own. We are two "peoples" joined in the bonds of one government—loyal to the same flag, loving the same Union, and sustaining the same republican institutions.

Our country embraces a great many differing types of character, made up as it is of men of various nationalities. The Yankee is an improved Englishman, and the Western man is a Yankee expanded. This change of character is partly the work of adventure, which sharpens and quickens the mental character, partly the work of climate, which colors the skin and shapes the skull, and partly the work of natural surroundings. The prairie does not, as Mr. Tilton suggests, tend to flatten the character, but to expand it in all directions without impairing the fineness of its fiber. The great lakes also broaden the nature of those who are molded of that material, which can be enlarged without becoming coarse.

The prairie is scarcely "a dead level" in the sense in which my eloquent and accomplished friend of The Independent speaks of it.

This is the prairie broad and wild and free,
Ocean of emerald hue and moving light;
Here the meek grass, with its green finger, points
To Him who feeds it; and the myriad flowers
Of many hues—grass-nestling flowers, sweet buds—
Swing like rich censer-cups in the soft wind.
Nations of insects float in the free air
On glittering wings, so various-dyed and gay,
They seem the offspring of the gorgeous flowers;
Blythe birds, like winged blossoms of the sky,
Pour forth their roundelays from morn to eve;
The robin—bard of birds—whose ardent hymn
Glows in her sunny breast of softened flame,
Builds here her cabin-nest and rears her brood;
That jewel of the air, the oriole—
Bright drops of sky and sunshine turned to song—
Hangs here its cradle on the lonely tree,
And Nature rocks it with an unseen hand,
And watches it with all the stars of heaven.

Now is that a dead level? I do not refer to my verses, but to the prairie. As for "the seaboard salt," the Western character, unlike Lot's wife, does not need salt to give it statuesque proportions on the plains. Seaboard cities are usually so corrupt that even salt can not save.

Again, I must differ with Mr. Tilton in his opinion of the Western farmers. He says: "I have been struck with the apparent fact, that the farmers of the prairies do not, as a class, rank among the ablest men of the West." Now, I hold that the farmers of the West will compare favorably with the farmers of the East. Look at their broad and well-cultivated farms, their comfortable homes, their fine schoolhouses and churches. As a proof of their intelligence, there is scarcely a farming community in the West that does not take The Independent, while there are many farmers in the West who have brains enough and culture enough to edit that sheet, a model one and one of the ablest on the continent. The Western merchants, city-builders, freight-forwarders and railroad kings, are men of untamed energy and the most daring enterprise. They are seen to greater advantage than farmers, because they are more conspicuous; they handle more money, make more noise in the world, have more chances for the display of their abilities; but many of the grain-buyers, and warehousemen, and merchant princes and professional men were farmers and are the sons of farmers. Farmer Funk a man without culture and without social status on the start of life, made himself rich, and surrounded himself with a farm almost as large as the State of Rhode Island, and in the Senate of his State he made an unstudied speech whose natural eloquence moved the entire nation. It was a sunburst of patriotic eloquence which flashed across the continent.

No friend of the West can find a word of fault with the tone and spirit of Mr. Tilton's well-written leaders, or rather letters, and, with the exceptional points which I have named, it is a true and life-like representation of Western character. It is true, the people of the West do not care a fig for the reputation a man may have at the East; they have invoiced, weighed and measured so many little great men, who came to them with notoriety blowing their names through brazen trumpets in advance of

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them, and then found them failures, that they have concluded to form their own opinions, and render their own verdict in accordance with the evidence. Western men, farmers as well as others, "are the bluffest, frankest, heartiest men on earth. They carry their hearts in their hands, their souls in their eyes. You jostle against them in the street, and by that contact have made their intimate acquaintance. If they like you, they will let you know it; if they don't like you, they do not conceal it by any of the little frauds of unmanly politeness." True, every word of it! When a Western man shakes you by the hand, you feel his heart beating to the finger-tips; not a cold, dead finger or two touching your palm, and chilling the warm blood of love and friendship into ice. It is a fact that many of the best people of the West are from New York and New England, but they do not pride themselves on that account. They are conscious of the fact that the man of the West is more of a representative man of America than is the man of the East. If the reader imagines there is a great lack of social refinement and elegance at the West, he is mistaken. The schools, especially those of Michigan, are equal to the best schools of the New England States, and the University of Michigan stands No. 3 in the list of our State and National Universities. It stands No. 3 simply because it happens to be younger than Harvard and Yale. It really has a larger number of students than either of its older rivals, and its system of training is better suited to the American mind and better adapted to American institutions than that of any other university in America. Without halting to point out the educational advantages enjoyed in the State of Michigan, I will proceed, without further delay, to give a brief account of its material resources. I shall quote, now and then, from the lecture delivered before the Michigan Legislature by Mr. D. Bethune Duffield of Detroit. He says:

"The State of Michigan consists of two peninsulas, known as the northern and southern, the land area of which is 56,243 square miles, or 35,995,520 acres, being 1.91 per cent. of the total area of the United States. The population in 1860 was 751,956. The northern peninsula embraces all that portion of the northwestern territory lying between Lakes Michigan and Superior, and east of the Rivers Menominee and Montreal, which form the boundary between it and the State of Wisconsin. It is at present divided into eight counties. Its extreme northern situation, prohibiting its use for agricultural purposes (except to a very limited extent, in the vicinity of settlements), its population have been hitherto confined to the development of the minerals peculiar to the region. The undeveloped portion of the mineral region embraces the larger part of the counties of Ontonagon, Houghton and Marquette.

"The southern half of the State is a magnificent peninsula, 280 miles in length, and 200 miles broad in its extremest width. Surrounded on all sides, except its southern, by the waters of the great lakes, dashing like vast seas, it possesses a coast line of 1,000 miles; and this, with another 1,000 miles on the upper peninsula, gives to the State 2,000 miles of coast. This estimate does not include the coast lines of the islands, in either of the three great lakes, which wash the borders of the State. This entire coast line is securely accessible at various points, and by its natural and improved harbors, together with the St. Mary's and Welland Canals, opens the mineral, agricultural and other products of both peninsulas to the trade of the world.

"The southern or settled part of the lower peninsula is almost exclusively an agricultural region, possessing such varieties of prairie openings and timbered lands as are rarely found in any other portions of the United States. It is also beautifully diversified with lakes abounding in fish, and displays every variety of timber known to the climate.

"The coal and salt basins are found in this peninsula, and, from developments already made, their products must soon take rank with the most important of our State.

"The recent incipient establishment of manufactures among us, involving the use of all the different varieties of hard and soft timber (except the pine of commerce), such as oak, maple, butternut, basswood, etc., is bringing into active demand all this heretofore neglected class of our woods, which are reckoned as superior to those found in any other State. Massachusetts annually carries away from us immense quantities of them for the use of her shovel and other manufactures, thus bringing prominently into market a prolific source of wealth which has hitherto lain dormant.

"But as the unsettled portions of the State constitute the main subject of our reflection, we proceed at once to a consideration of them.

"The northern or upper peninsula, excepting the different towns and localities dependent on the mines, is wholly an unsettled region, and comprises upward of nine millions of acres, or fourteen thousand square miles, a tract larger

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than the three States of Massachusetts, Connecticut and Rhode Island.

"Aside from its mineral wealth, now only beginning to be developed, its value may be said to consist chiefly in its timber, and not in any agricultural capacities.

"This timber is of that class which is absolutely necessary to the mines, and will be so appropriated and used. Yet there are districts within the mineral region of the upper peninsula which are covered with valuable hard timber, among which may be seen some of the finest tracts of bird's-eye maple any where to be found. This has been observed at Grand Island, the Ance, and at Portage Lake.

"The remaining portion of the upper peninsula (not the mineral) is valuable principally for its pine timber, although in the region of the two peninsulas of the Big and Little Bay de Nocquet, there is to be found a very superior hard timber, with a good soil for agricultural purposes. This is perhaps the exception as to this sort of land in the upper peninsula. All of it has recently been taken up by parties interested in the location there of iron furnaces.

"Passing down on to the lower peninsula, we find the following unsettled portions, viz.:

"1. A small region on the lesser peninsula, between Saginaw Bay and the River St. Clair, comprising portions of Huron, Tuscola, Sanilac, Lapeer and St. Clair Counties.

"2. Nearly the whole of the southern peninsula north from the center line of Gratiot, Montcalm, Mecosta, Newaygo and Muskegon Counties; or north from a line midway between the Detroit and Milwaukee Railroad and the Muskegon River, and the Chippeway River of Saginaw County.

"This whole region, embracing thirty-four counties, possesses an area of 13,000,000 acres, or over 20,000 square miles, equal in extent to the three States of Connecticut, Massachusetts and Vermont, which, together, comprise but 20,000 square miles. If to this we add the 9,000,000 of acres, or the 14,000 square miles of unsettled lands in the upper peninsula, we have a total unsettled territory of 22,000,000 acres or 34,000 square miles."

Michigan is a State whose boundary lines embrace a territory greater than some of the nations of Europe. In Huron County and vicinity, beside the immense pineries, are quarries of grit or grindstones and flagstones. In the county of Presque Isle, and elsewhere, valuable beds of marble have been discovered, also large beds of water-lime. On the Tawas Bay, and within a day's drive of Saginaw, are vast beds of plaster, covering a tract of seven hundred acres of land. The entire bed is five feet above the water level of Lake Huron. The Grand Tranverse region ranks with the best agricultural portions of the State. Want of space compels me to omit special mention of vast regions of timber land, whose masts of pine tower like steeples of verdure in the wilderness, great tracts of beech and maple and unexplored forests, in which almost every variety of timber known on this continent can be found. In this State there seems to be iron enough for the entire country for a hundred generations to come. Its mines of copper are immense and invaluable. The State is interlaced with streams which turn the crank in hives of toil, and forge and spin for the men who harness it with machinery, and carry the burdens of grain and lumber to the lakes. Its railroads penetrate almost every point where the settler swings his ax, or the white wagon of the pioneer has marked the place for the path of iron and the steed of steam. On the banks of the beautiful rivers are mills and shops whose tall chimneys are plumed with smoke, and along the line of its railways are cities, towns and villages, with splendid stores, hotels, markets and manufactories, and the dwellings are neat and elegant, with tasteful surroundings of flowers and foliage. Many of these residences are the homes of refined and cultivated men and women. Usually, the best building in the live town of Michigan is the school-house.

In visiting the schools of Detroit, Kalamazoo, Battle Creek, Niles, Dowageri, Ann Arbor, Grass Lake, Hillsdale, Hudson, Adrian, Jackson, and elsewhere in Michigan, I have noticed the intelligent faces of the children, and wished THE HERALD OF HEALTH could reach them all to teach them how to keep inviolate the laws of health, so that they might grow up hale and hearty men and women, worthy of the West and the grand destiny of our continent. I regret to say that tobacco-chewing and smoking and the use of intoxicating liquors prevail here as well as at the East, and thousands of young men, and sometimes mere boys, are the victims of appetite, which, like the leech, continues to cry, "Give, give, give!" I am establishing local agencies in some neighborhoods, where the copies of this magazine ordered by the newsmen will be, I trust, like the seed-wheat sown on good ground, yielding a golden harvest.

What a field is the West for the farmer, the merchant, the mechanic, the manufacturer! With such resources, one would suppose, with Mr. Tilton, that the churches of the West need

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not ask assistance of the churches of the East. If the men of the West carry the same zeal into religion that they do into commerce, there will be no necessity of aid from the East. The coal, iron, copper, timber and land of the West make the people of the West richer than the people of the East. They may not have so much wealth in gold and greenbacks, but they are richer in all the staples of trade than are the people of the East. Reform is making rapid strides in this State. There are more than thirty-five thousand men and women of Michigan who have joined the order of Templars of Temperance and Good Templars, and large numbers of persons, not belonging to either of these organizations, have signed the Temperance pledge.

Health of Girls.

BY DR. J. H. HANAFORD.

It may be that most young ladies will feel a little restive if reference is made to cleanliness as a means of promoting health. Yet no disrespect to the sex is intended, since the writer believes that the most intimate and endearing relations between the sexes constitute our normal condition. But are our daughters, and young ladies generally, cleanly in their habits? It is presumed that most of them, and certainly those sufficiently intelligent to read a journal of this class, habitually wash their face and hands at least once each day, and perhaps oftener. Any departure from this custom would brand one, in most communities, as a slattern, and justly; yet it is possible that some are not really cleanly in all other respects. The necessity for this care of the surface, as connected with personal cleanliness, is based on the fact that waste, perspirable matter, decayed and effete portions of the body, poisonous and destructive of health if retained in the system, is constantly being thrown to the surface. This matter, thrown out on every part of the body, is lodged in the clothing, collects on the surface, the more liquid portions passing off by evaporation. The amount of this is surprising, being estimated by some at from forty to sixty ounces per day from the surface of an adult of ordinary size, though this may be somewhat above the average. It has also been proved by careful experiments that of all taken into the stomach, solid and liquid, about three-fifths ordinarily passes off through the pores, all of which is impure matter. Surfaces exposed, like the face, hands, etc., retain less of this, passing off by evaporation as it does, while other portions, protected by clothing from the action of the air, etc., are made more impure, and consequently demand more attention. It follows, therefore, that there is as much occasion to wash the whole body daily as to care for the hands and face. If this is true, any deviation from this implies an absence of personal cleanliness.

It is worthy of remark that a portion of this waste material thrown to the surface by perspiration, if not removed, is readily taken up by the absorbents and carried back into the system, of course preventing the purification intended by this process of perspiration. Hence, a daily wash of the whole body is absolutely necessary as a means of cleanliness, without any reference to other and equally important considerations. And let it be borne in mind that the great design of this process of perspiration is to "purify the blood," and that it effects this object—when these pores are kept open and active by friction and bathing—far more rapidly and effectually than any or all of the blood-purifiers invented during the last half century, and their name is "legion." If "troubled with humors," it is far safer and far more effectual to invite them to the surface by invigorating the vessels designed to throw off impurity, producing a free eruption on the surface, than to resort to quack medication, taking drugs that render the blood still more impure, to say nothing of the injurious results of purgatives, so often employed for this purpose.

But is it safe for all to bathe, or will "water agree" with all? Yes. If all are benefited by a wash of the face and hands, it is safe to extend such a wash to other portions of the body. If one portion is invigorated by such a bath or wash, it follows that a more general application, under favorable circumstances, will produce similar results. While the vigorous, those supplied with ample animal heat, are able to endure almost any application, bathing in frozen streams, etc.—though such baths are never advisable, never judicious—the delicate can scarcely exercise too much prudence. Wetting the hands in cool water, washing the whole or a part of the body, following this application with thorough rubbing with a crash towel and flannel or flesh brush, is not only invigorating but safe. The natural warmth of the hand, with the friction, produces a comfortable heat, while but a limited amount of the animal heat is allowed to escape from the body, particularly if other parts are covered during the process. It is impossible that such a wash, conducted with ordinary precautions, should, to any considerable extent, tax the powers of the system or ex-

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haust its warmth, particularly when only a part of the body is bathed at any one time. Those extremely delicate, perhaps, would be overtaxed by a full hand-bath; yet, ordinary young ladies will find no difficulty in the enjoyment of this luxury every morning. Indeed, by a judicious daily bath the sickly are often able to regain health, while the delicate become robust, and the robust still more hardy.

While such baths are recommended, it is difficult to speak in too harsh terms of reprehension of those harsh applications once in vogue, and not wholly discontinued by the ignorant—such as the ordinary shower-bath of the past, violent applications to the head, very cold swimming baths, and some of the ice applications, all calculated to shock the nervous system unduly, or unnecessarily exhaust the vital forces, reducing the animal heat in too great a degree. But few are able to endure such harsh treatment, while none are benefited by the extremes, or, at least, not as much as they might be by milder treatment. Fortunately, such harshness is rapidly passing away, especially among the more intelligent.

Among the advantages of proper bathing, in addition to the purification of the system already referred to, and the general invigorating effects, is one of some importance to young ladies, especially those who have special regard to personal appearance—to beauty. Proper care of the skin changes it from its dry, harsh-like appearance to one indicating health, giving it a fairness and a velvet-like softness resembling that of the child. The young lady who would remove the "pimples" and the "worms" from her disfigured face can do so, if patient and persevering, by a systematic course of bathing, and a disuse of rich, gross and greasy food, fat pork and its equivalent, if its equivalent anywhere exists.

Again, cool baths, properly administered, fortify the system against the sudden changes of our variable climate, giving a power to resist the usual attacks of disease, affording a comparative exemption from "colds," to which most forms of diseases are referred. The reaction of these baths, and the necessary friction following, stimulate the smaller blood-vessels of the skin, in which about one-half of all the blood of the body naturally circulates, giving warmth and vigor to the vessels of this very important surface, and of course keeping the millions of pores, these outlets of the body, in a constant state of activity—a sure remedy for "colds." The importance of this will be appreciated when it is remembered that most of our diseases have their origin in colds. If to this fact we add another—that such baths, with the friction following—a very important condition of bathing—necessarily improve the circulation of the blood, bringing it to the surface and driving it to the extremities, the "rosy cheeks" and "ruby lips" are no mystery, only obtained by securing health, almost or quite necessarily following the acquisition of health.

In fine, if the sallow expression is not desired, the paleness of death, the dry, hard skin, the pimples, etc.; if, in their stead, the fair, ruddy and joy-lit countenance is desired, the course to be pursued is plain. Adopt a healthful diet, avoiding the spices, rich and indigestible food, including rancid, oily preparations—one of the important means of obtaining pure blood; exercise sufficiently to promote free perspiration; wash enough to promote cleanliness; breathe freely of pure air; seek the sunshine, with no special dread of honest tan; in short, obey the laws of our being, and health is easily obtained, if the original constitution is not specially defective. "We have what we earn," as much in the matter of health as in financial affairs, and need not murmur if we suffer from our own neglect. The responsibility is ours, and we need not attempt to disclaim it, or murmur when punished for our sins.

A MEDICAL man was employed by a laborer to attend his wife during her illness. The doctor hinted (according to the custom of such good folks), his fear of not being ultimately remunerated for his trouble. "I've *£5*," said the poor fellow, "and if you *kill* or *cure*, you shall have 'em." The poor woman died under the doctor's hands (it may be charitable to add that she would have done so without his help), and after a reasonable time had elapsed, Bolus called for his *£5*. The man put the following questions to him: "Did you *kill* my wife?" "No!" was the reply. "Did you *cure* her?" "No!" again. "Then," said the disconsolate, "you have no legal demand."

INFLAMMATION OF THE VEINS OF THE LIVER.—This condition is not often met with but when it occurs it is called portal or hepatic phlebitis. The symptoms of this affection are pain in the organ, nausea, constipation, or thin and copious stools, fever, hiccough, jaundice, profuse sweats, frequently recurring chills, emaciation, and an increase in the size of the spleen. It is not easily distinguished from acute hepatitis, and requires a similar plan of treatment.

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Dr. Drake, the Quack, and His Victim.

A Duck who had got such a habit of stuffing,
That all the day long she was panting and puffing,
And by every creature who did her great crop see,
Was thought to be galloping fast for a dropsy.

One day, after eating a plentiful dinner,
With full twice as much as there should have been in her,
While up to her forehead still greedily roking,
Was greatly alarmed by the symptoms of choking.

Now there was an old fellow much famed for discerning
(A drake, who had taken a liking for learning),
And high in repute with his feathery friends,
Was called Dr. Drake; for this doctor she sends.

In a hole in the dunghill was Dr. Drake's shop,
Where he kept a few simples for curing the crop;
Small pebbles, and two or three different gravels,
With certain famed plants he had found in his travels.

So taking a handfull of suitable things,
And brushing his topple, and pluming his wings,
And putting his feathers in apple-pie order,
He went to prescribe for the lady's disorder.

"Dear sir," said the duck, with a delicate quack,
Just turning a little way round on her back,
And leaning her head on a stone in the yard,
"My case, Dr. Drake, is exceedingly hard.

"I feel so distended with wind, and oppressed,
So squeamish and faint, such a load at my chest;
And day after day, I assure you it *is* hard,
To suffer with patience these pains in my gizzard."

"Give me leave," said the doctor, with medical look,
As her cold flabby paw in his fingers he took;
"By the feel of your pulse, your complaint I've been thinking,
Must surely be owing to eating and drinking."

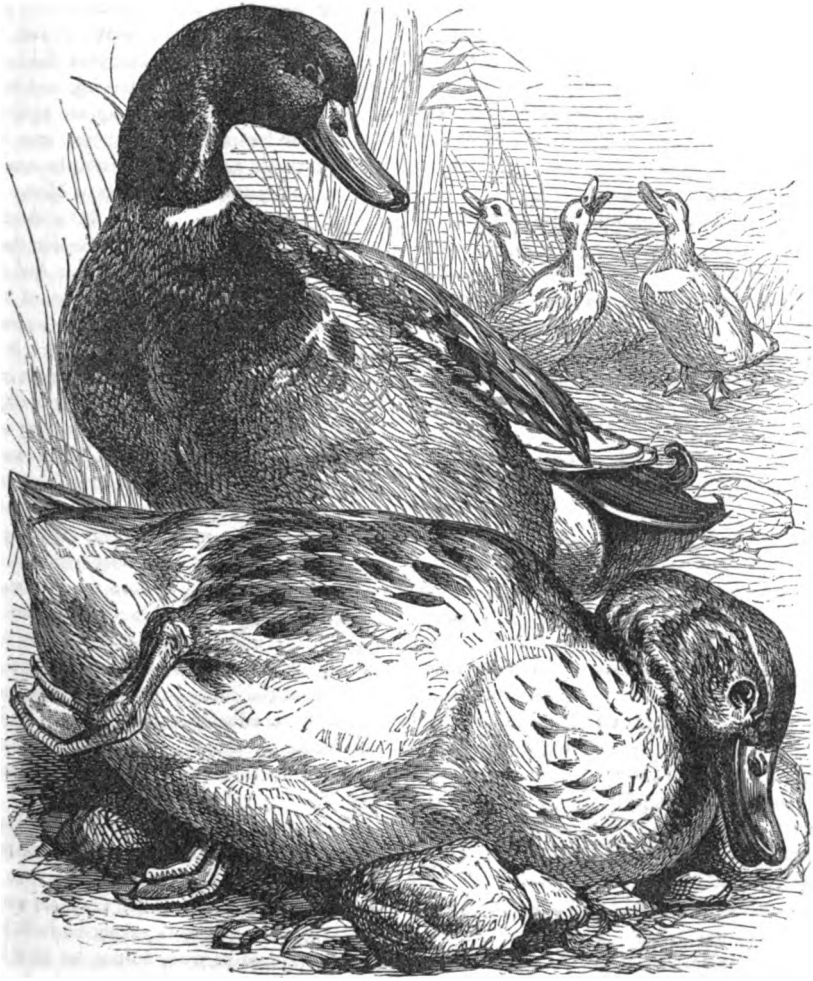
"Oh! no, sir, believe me," the lady replied
(Alarmed for her stomach as well as her pride),
"I'm sure it arises from nothing I eat,
But I rather suspect I got wet in my feet.

"I've only been raking a bit in the gutter,
Where cook has been pouring some cold melted butter,
And a slice of green cabbage, and scraps of cold meat,
Just a trifle or two, that I thought I could eat."

Then grave Dr. Drake, in his business proceeding,
Us'd cathartics, emetics, blisters and bleeding;
While his patient suddenly rolled on her side,
Gave a terrible quack, then a struggle, and died!

Her remains were interred in a neighboring swamp,
By her friends, with a great deal of funeral pomp;
And all the young ducklings are brought by their friends,
There to learn the disgrace in which quackery ends.

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DR. DRAKE, THE QUACK COUNCIL, AND THE VICTIM.

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Remote and Permanent Results.

BY REV. HENRY WARD BEECHER.

Those results in moral conduct, in intellectual enterprise, in social elements, which interpose the least time and the fewest processes between the cause and the effect, are the most evanescent, the poorest. In other words, the things that it takes the shortest time to do are usually the meagerest—are apt to have the least in them; whereas, those results which spring from complex causes, from long-acting and inter-acting influences, and which require a great deal of time in their development, are generally the most rich and the most enduring. It is so because God made it to be so.

This is the hourly observation of men. It has not just now been discovered for the first time. It is not a philosophical deduction. It is a homely proverb, and has been since there has been a proverb. "Soon come, soon gone." In every language there are proverbs that substantially cover this idea. "Come quick, go quicker." Without any philosophical insight, and merely from general experience, there is an impression, and there has been for ages, that "haste makes waste;" that, for instance, wealth, or honor, or praise, or power, which is quickly gained, can not be permanent. Men do not know why; they merely know that that has been the ordinary course of things. There is, therefore, the impression that it will continue to be so; and it is a just impression. On the other hand, there has been an impression that whatever is susceptible of consolidation and enduringness must have had a real period of structural growth; that a certain waiting, proving, growing, is indispensable to permanence. And that is so. It is so, not by accident, but by the action of laws infixed in the world. "Patient continuance in well-doing" is the very law of success; and all results that are really sudden are to be suspected as transient and unsubstantial.

God has established human life on a law of reciprocity. As you can not buy from a fellow-man commodities without a price equivalent to their value, so you can not obtain from nature, nor from society, benefits out of proportion to the price which you pay for them. And if in any surreptitious manner you obtain possession of results out of proportion to the outlay which you make for them, nature and society will repay themselves by giving you possession but a little time.

I do not know that there is one thing outside of love to God that it is more important that young men and women should understand, than that there is a law of equity which runs through every department of human life, and that you can not get more than you pay for. Whatever you want in thought, you must render an equivalent for in industry. Whatever you want of praise, of power, of wealth, since it can not be stolen, must be earned by fair equivalents. If any man seems to get it without having paid an equivalent, the results will show, at last, that it was illusive, and that no man ever did have and keep that which was worth having and keeping, except it had been earned by square equivalents. Half of the temptations that beset men to sacrifice character and moral principle arise from the want of conviction on this subject. There is an impression that men can take short ways to prosperity. There is an impression that men can safely make haste to be rich. And if men felt universally that it was as absurd to take short and dubious ways to obtain success and influence in wealth, in learning, in art, in literature, as it would be to take short ways in husbandry, it would raise the tone of morality fifty per cent. in a single year. It is very important that the impression should be produced that there is a moral law in secular affairs, just as really as there was a moral law on Mount Sinai; that there is a moral law asserting itself perpetually, unheralded, unsuspected, unproclaimed; that although there is no thunder or lightning about it, no table of stone on which it is written, and no prophet to declare it, after all there is the same moral law running through business, social intercourse, every department of life, that is silently asserting itself by its rewards and penalties. And what is wanted is that men should be taught to look at it and realize it.

The great ends which men are seeking are wealth, praise, honor and love. Their price is high. Gained without paying that price in exertion, which implies time, they are surreptitiously gained, and will surely be held briefly. If you want to be wise, do not be in a hurry. If you want to be true, do not make haste unduly. Take time to let that which you want grow.

The habit of working for immediate results in honor, in praise, in love, and in wealth, is, then, comprehensively viewed, morally weakening. And all things which are worth having, and worth having permanently, are in their nature to be got on conditions that imply time, patience, proving, laboring.

If you attempt to overreach, and come sud-

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denly upon those things in which time is indispensable, it affects the character of the results themselves; for, if results are to be truly great, they must conform to nature, and be seasoned by time. It affects character yet more, preventing patience, comprehension, foresight, faith in the unpresent, the power of putting the full value on future and unseen things, endurance and hardihood. Although the impression is that those results which are near, and can be reduced to the control of the senses, are the most real and the only substantial things, while remote and contingent effects are visionary; yet, a higher wisdom and a larger experience satisfy every man that the transient is associated with near, easy and immediate things, while permanence and value are associated with remote and difficult ones.

You use language that does not really befit your sober judgment. I hear men saying, all the time, in respect to purely religious or philosophical things, "Oh, these thread-drawings in philosophy, these imaginary states, may be very well; but we practical men have to attend to practical things!" There is an implication that practical things are the substratum on which a man must stand before he can begin to take care of invisible results, such as report themselves in character, and power, and what not. But these men, while they say this in respect to religious things, are most strenuous advocates of invisible things when speaking of their own affairs, in which they are better educated, and in which they are therefore better judges.

A man begins commercial life, and, after many vicissitudes, at fifty years of age he succeeds, and comes into possession of pre-eminent prosperity. Now, what, as the result of his experience, is his anxious advice to his son? When talking to me he says: "It will do very well, to be sure, for you to preach sentimental views; and yet, you know, a man has to attend to near things, home things, substantial things." And I say to him, How do you talk to your son, who is about to start out in life? Do you say to him, "My boy, live for what you can find today?" Do you not say to him, "My son, foresight is the very life of business?" Do not you point to this or that man, and say, "He does not see further than the end of his nose?" Do not you warn him against following the example of men who seek first things, who run upon quick adventures and get sudden harvests? Do not you say to him, "My son, you must lay foundations; it is not possible for you to organize a great business, and understand affairs in all their parts, and have the confidence of men, so that you can have command of social and commercial resources, in a day; therefore, you must not be in a hurry?" What does a man say to his son that is setting out in business, but this: "Do not live for sudden things, but learn to live by faith in remote results. Begin by preparing to augment your proportions; earn your prosperity by thinking; by proving your fidelity; by showing yourself to be sagacious and industrious. Lay down your lines and then work up to them. And then by-and-by you will come where you will be not only prospered, but substantially prospered." And does he not say, calling his attention to one and another, "They are mushroom men, that come up in the night and last but a day?" And does not every man who has attained permanent prosperity corroborate the wisdom of such advice? Is it not a generally recognized fact in regard to business matters, that effects for which preparation is made beforehand, and which are wrought out gradually, always stand, whereas sudden effects for which no preparation is made always fail? Why, that which you can grow in a day is lettuce; and how long will it last? That which it takes a hundred years to grow is oak; and it lasts for ever. Time is the best tanbark in the world. It seasons things and makes them tough as leather.

Take another illustration of the same thing in the matter of scholarship. Gather together the men that are most versed in teaching, that have labored years and years in schools and colleges, that have educated generations of young men, and ask them how intellectual wealth is acquired. Any man that talks about a royal road to learning is an empiric, a charlatan. Any man that says he "will teach you French in five lessons" is a fool, or thinks you are a fool. What estimate must that man put upon you who offers to teach you to write in three copies? Who does not know that all these hotbed, forcing processes of education are fruitless and unsatisfactory? What do wise parents think on this subject? They are good judges about education. What does every professional educator, who has made it the conscientious business of his life to teach, think? What do they say, as well as think, but this: "No man can gain knowledge but by giving an equivalent therefor?" You can not inherit another man's experience. You can not bribe books. Still less can you bribe Nature, the unwritten book of all knowledge. And if any man will have that education which consists in the training of the faculties, and which is the only real education, he must render an equivalent for it of

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thought, of pain, of watching, of various and long-continued industry. Sudden learning is superficial gilding; and learning that is deep-seated comes with long-breathed, long-paced industry.

There is no such thing, then, as a royal road to learning, either in mechanics, or engineering, or chemistry, or geology, or natural history, or any department of education. Understand that whatever knowledge you have you must quarry out. "Work out your own salvation" may be applied to intellectual matters as well as to moral and spiritual.

There is an impression, however, that God gives some men the right to go through without paying toll. No, there are no deadheads in nature. Nobody rides there without paying. There are no men that run the gate under any pretense in nature. What, not men of genius? No, not men of genius. What, not men of rare endowments? No, not men of rare endowments. Great men are the great workers; and men that pretend to know without working are impostors, I do not care who they are. Men that have left works that have stamped them with a just reputation of possessing genius have been, since the world began, the most industrious, the most multifarious, and the most continuous workers, I do not care where you look for them. And men that pretend to have genius as a substitute for diligence and industry, may have capacity, but it falls dead and fruitless.

What is genius? You may describe men as divided into two classes, one of whom have brains, and an organized trunk with them, such that they have the power of automatic action, and the other of whom have the power of being inspired into action. That is, some men are organized so low in grade as to make them think or feel there must be causes, social or material, acting on them from without. Those we call common folks. There are others who are organized higher than these. They have sensibility of fiber such that their brain, unmoved by external reasons, by its own tendency seems to develop thought and feeling. Where a man is inspired in the direction of music, we call him a genius for music. The word *genius* merely indicates a more than ordinarily fine organization in any single faculty. If this fineness of organization extends through the whole brain, then the whole brain is brought under the law of genius. A man who has genius simply has a little better instrument than one who has not.

One man has a chest of tools consisting of one chisel, one saw, one plane, a jack-knife and a hammer. He has a house to build. He will build it with those tools; but it will be rougher when built than it would have been with a more complete set of tools, and his work will have been a great deal harder. The duller the ax, the more strength must he put on it. Another man has a chest filled with every conceivable tool of the best possible temper; and can he set those tools down in a meadow, and go away, and then after a while go back and find a house built? What is it, but that both must work, only one has a better chance and works easier? Every board has to be planed, every timber has to be squared, every tenon has to be made, and every joint has to be fitted, in either case. It is only a question of whether one can do these things easier and better than the other. Doing implies work in one case the same as in the other.

And so it is in what is called genius, and common sense, which sometimes does not go with genius—and then genius is good for nothing.

And so, in whatever department of life you find yourself, and whatever your endowments may be, you are subject to this universal law by which every man is required to give an equivalent, in thought, in skill, in industry, in one way or another, sooner or later, for every thing he has.

CURING BAD HABITS.—There are many people who would willingly break off bad habits if they knew how, and could be rightly encouraged in their efforts. A friend sends us the following recipe for breaking off the use of tobacco. It is perfectly Hygienic, and will, if persisted in for a few days, invariably cure:

"I had a deep well of very cold water, and whenever the evil appetite craved indulgence I resorted immediately to fresh-drawn water. Of this I drank what I desired, and then continued to hold water in my mouth, throwing out and taking in successive mouthfuls until the craving ceased. By a faithful adherence to this practice for about a month I was cured, and from that time to this have been entirely free from any appetite for tobacco."

Many other bad habits, such as liquor-drinking, gluttony, eating at irregular and untimely hours, etc., could be treated in the same manner. The full warm bath, or, if the person is robust, the wet-sheet pack would aid in the cure, by helping to cleanse the system and assist depuration.

THE phrase, "Fixed as the everlasting hills," is quite inadmissible; there never was a hill that didn't slope.

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Life—Its Normal and Abnormal Course.

BY K. J. STEINBACHER, DIRECTOR OF THE MEDICAL INSTITUTE IN MUNICH.

TRANSLATED FROM THE GERMAN.

I. The Food of Life—Fluids and their Transformation.

"The substance of which the body consists is in constant motion—the same matter appearing continually in a new form."

Life consists of a number of processes, of which one perpetually takes the place of the other. The substances of which individual bodies are formed change; new matter is added as the old, worn out substance disappears. If this process of change proceeds in a normal condition we are well. On the contrary, we are sick when life is progressing under abnormal conditions, or under disturbed processes of the transformation of substances.

Disease is accordingly an abnormal state of nature, against which man by instinct battles.

To remove disease has ever been the object of the science of Medicine. To remove from the system that which causes disease, to produce new fluids, to place them into proper mutual relations, is the object which the physician should and ought to reach.

But where do the causes of disease lie which thus produce a change in the entire organic machinery? Our body, a microscopic world, the most simple and, at the same time, the most complicated of all machineries, is much like a clock—the whole suffers more or less if the least part of it is out of order.

Most diseases have their seat and origin in the fluids—in the substances by which we are preserved and vivified, which have the power to make us sick or well. As the spring in the watch and the steam in the locomotive are the moving and the machinery in constant activity preserving powers, so there is also in the human organism a certain something which keeps it alive. Life is motion. The motive power, whose office begins already at the instant of conception, which is constantly in motion, although at times uneven and irregular, is the blood. Blood is the nourishment of life. If this nourishment is sound in all its parts, then health characterizes the entire organism.

If this nourishment of life—pabulum vitæ—is diseased, then it is also disease-producing at the same time, and the whole life must suffer under its disease-producing influence. In this nourishment of life—that is, in its normal or abnormal state, lies accordingly the origin of our greatest enjoyments, as also the cause of our physical sufferings.

Blood—how does it originate? How does it continue to exist? It is our food, that which we eat and drink, which in its dissolved state is changed into blood by an especial apparatus—the digestive organs. It would therefore not appear so vain, if people should say that man consists of what he eats and drinks! For it is but too true that the bloom of life, thoughts, feelings and wishes, depends on the earth upon which we are placed, because upon its products depends mostly our sustenance of life. It is also true in a certain sense, when George Forster says, "The history of the products of the ground is deeply and intimately woven into the fate of man and into all his feelings, impressions and actions." If it be food, then, which produces healthy blood, why, then, should not this same food be also enabled to form diseased blood, and thus become poisonous, when taken in a perverted quantity or quality?

The blood, having absorbed the proffered food, transmits it to the different organs of the body. In these again it undergoes certain changes; for the old must vanish before the new, the used-up oil must be replaced by new oil, and the living machine, which we call life, must receive new supplies. A portion of these is changed into blood, while the remainder is rejected as useless to make room for new elements.

In the blood, therefore, lies health and life. The blood itself receives its nourishment through our food by its ever moving and living circulation. Hence, on this same food depends life and health, disease and death.

Under the word "food," in its widest application, we understand every thing which appertains to the sustenance of life—eating and drinking, light and air. The changes which our material food undergoes, until it is transformed into blood, we call digestion.

The organs of the body created to bring about these changes are the digestive organs.

Formation of blood and digestive organs—what an intimate and necessary connection! The chief condition of every life. Is it, then, to be wondered at that an ailment of the digestive organs and a disturbance of the digestive process interferes with health and makes man a sufferer? Where one part suffers the whole must suffer, not only through sympathy, but still more on account of the organic connection which the single parts sustain to the harmonious whole. During the time the food enters and leaves the body it has to undergo numerous changes. Its reception, however, has to be as normal as its assimilation and discharge, for

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that alone which is useless for the formation of blood and useless for life is rejected.

We exhale useless nitrogen to inhale in its stead the elixir of life—oxygen. If for a few minutes we should retain the nitrogen and neglect to inhale oxygen, such action would be inimical to life.

The introductory organs, beginning with the mouth, continuing through the glands, the stomach and its juices, the liver, the gall, the intestines, with all their partitions and ramifications, with their absorbing vessels, down to the rectum, must all act in harmonious order, if the formation of the blood is a normal one. In conjunction with this must be the exchange of fluids—their even proportionment—and the rejection of their useless parts. This exchange, this even proportionment, produces the change of substance, upon the unerring process of which depends the normal condition of our bodies as well as the duration of life.

Hence we perceive that upon the action of the fluids (the blood), as the principle of the sustenance and the preservation of life, health or disease depends.

Of the food, the prototype of our blood, we shall speak as soon as we have shown the condition of the fluids when they are disease-producing.

2. VITAL POWER—DISEASE.—

"Natura dulce salus."

If the healthy flow of life is disturbed, it becomes the duty of the medical art to regulate and lead it back to its natural channel.

The same life which animates us while well is present during illness, only it is life under different manifestations, because the conditions of life have changed.

That power which operates in us until death makes its appearance—the desire of self-preservation, which controls us whether sick or well—that power which ever lives in us as the result of our life-preserving conditions, is the vital power.

We need its aid when we are called upon to heal disturbances in the system, even as we need the main-spring if we wish to repair or regulate our watches. A person wrapped in a wet sheet would never become warm, if this same vital power had ceased to be active within him. Thus, the administration of a remedy would produce no results whatever, if the body should be lacking in this vital power, by means of which alone the necessary reaction can be produced. Hence the correctness and deep truth of the axiom, *Natura sanat, medicus curat*—"Nature alone can heal." The physician simply takes care to direct this healing, recuperating, vital power. To attack disease, then, where it is most deeply rooted, where it has its source, from whence it derives its nourishment, should be the sole aim of the medical practitioner.

The experienced gardener does not treat singly the leaves, or the stem, or the flower, or the branches of his drooping plants, but takes hold of the roots, bestowing upon them his care, new earth, new fertilizing agencies; neither does the true physician single out for his attack some prominent symptoms, but he bestows his care upon the source from whence they derive their origin.

Hence it would prove fallacious in diseases of the eye and ear, which, for example, have made their appearance in consequence of scrofula or venosity, to treat simply the eye or the ear. Treat the scrofulous habit, regulate the venous congestion of the blood, and eyes and ears will be cured without the application of local or specific remedies!

Nature is the healing power—guided by her the physician best obtains his object. Nature is and remains nature; vital power, we repeat, is always the same, whether normal or disturbed, but without vital power no cure.

To heal (*curare*) means to aid the disturbed state of Nature, so as to restore her with ease to order. We must show her the way by which she may receive and put to use the curative means; we must open to her the portals through which she can throw off what is obnoxious. In endeavoring to cure, we must therefore pay attention to that which is the main cause of suffering, to that which produced the disease.

Under food, in its wider sense, we also class the air which we breathe—the climatic agencies by which we are surrounded; as this is, for example, the case with miasma and chlorosis, when chills and fever or chlorosis, without the giving of any remedies, are cured by a simple change of location.

There are yet other influences which create disease, disturbances in the assimilation and the distribution of food, disturbances in the secretion of fluids and the excrements.

But these general remarks on blood, life and vital power, were deemed necessary as a preface, it being here chiefly our aim to speak of the general laws upon which the only true manner of treating diseases according to the laws of nature can be based, in order to operate by natural remedies upon the vital power and through its means upon all the fluids.

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How to Bathe—No. IV.

BY E. P. MILLER, M. D.

THE SHOWER BATH.

In the early days of Water-cure, the shower bath became, for a time, one of the most popular of the Hydropathic appliances. It was thought by many to be the full representative of the Water-cure practice. It was often used without advice, without discretion, and without regard to the constitution or condition of the bather; it was generally applied cold, and, as a natural consequence of this indiscriminate use, was the agent whereby much injury was done in many cases.

Persons of nervous temperament, with impaired digestion and feeble circulation, would go, martyr-like, from their beds to the cold shower-bath, and return cold and shivering to dress and go out for a walk, which could never be sufficiently brisk to bring back the natural warmth; and, after a few such applications, would find themselves more nervous and excitable, with greater derangement of the digestive function, less general warmth of the system, and in a worse condition in all respects than before.

The result of such treatment would naturally lead the friends of the bather, if not the bather himself, to the conclusion that Water-cure was a humbug, and the more it was "let alone" the better for the race.

Yet, the shower bath, notwithstanding the abuse in its application and the consequent injury, is, when properly applied, one of the best baths ever employed. If man's dwelling were the open air, with but the starry canopy for his roof, he would have but little need to bathe, for the gentle showers and the heavier rains would answer well the purpose. The shower bath is but artificial rain, and may be so applied as to be both luxurious and invigorating.

Few persons are able to take this bath at a temperature lower than sixty degrees, and, as a general thing, a temperature ranging from seventy to eighty-five degrees would be far better. This is not so much a bath for the country as for the city, where every house is amply supplied with water and with bath-rooms where hot and cold water is abundant; here a shower-bath may be so arranged that the water can be used at any desired temperature and changed from warm to cold at pleasure. A pan or basin perforated with holes is attached to a pipe, which is formed by the union of two pipes, one transmitting hot water and the other cold, with faucets below by which the degree of heat or cold may be regulated; the pan need be placed but a little higher than the head, for the pressure from the reservoir gives it sufficient force. Begin with the water tepid, then change to cool, followed by a dash of cold, is the best plan for most bathers. Arrange the water at the right temperature, then let it fall first upon the hands and arms, rubbing them vigorously; then upon the feet and legs, then the neck, back and chest, rubbing each part while the water falls upon it; then turning the body, alternately exposing different parts to the falling shower for two or three minutes, the warm water can be partially turned off, and the shower made as cool as is agreeable.

As a general rule the cold water should not fall on the top of the head, nor even the tepid water, if the hair is long and heavy; but if it is short, and the bather in good health, it is a great luxury to let the tepid or cool water come trickling down over the head, face and entire body.

This bath may be so applied as to be beneficial to almost every one, except those who are very feeble. A person who is full of blood, with good digestion and active circulation, can enjoy a shower bath as cold as it comes from the spring or hydrant; but it is never to be recommended thus to invalids or those with nervous temperaments, as their difficulties would only be aggravated thereby. The most convenient apparatus for home use is a double-bottomed bucket, the lower bottom being full of holes and the upper one tight, with a valve in it to which a string is attached; the bucket being filled with water of the desired temperature, when the bather is ready he pulls the string, raising the valve and letting the contents of the bucket fall upon him, rubbing vigorously the while as previously described. Only a limited quantity of water can be used with this apparatus, and consequently it can not be so thorough or so pleasant.

The shower bath may be made a powerful tonic, and is useful for cleanliness, for increasing the external circulation, and for removing internal congestion and inflammation; it may be given with advantage, in some cases, after a pack, fomentation, vapor bath or Turkish Bath; and for those in a vigorous state of health it is a decided luxury to take it, cold, as a regular morning bath.

THE SPRAY BATH.

This bath can be used only by attaching a hose pipe, with the spray appendage, to a force-pump, or a water-pipe where there is a considerable amount of pressure on the water. The spray apparatus is a piece of brass or copper,

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shaped like a tea-saucer, about two or three inches in diameter, with a flat plate on the top pierced with innumerable small holes, there being a hole in the bottom, around which a rim is extended sufficiently to attach a hose-pipe to it. The perforated plate is sometimes made slightly convex, but with this the water is thrown over a large surface, and can not be so well concentrated or so readily controlled as when it is perfectly flat.

The pipe should be so arranged that the spray may be given at any desired temperature, or changed from warm to cold at pleasure. This is perhaps the most agreeable bath in the whole range of Water-cure appliances; it is used after the vapor or the Turkish Bath, after a wet-sheet pack, or as a simple bath by itself. It is exceedingly useful in reducing local inflammation about the joints, or anywhere upon the body; also for reducing tumors, and treating ulcers and abscesses. I have had several cases of epididimitis, accompanied with the most intense pain and severe swelling of the parts, which I have relieved in a few hours by alternate applications of the hot and cold spray; by this means the pain is subdued and the inflammation reduced quicker than by any other method. The alternate expansion and contraction of the capillaries by the hot and cold water, removes the blood from them and establishes a healthy circulation.

THE DOUCHE BATH.

There are several varieties of douche, such as the falling douche, hose douche, pail douche, cataract douche, local douche, etc. The first mentioned is where a stream of water falls from a height of two, three or more feet upon the bather. The water is generally used cold, and is thus one of the most powerful of the Hydropathic appliances; but it may be moderated in temperature where there are conveniences for doing so. In taking this bath, the water should fall first upon the hands and arms, as in the shower bath; then upon the feet and legs; then the chest and abdomen, shoulders, back, etc., the bather turning quickly and rubbing himself as vigorously as possible. The water should never be allowed to fall upon the head, nor should this bath be used by any except those persons who possess strong reactive powers.

THE HOSE DOUCHE.

This can be used only where there is sufficient pressure of water to eject from a hose-pipe a stream of from half an inch to an inch or more in diameter. This, coming upon the body in a horizontal direction, requires an assistant to move the hose and direct the stream successively upon different parts of the body. The turning and rubbing should accompany this bath as in those previously described.

THE PAIL DOUCHE.

In this bath, the bather being prepared, an attendant dashes two, three or more buckets of water over the chest, back and sides of the body. The water may be of any desired temperature, but it is well to have the first tepid, the next a little cooler, and so on; and, if there is sufficient vigor of constitution to render cold water admissible, let the last bucketfull be administered cold. This is an excellent morning bath, and is often used in Hydropathic establishments, but is not very convenient for home practice.

THE CATARACT DOUCHE.

This is where a sheet of water a foot or more in width is made to fall sidewise upon the body. It is sometimes given by means of two tubs, so arranged, one upon each side of the bather, that their contents are emptied in a broad sheet, striking the shoulders and chest. The bather must work vigorously during this process.

THE LOCAL DOUCHE.

In this a stream of water is applied to some particular portion of the body or limbs for a special purpose; a falling stream from any source, even a pitcher held high above the part will answer every purpose. This is an excellent application for removing tumors, reducing chronic enlargement or inflammation of the joints, for healing old ulcers, fever sores, etc.; the water may be of any desired temperature, or alternated from as hot as can be borne to icy cold.

Heat expands the minute blood-vessels called capillaries, while cold contracts them; and the action of heat and cold in this way is mechanical, the former opening the vessels and the latter closing them. By this process the blood is constantly changed and not allowed to stagnate, the absorbents are vigorously set to work, the diseased tissues carried away, and their place supplied by sound material.

A PERSON who was recently called into court for the purpose of proving the correctness of a doctor's bill, was asked by the lawyer whether "the doctor did not make several visits after the patient was out of danger?" "No," replied the witness, "I considered the patient in danger as long as the doctor continued his visits."

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The Snow-Covered Trees.

BY MISS MARY E. DARTT.

O leafless trees! that sleep to-night,
Like many a heart, in snow-shroud white—
Around, thick strewn, like memories dear,
Your summer's joys lie dead and sere!
Can Spring, with smiles and tears of dew,
Win back those once bright leaves to you?

Ah, no! the rain shall patter soft and low
Above them, and the Winter's snow,
Like chill oblivion, flake by flake,
Their fading forms shall fainter make,
Till Earth, above whose heart they rest,
Shall pitying hide them in her breast!

Yet, 'mid your dead unmoved ye stand,
As though some inspiration grand
Within your heart each murmur stilled,
And all your inner being filled
With strength to do what He has willed.

Like you, O leafless trees, am I!
My heart's sweet hopes dead round me lie,
And in the future I can see
But wintry winds and storms for me.

Through trial have ye learned to know
God's will controls both joy and woe,
And at his bidding soft-eyed Spring
Your waiting arms will treasures bring,
In form and spirit not less sweet
Than those that molder at your feet.

Teach me the lesson! In my breast
I fain would still the vain unrest.

A murmur soft as childhood's breath
Thrilled through the boughs; then still as death
Again from off their drapery white
The moon threw back its icy light;
But in the sound, as if from heaven,
This message to my soul was given:

"Go! let the struggle of each day
Be with thy heart for strength to say,
In truth, whate'er be lost or won,
'I am content! *Thy will be done!*'"

A GOOD JOKE.—A comical quarrel, says a Paris cotemporary, took place the other day on a boulevard. A gentleman roughly accosted a workingman and accused him of swindling. "You sold me," he said, "a pomade to make my hair grow; see! my head is as smooth as a piece of leather!"

"Sir," answered the vender of ointment, "you wrong me. There are lands where the best seed won't grow. It is not the fault of the seed—it is the soil!"

The Chemical Aspect of Our Bodies, and the True or Physiological Aspect.

BY PROF. RUFUS KING BROWNE, M. D., OF THE NEW YORK COLLEGE OF DENTISTRY.

IT astonishes a pretty young lady to tell her that she chemically consists of a pail of water, several gases, some charcoal, lime, iron and phosphorus, and a few etceteras, but the statement is nevertheless very near the truth, as expressed in the language of Chemistry. Organized beings are composed of very simple materials, whatever may be their zoological rank, and they do not differ in mere composition as was formerly supposed. They contain, for the most part, hard and soft structures, the former being for support, frame-work, etc., and the latter constituting the most vital portion.

In man, the hardest material is the enamel of his teeth, and the softest is his brain and nerves Human bones, and bones in general, are composed of a soft material, which, when extracted from them, is known as osteine, and a hard material, strengthening the former, consisting almost entirely of phosphate of lime. It is interesting to compare a hard, firm bone of one of the higher vertebrates with the soft bone of cartilaginous fishes, sharks, etc., the magnates of the fish world, whose elevated position is demonstrated to the satisfaction of naturalists by their superior power of devouring their fellows.

Phosphate of lime is one of the constituents of wheat flour. The animal derives his phosphates from the vegetable, and when the animal has done with them and passes them away in secretions, or lays them down with his bones to rot in mother earth, fresh plants catch them up again, and bring them once more within the circle of organic life.

The simplest animals are composed wholly or chiefly of sarcode, the soft stuff of which the infusoria are made, and which, with a little modification, constitutes the bodies of the polypes. As it occurs so commonly as a chief constituent of the lower kinds of animals in their adult form, it is not surprising that it is found in the larval or embryonic stages of higher ones, including man himself. One of the best ways of getting a notion of the appearance and properties of sarcode, is to look at an amœba through a microscope. Chemically it has a close relation to the muscular tissue of higher animals, as it belongs to the proteine or albumenoid class of bodies.

The principal elements composing albumen, the type of this group, are carbon, hydrogen,

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oxygen and nitrogen, but small quantities of sulphur and some saline ingredients are always present. Albumen is easily studied in its well-known form—white of egg. Albumen and its near relative, fibrine, can exist in two conditions, soluble and insoluble. The white of egg readily coagulates on the application of heat, and fibrine, which the blood holds in solution, coagulates on being withdrawn from the vessels of a living animal.

Substances closely resembling or identical with fibrine and albumen exist in the vegetable world, especially in seed, which are found useful for food. The albumenoid group are essential to animal life, and probably to organic life, though their quantity in many plants is very small, and they are remarkable for the facility with which they undergo chemical changes. They give its chief nutritive value to milk, to the meal of peas, beans and other bodies standing high as food.

As the object of the present paper is solely to help beginners and those who are not special students, we may say that muscular tissue consists chiefly of musculine, a substance very similar to and nearly identical with fibrine, but being highly vascular and containing nearly three-fourths its weight of water, it is permeated with a fluid consisting partly of blood and partly of substances secreted from it, independently of a small proportion of nervous and adipose matter.

The portion of muscle which is soluble in cold water consists of albumen, salts of the blood, and two crystallizable animal principles named kreatine and inosite, several acids, and a peculiar red coloring matter. All kinds of flesh contain an immense quantity of water, and unless the chief animal tissue and substances are very moist, active life appears impossible, though some creatures may be very nearly dried without being killed. In such a condition they are torpid from suspended function.

Ready susceptibility of change is the condition of those substances on which life mainly depends, and the nerve material exhibits this quality in the highest degree. The human brain contains, in one hundred parts, about seven of albumen and five of peculiar fatty acids, one of which, cerebric acid, contains phosphorus and about eighty per cent. of water.

Cerebric acid contains no less than five bodies —carbon, hydrogen, oxygen, nitrogen and phosphorus, and many other important animal compounds are equally complicated. Blood is very remarkable for its numerous components. Chemists recognize in it four kinds of fatty matter—fibrine, albumen, salt, and other soluble salts, together with other materials in which iron is conspicuous.

Although the chemical composition of animals and vegetables is very similar, the proportions of the various compounds entering into both vary very much, the animal series being remarkable for the quantity of their highly complex nitrogenous elements, while the hydrocarbons, with oxygen, prevail in plants. A comparison of fibrine with wood may be interesting. The former contains more than half its weight of carbon, about six per cent. of hydrogen, about fifteen per cent. of nitrogen and twenty-three per cent. of oxygen, and small quantities of phosphorus and sulphur. The latter varies a little, according to its kind, but a piece of oak wood contains about forty-nine per cent. of carbon, about six per cent. of hydrogen, about forty-three or forty-four per cent. of oxygen, and in some cases a little nitrogen, say two per cent.

The essential part of wood is its fiber, called in chemistry cellulose. This contains thirty-six definite portions of carbon, united to thirty definite portions of oxygen and as many of hydrogen. In a very delicate form cellulose is digestible and nutritious, but as soon as it is concreted into firm fibers like hemp, cotton, etc., it is no longer fit for human food. Clean cotton fiber is nearly pure cellulose. The hair, hoof and horns of animals are very similar in chemical composition, and silk is very like them and belongs to the same series. These substances are rather more than half carbon, about one-quarter oxygen, about a sixth nitrogen, and they contain about three per cent. of sulphur.

The solid parts of insects—such as the elytras and hard skin of beetles, their claws, ovipositors, etc.—and the shells of certain rotifers, etc., are composed of chitine, a substance chemically resembling the preceding, but with a larger allowance of oxygen. This substance is also found in the organic matter of the shells of crustaceans—those of water-fleas (*entomostraca*).

Sugar appears to be the basis or foundation of organic matter in general, and from it all the varieties of organic products might be obtained by the addition or subtraction of water, oxygen and ammonia. This is cited, not to convey the impression that all organic bodies do actually arise out of such a mode of treating sugar, but to illustrate the relation organic compounds bear to each other.

Organic compounds, placed under appropriate conditions, are susceptible of endless changes and modifications, first by the simple addition of definite quantities of the materials which they

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already possess; second, by the removal of certain constituents wholly or partially, but always in definite proportions; thirdly, by substitution —that is, by taking away certain elements in definite proportions, and adding new elements in equivalent proportions. Living beings take matter into their system in one condition, and change it by processes of this kind. The plant is remarkable for the extent to which it can convert inorganic matter into organized combinations, and the animal does the same from plants.

The processes carried on by organized beings range from simple ones to others that are highly complex. A vegetable cell, such as a yeast cell, is able, through its delicate walls, to allow a certain intercourse between its internal contents and the matter which the fluid in which it grows contains. It takes from the fluid a solution which requires for its development and reproduction, and in so doing determines certain decompositions and recompositions, which are termed fermentation, and which give rise to special products. In more complicated organic beings a great series of processes, more or less similar are going on, and every organ is engaged in a series of transactions with fluids and gases, one result of the whole being the orderly binding up and the equally orderly taking to pieces of the various parts which make up the structure.

Starches and sugars are among the most interesting products of vegetable life. Common starch consists of carbon, oxygen and hydrogen, and if the elements of water (oxygen and hydrogen) be added, starch-sugar is the result. There are many varieties of sugar, and many substances allied to sugar and belonging chemically to the same group. They consist of the same elements combined in different proportions. Cane-sugar crystallizes in four or six-sided rhombic prisms; grape-sugar in cubes or square tables; sugar-of-milk in four-sided prisms. Fruit-sugar is not crystallizable. Gums are much like sugar in composition, and are abundantly found in plants. Gum arabic has the same composition as cane-sugar—C12—H12—O11—and may be converted into sugar.

Vegetable jelly (or pectine) gives their gelatinous character to the juices of many fruits, and pectose, which may be converted into it, abounds in turnips, carrots, etc. Silica is composed of silicon and oxygen.

Diatoms and other organized beings can separate from water the minute quantity of silica necessary for their shells; from the same menstrum—sea water—they separate their interior, which is nearly diffluent.

CHEMICAL ANALYSIS NOT PHYSIOLOGICAL KNOWLEDGE.

Now, in the foregoing we have adduced the last form of the chemical view of the constitution of the human body, for by his analytic processes the chemist finds these elements and various modifications of them, increasing their number, in the fluids and solids of the body.

To him, therefore, the body—which may be analyzed or separated into these substances—is all simply so much of those elements, with their natural actions and reactions, the serial continuity of which constitutes a process called life. But to the physiologist nothing can be more erroneous than precisely this view. For the various structures of the body, its hard and soft tissues, although they may be separated into these primary elements, considered as a mass of so much material to be analyzed, nowhere present the properties of these elements so separated. For, prior to the analysis, the body is what it is in virtue of the fact that those elements obtained by analysis, do not exist under nor evolve the properties which belong to them under their separate form, but only under the form in which they exist as a fusion or intimate combination, possessing wholly unlike and dissimilar properties. And it is these very properties, which by the very process of analysis the chemist destroys or obliterates in order to obtain his separate elements, which constitutes the physiology and animation of the tissues. This may be made very plain. Thus, for example, bone may be analyzed into phosphate of calcium, consisting chemically of the elements of phosphorus, oxygen and lime, with animal matter (osteine). And the separate elements are phosphorus and oxygen, etc. etc. Phosphorus is a soft, colorless, half transparent, waxy solid, so extremely inflammable that it takes fire in the open air by the slightest friction, and burns with great violence, emitting a brilliant flame and dense white fumes of phosphoric acid, due to its oxidation, while the oxygen is a transparent gas. Now, neither of these properties are ever presented by bone as a physiological component of the body as a tissue. And this example will do for the other tissues. The properties of bone do not consist of these properties of separate elements, but of qualities totally unlike theirs. Or to illustrate by a familiar example: water may be analyzed into two gases, oxygen and hydrogen, yet the water as a substance has none of the properties of a gas, but entirely different ones. It has, on the contrary, properties which are totally lost or oblit-

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erated the moment it is analyzed. We adduce these illustrations to show the reader how very far such analysis is from giving us a correct knowledge of physiology. In short, chemistry by analysis obliterates the very properties which constitute the very characters of the tissues, considered as forms of organization, by presenting instead the mere organic remains, in elemental form, of such organization. And this is equally true, whatever our view of life may be. In short, it obliterates the very characteristics of the substances on which the anatomical and physiological power of the animate organization is wholly dependent. But the reader must not understand, from the distinction we have drawn, that it is our purpose to underrate the value of what chemistry has done in thus analyzing our structures, nor is it our intention to upbraid the chemist for failing to give us a satisfactory explanation of physiological phenomena, but simply to make it plain that the products of analysis are not the forms of the substances upon which the organism is sustained; that the properties of our various tissues, which constitute their varied physiological character, are wholly different from the properties of elements obtained as products of an analysis which totally destroys the former. To recur to our illustration: the properties of phosphorus are those which, when absorbed into the system, enter into immediate and destructive antagonism with its organic forms, while those of bone can be appropriated and assimilated, as an every-way accordant substance, by various organisms, not only without detriment, but with the most happy effects as nourishment for those forms. And this brings us to the point of saying a few words on food.

FOOD AND NOURISHMENT.

Both chemistry and physiology assure us that both animal and vegetable food have been proved to contain the same nourishing principles. Of vegetables the leguminosæ possess the highest properties of flesh-forming principles. Wheaten bread contains, more nearly than any other substance, the proportion of plastic and respiratory material necessary for the wants of the body in our climate, and hence has been justly called the "staff of life." The leguminosæ, such as peas, beans and corn, need to be used with rice, potatoes, oils, butter. Nature flavors vegetable products, in an immense number of ways, with a few aromas and essences, not only pleasing to the palate, but most useful for health, and if meat itself were displaced by a well-chosen vegetable diet, the national health would greatly improve.

Human Longevity.

BY CHARLES H. S. DAVIS, M. D.

M. FLOURENS once endeavored to calculate how long a man ought to live. And he made his reckoning by determining the duration of life in some of the lower animals, and finding how long it took for their skeleton to arrive at its perfect development. He thus satisfied himself that man was a centennarian. M. Hœser, a German professor, relates that on one of the hills which surround the Gulf of Naples, there exists a convent, called the Cameldules, which is celebrated throughout the world for its picturesque position. "My guide," he relates, "who looked like one of forty, was seventy years old, and he the youngest of the community. He assured me that the death of a Cameldule before the age of ninety was an unheard-of event, and that a considerable number of them exceeded one hundred years." M. Hœser also makes out that men of genius, at all events, lived longer in ancient than in modern days. The age of Pericles, in this respect, exceeds all others. At Athens, the majority of citizens of that day attained the age of eighty. Xenophon and Sophocles reached to 80; Epichæmus to 97; Thales and Solon to 100, and Gorgias and Leontium to 108 years.

"And Jacob said unto Pharaoh, The days of the years of my pilgrimage are an 130 years; few and evil have the days of the years of my life been, and have not attained unto the days of the years of my fathers in the days of their pilgrimage." If we think, with Hufeland, that until the time of Abraham the year consisted of only three months, that it was afterward extended eight, and that it was not until the time of Joseph that it was made to consist of twelve, then Methuselah was but 242 of our years, instead of 969; and Jacob, instead of living 147 years, died at the age of 37. We find that Adam was 230 years old at Seth's birth; Seth was 205 years old when Enos was born; Enos was 190 years old when Cainan was born; Cainan was 170 years old when Mahalaleel was born; Mahalaleel was 165 years old when Jared was born; Jared was 162 years old when Enoch was born; Enoch was 165 years old when Methusela was born; Methusela was 187 years old when Lamech was born; and Lamech was 182 years old when Noah was born. Pliny was of the opinion that the surprising accounts of longevity were from ignorance of the old computation of time. According to the observations of M. Gatters, the duration of life among the Jews is considerably longer than with Chris-

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tians; even in infancy the mortality of the former is relatively less than among the latter. From his calculations it results that the average length of life is, for Israelites, 46.5 years; for Germans, 26.7; for the Croats, 20.2; for the Austrians, 27.5. Gatters attributes the superiority on the part of the Jews, in different climates, entirely to the influence of race, and suggests the advantage of paying attention to the ethnographic element in the etiology of diseases. M. Charles Lejoncourt published in 1842 his "Galerie des Centenaires," in which may be found a curious list of examples proving the hereditary nature of longevity. In one page we have a day-laborer dying at the age of 108; his father lived to 104; his grandfather to 108, and his daughter, then living, had reached 80. In another instance we have a saddler whose grandfather died at 112; his father at 113, and he himself at 115; also of a woman, then living, aged 150, whose father died at 124, and whose uncle at 113. Lucas's "Traite de l'Heredite Naturelle," cites a case, Jean Golembiewski, a Pole, who in 1846 was still living, aged 102, having been eighty years a common soldier, in thirty-five campaigns under Napoleon, and having even survived the terrible Russian campaign, in spite of five wounds and a soldier's recklessness of life. His father died aged 121, and his grandfather aged 130 years. According to Easton ("Human Longevity," p. 16), of males and females who lived from 100 to 110 years, the instances have been 1310.

Above 110 to 120, ...	277
Above 120 to 130, ...	84
Above 130 to 140, ...	26
Above 140 to 150, ...	7
Above 150 to 160, ...	3
Above 160 to 170, ...	2
Above 170 to 185, ...	3

Easton's book was published in 1799.

Of a hundred men, 50 die before the 10th year;

20 between the 10th and the 20th;
10 between the 20th and the 30th;
6 between the 30th and the 40th;
5 between the 40th and the 50th;
3 between the 50th and the 60th.

From 1728 to 1750, a period of twenty-two years, the deaths in London amounted to 750,322, and out of this number only 242 persons survived the hundredth year of their age. The book of Genesis is supposed to comprise the first twenty-three hundred and sixty-nine years of history; whatever was done or suffered was recorded. The simple record is "he died," or he died "in a good old age and full of years," or he was "old and full of days." During the whole period not a single case of natural death in infancy, or childhood, or early manhood is to be found. Says Horace Mann (Inaugural Address): "I hold it to be morally impossible for God to have created in the beginning such men and women as we find the human race, in their physical condition, now to be." Let us look forward hopefully to the period when "time and the various labors of a changeful life have restored things to a better condition."

"Multa dies variique labor mutabilis ævi,
Retulis in melius."—*Æneid*, xi. 425.

Alcoholic Medication.

BY W. FOSTER, JR.

The use of alcohol is frequently excused on the ground that it is medicinal, and the user fortifies himself by appealing to the practice of physicians. Indeed, I think it may be safely assumed that the prescription of alcohol in some of its forms, now commonly whisky, by the medical profession, is the great stumbling-block in the way of Temperance, and the potent reason why the vice of drunkenness is so widely prevalent, and is increasing. Here and there a medical man has set his face like a flint against the use of alcohol, but generally it is claimed to be a grand remedial agent, and as such is the prescription of most of the schools of medicine. It is fortunate when medical authority can be adduced against such an agent, especially when that authority is based on facts, and has the statistics at hand to verify the grounds of opposition.

The following is an address recently delivered by Mr. James Haughton, at the Board of the North Union, on this important and interesting subject:

NON-STIMULATING TREATMENT OF DISEASE.

Gentlemen—I have felt it to be my duty, on one or two occasions, to bring the Annual Report of the Medical Officer of the Longford Union (Dr. Nicolls) under your notice. I did so because these reports exhibited the singularly successful results of Dr. Nicolls's treatment of disease in that Union for several years, results which were not only beneficial to the poor of the Union, among whom the mortality of fever and other diseases was comparatively small, but also to the rate-payers, who had less taxes to pay. As both these parties were benefited, it seemed to me it would be well if all the medical officers in our Poor-law Unions could

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be induced to adopt the non-stimulating practice in the treatment of disease, so advantageously pursued by Dr. Nicolls for so many years. His report for the past year, ending 29th September, has just been submitted to his Board, and as it presents the same favorable results that have been experienced by him for eighteen years, I again beg to bring his mode of treatment under your notice. The report is short but very suggestive. I hope it will have its due effect on the physicians in all our Unions throughout the country.

"*My Lords and Gentlemen*—I beg to submit to you my report for the year ending the 29th ult., which I am glad shows this establishment in a satisfactory condition.

FEVER HOSPITAL.

"Remained, 0; admitted, 51; of whom 43 recovered, 6 died and 2 remained. Of the deaths, one was a girl aged 10 years, who, when recovering from fever, was attacked with pneumonia, of which she died; one was a girl aged 18 years, who was recovering from fever when diarrhea set in, of which she died; one was a woman aged 33, a wandering mendicant, brought in speechless and unconscious—she died thirty-six hours after her admission. There were also three men of very intemperate habits. One was suffering from hectic and diarrhea, the result of a chronic abscess; one was a rambling tinker, speechless and unconscious when admitted; another a pensioner, in delirium tremens, of which he died; so that in reality there were but two deaths from fever, and those were unconscious and speechless, and died shortly after their admission. I continue the non-alcoholic treatment, which for the last eighteen years I have found most successful.

INFIRMARY.

"Remained, 60; admitted, 823; recovered, 737; died, 45; remaining, 41—total, 823. Of the deaths, thirteen were children not exceeding 3 years, and eight between 3 years and 60 years; twenty-four were 60 years and upward. Of the cases treated in the Infirmary many were serious surgical and midwifery, which all made good recoveries. I beg again most respectfully to direct your attention to the great necessity of having duly educated midwives in the different dispensary districts. I frequently hear of women and children being lost through the ignorance of the ordinary midwives.

"I am, my lords and gentlemen,
"Your most obedient servant,
"S. NICOLLS, M. D., Medical Officer.
'*To the Chairman and Guardians of the Longford Union.*"

Dr. Nicolls informs us that he continues the non-alcoholic treatment which he has found so successful hitherto. In his report for 1865 he states his practice in these plain words: "I beg further to state that this hospital is conducted on Vegetarian and Temperance principles—not one pound of flesh meat, pint of whisky or bottle of wine having been used in it for the last fifteen years." And he informs me that such is still his practice. This non-stimulating treatment of fever, we find in his last report, continues to be most successful. Taking the cases of death in that department, although Dr. Nicolls thinks only two should be placed to its account—the percentage is really only four. As we have no fever hospital in our Union, I will, therefore, compare this result, as I did on a former occasion, with the deaths during the past year in Cork Street Fever Hospital. In the report of that hospital for the year ending March, 1865, I find that the deaths were over seven and a half per cent., a proportion which Dr. Kennedy considers favorable, as the number of severe cases was large. It will thus be seen that Dr. Nicolls's practice contrasts favorably with that of as noble and as well arranged an hospital as is to be found in these kingdoms. Dr. Kennedy states that the percentage of deaths in it from typhus fever is smaller than in England and Scotland, which he attributes to the different dietetic habits of the people in those countries, where, he says, "they use more drink and much more animal food; and there can be little doubt these habits engender a state of the system very unfavorable indeed for the attack of such a disease as a fever." Dr. Kennedy is not a teetotaler nor a vegetarian—he uses both flesh and alcohol in the cure of disease, so that his testimony in our favor is very valuable indeed. In addition to the foregoing opinion, he says, in the same medical report from which it is taken:

"Before leaving the question of the rate of mortality in typhus, I would observe on the marked difference which obtains between the wealthier and the poorer classes being very much higher in the former than the latter. It is not too much to say that it is three times more fatal among the one than the other."

You, gentlemen, who are fond of good living, and who smile at my simplicity in endeavoring to induce my fellow-men to adopt a more natural system of living than now prevails, take note of the deliberate opinion of the head physician in our largest fever hospital as to your unwise dietetic habits, and admit, in candor,

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that I have some good ground for the opinions I hold in those matters.

I may mention here, for the government of medical men as well as their patients, that Dr. Nicolls has informed me that he finds his non-stimulatory practice quite as successful among the gentry in the country as with his poor patients in the hospital. The cost per head in the Longford Union is stated to be 2*s.* 3*d.* a week; with us it is 3*s.* 6*d.* In so far as this difference arises from the free use of flesh meat and alcoholic liquors in our Union, the attention of our medical officers may be properly directed to the facts I am now bringing to your notice. Favorably as Dr. Nicolls's treatment of fever contrasts with that of hospitals in other parts of the kingdom, the result, as regards other diseases in Longford Union and in our Union, are even more striking. As the accounts are not kept, I presume, in the same form in the two Unions, the calculations may not correctly state the percentage of mortality in each; but taking the same rule for both—the number of poor admitted—I find it was about six per cent. in Longford, while in ours it was fourteen per cent. If my calculation for the year 1864—and which I brought to your notice in February, 1865—was correct, it showed a much greater mortality in both Unions, but still largely in favor of Longford; the figures were 38 and 24. For the past year they are 6 and 14. In either case the question is one of great importance, and should receive the serious attention of our medical officers, and the medical officers in every other Union where the mortality is greater than in Longford Union. Surely that practice must be best which, in a series of years, produces the best results. Gentlemen, having, in February, 1865, gone at some length into this important question before this Board, I shall not now weary you by a repetition of the arguments I then used, or of the many evidences I then brought under your notice from the writings of several eminent physicians, strongly condemnatory of the free use of alcoholic liquors in our hospitals and poor-house infirmaries. On that occasion you passed a resolution referring the matter to the Poor-law Commissioners, who had the matter investigated, which investigation proved that Dr. Nicolls's statements were fully borne out by facts. As another year's experience confirms the value of his practice, all I desire, on the present occasion, is that you shall recommend the facts I have again thought it my duty, in the interest of the poor and of the rate-payers, to bring under your notice, to the consideration of our medical officers. There is not a gentleman whom I now have the honor to address who does not feel, with me, that the drunkenness which prevails is the main cause of nearly all the destitution we are called on to relieve; but for that prolific cause of misery we should have little poverty and sickness in the community. Should we not, therefore, do all in our power to impress on the minds of the people the danger of tampering with alcoholic liquors, even as medicines, which we know the ignorant are too apt to resort to on all occasions? I have reason to know that many medical men have been coerced, by the force of scientific inquiry, to look with suspicion on the value of alcohol as a medicine; and I think the general public should hail with pleasure every circumstance which adds any force to this conviction. Hence arises my anxiety, as a Poor-law Guardian, to bring the continued and steady successful results of Dr. Nicolls's non-stimulating practice in the Longford Union under the notice of all the other medical officers of Poor-law Unions in these kingdoms. I move, Mr. Chairman, "That the continued successful treatment of sick patients in the Longford Union by Dr. Nicolls, be brought under the notice of the medical officers of this Union for their serious consideration." The motion was carried.

Such is the article, an evidence, too, that the policy and necessity of alcoholic medication are questions of significance abroad as well as at home. I have transcribed it, though its length is considerable, believing it a document worthy of being embalmed in the pages of THE HERALD OF HEALTH.

PROVIDENCE, *February*, 1867.

LAUGHTER.—Josh Billings, in discoursing of laughter, says: "I don't like a giggler; this kind of laff is like the dandylion, a feeble yeller, and not a bit of good smell about it. It is true that any kind of a laff is better than none; but give me the laugh that looks out of a man's eyes fust to see if the coast is clear, then steals down into a dimple, and rides in an eddy thar awhile; then waltzes awhile at the korners ov his mouth, like a thing ov life; then busts its bonds ov duty, and fills the air for a moment with a shower ov silvery-tongued sparks; then steals back, with a smile, to its lair, in the haste tew wait agin for its prey—this is the kind ov laff that I luv and ain't afrade ov."

THE editor of an Eastern paper says: "We have adopted the eight hour system in this office. We commence work at 8 o'clock in the morning and quit at 8 o'clock in the evening."

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Hæmoptysis.

BY E. P. MILLER, M. D.

HÆMOPTYSIS means spitting of blood, and is generally associated with the formation of tubercular deposits in the lungs, and the rupture of capillary blood-vessels in consequence. If a person is suddenly attacked with spitting of bright red blood, although not previously aware of any weakness or trouble of the lungs, he is at once frightened into the belief that his lungs are partially disorganized by tubercular deposits. This is sometimes the case, although generally, when hæmoptysis occurs connected with tubercular disease, there have been previous symptoms of this condition, such as cough, pain in the chest, quick pulse and the auscultatory signs.

Hæmoptysis is generally considered but another name for consumption, but from several cases I have observed in my own practice, and in the practice of other physicians with whom I have been associated, I am convinced that it quite frequently occurs entirely disconnected with tubercular disease.

It often occurs in congestion of the lungs, caused either by inflammatory action or by obstructions to the circulation originating in heart disease. It is observed in pneumonia, in acute and chronic bronchitis, in some cases of general plethora, in congested conditions of the gums, pharnyx and tonsils. There is a form of hemorrhage, also, which is doubtless from the lungs, that is not produced from the above causes or from tubercular deposits, which I wish more especially to speak of, and which seems to arise from a change in the condition of the blood, leaving the capillary vessels of the lungs in such a weakened condition that the blood easily exudes through them.

The blood seems to be in a morbid and peculiar fluid condition, and is of a red currant-jelly appearance, and sometimes there is nearly a half-pint expectorated in twenty-four hours. While I was connected with a medical institution in Western New York, I saw five or six cases of this kind in one year. They were not troubled with a cough or with pains of the chest, the pulse being, if any thing, lower than the normal standard, and they were free from the usual signs found on a physical examination of the chest in cases of tuberculosis.

The physician of the Brompton Hospital for the treatment of consumption and diseases of the chest, has recently reported some cases of a similar character, and the success in the treatment of them has verified the diagnosis, for they have nearly all recovered, the recoveries in such cases being much greater than in tubercular disease. The attending physicians in this hospital are of the opinion that the condition of the blood is very similar to that of scurvy and purpura. It would hardly seem probable that such cases are produced from causes similar to those that produce scurvy, for that is generally attributed to living largely on salt meats, without vegetables, while the cases under my own observation were at the time living entirely without either meat or salt; they were, however, persons whose blood was being seriously impoverished from dyspepsia or from seminal losses.

Such cases are generally readily relieved by a proper course of Hygienic treatment. Whatever tends to improve the condition and quality of the blood will aid in overcoming this disease. Good pure air is an absolute necessity, and also out-door exercise of some kind; violent exercise should be avoided; pork and greasy food should be discarded. If meat is used at all, it should be not more than once a day. Grains, fruits and vegetables are the best kinds of food.

When attacks of hemorrhage come on, sips of cold water or bits of ice in the mouth will generally stop it. If these are not at hand, a few swallows of strong salt and water will do it, and absolute rest should be enjoined.

A general bath, with cold water and coarse towel or sponge, will answer for bathing; if the surface is cold this bath should not be repeated more than three times a week, and should be followed by brisk rubbing. The wet-jacket may be worn at night with benefit also.

SLEEPING FLOWERS.—Almost all flowers sleep during the night. The marygold goes to bed with the sun, and with him rises weeping. Many plants are so sensitive that their leaves close during the passage of a cloud. The dandelion opens at 5 or 6 o'clock in the morning, and shuts at 9 o'clock in the evening; the daisy opens its day's eye to meet the early beams of the morning sun. The crocus, tulip and many others close their blossoms at different hours toward evening. The ivy-leaved lettuce opens at 8 in the morning, and closes for ever at 4 in the afternoon. The night-flowering cereus turns night into day. It begins to expand its magnificent, sweet-scented blossoms in the twilight; it is in full bloom at midnight, and closes, never to open again, at the dawn of day.

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General Topics of the Month.



NEW YORK, MARCH, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

BY M. L. HOLBROOK, M. D.

A NEW SERIES.—With the next number of THE HERALD OF HEALTH will commence and continue a series of original illustrated articles on the

PHYSIOLOGICAL ANATOMY
AND
PHYSIOLOGY OF MAN,

By an observer whose long-continued researches on these topics especially qualify him to present the fullest and truest aspect of the make-up and functions of our bodies. Prof. Browne, the author, is already known to our readers; but it is not known that for eleven years he has specially and exclusively cultivated this branch of science with the highest power of the microscope, and these articles will contain the results of his investigations.

We have also the pleasure of announcing that we have had reported for us Rev. Henry Ward Beecher's discourse to medical men, preached Sunday evening, February 3. It will appear in the April number. It is one of the best discourses of the kind we have ever had the pleasure of hearing.

PUBLIC TEACHERS.—There is at present a great demand for popular lecturers on Physiology, Temperance, Mental Science, and the various departments of learning that are now being perfected and thought necessary as a part of a practical education. To-day thousands of young men who are fitted for the work might find enough to do, at remunerating prices, if they would but properly qualify themselves for the work. As a field of usefulness, we know of no other way in which more good could be done. We call the attention of those who are naturally qualified for this work to prepare themselves for and enter the field. We do not advise, as is too often the case, that young men should become public teachers, without fully comprehending what they are to do and how they are to do it. Too many of our lecturers do not know so much as the people they attempt to instruct. Very often they assume to know much more than they really do, and are not able to maintain themselves before their audiences. Perhaps there is no subject that there is so much interest in at present as Physiology, none, certainly, could be made more interesting or more fruitful of good. A course of eight or ten lectures, in any town of a few thousand inhabitants, ought to call out a large audience. Those who take up this profession ought to be able to do more than to amuse people and make them laugh. They should impart information, be real instructors. Prof. Agassiz is probably one of the best lecturers in this country. He calls out large audiences wherever he goes, and is listened to with profound interest, and yet his subject is not a more interesting one than the science of our bodies and our brains. He rarely seeks to amuse—always to instruct, to make his hearers see what he sees and enter enthusiastically into the subject he presents before them. We do not object to amusing lectures—on the contrary, we thoroughly believe in them; but very often a lecturer takes away all the dignity of his subject, if the subject has any importance, by making it a theme for the display of wit instead of learning. We ought to have in the field a few thousand lecturers on health matters—Hygiene, Education, Physiology, and their bearings upon life—who can command the same respect as lecturers on these themes that Agassiz does upon Geology and Natural History. If ministers, teachers and physicians would prepare themselves for lecturing and in-

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structing the people in what concerns them so much to know, they would not only make their own lives more perfect, but greatly increase their usefulness. It would lead them out of the ruts into which they too often fall as thinkers, and make them better fitted for their immediate calling than they otherwise would be. Again we say to those thoroughly qualified for lecturers, the field is large and ought to be occupied.

DOCTORING TREES AGAIN.—In a former number we discussed the subject of drugging trees, and it was shown what is the true way of maintaining them in health; but we notice in an exchange that Prof. Kirtland of Cleveland, O., expresses strong confidence in the use of copperas on the leaves and bark of the pear tree to cure or prevent fire-blight. Now, a solution of copperas may be very good to kill insects and in helping to cleanse the bark, just as soap is useful in cleansing clothes; but blight is not cured by this means alone, as we have frequently had occasion to observe. Blight is the local expression of a constitutional disease in the pear tree, as cancer is in the human being, and the only true treatment is an improved culture and right adaptation of soil and location. Local treatment may be needed to produce special results, but is useless, as a preventive or cure, without constitutional treatment in addition. We are surprised that so experienced a fruit-grower as Prof. Kirtland should express such an opinion; but does it not come from his practice of treating sick people with poisons and teaching in a medical college a plan of medication unnatural and erroneous? He has had extensive experience as a fruit-grower, has originated many new varieties of cherries, and been a most useful and public-spirited horticulturist; but as a tree doctor he will not succeed.

WEAK VOICES.—One of the great drawbacks to perfect social culture is an imperfect and weak condition of the vocal organs, making the articulation indistinct and conversation difficult and often disagreeable. Full, round, distinctly articulated tones of voice are rarely heard, except among those who live an out-door life and use their lungs much in hallooing and loud talking, and even in these, for want of cultivation, there is apt to be harshness and want of beauty. A clear, distinct, beautiful voice is a rarity almost everywhere. Most of this weakness comes from bad physical habits. To have a strong voice the respiratory muscles must be strong, and called into play in producing it. This, with women, is almost impossible, in consequence of the weakness of the muscles of the sides and abdomen brought about by tight clothing. Children, if they are healthy, have beautiful voices, but during the process of education they are obliged to sit speechless so much that they almost lose the use of their vocal organs. It ought to be a part of the discipline of the schools to so cultivate the voice as to retain its power and improve its beauty. Parents often reprove their children for loud talking and boisterousness. They ought to carefully cultivate this tendency—restrain it, if vulgar and in excess, but never try to eradicate it. Defect in the voice is also occasioned by decayed teeth. These organs have a very important influence in forming the speech, and where defective render good speech difficult. Great care should be taken to preserve the teeth, not only for the purposes of mastication, but for use in talking. So, again, weak voices are occasioned by debility, and where this is the case it can only be overcome by strengthening the muscular system and improving the general health. Vocal gymnastics—oratory, loud reading, singing, shouting, etc., in the fresh air are valuable aids to vocal culture, and should be practiced regularly. Long sitting, bad air, disuse of the throat and lungs in talking, dyspepsia, bad teeth, debility and want of exercise are fatal to good voices, and we should studiously guard against them.

DOES ALCOHOL WARM US?—The advocates of the use of alcohol, among other things, claim that it increases the animal temperature and helps to maintain animal heat. Dr. Walter Richards, in The London Lancet of recent date, publishes the result of his experiments, going to show that the use of alcohol depresses the temperature of the body, instead of increasing it in both animals and healthy persons. The effect of an injection into the rectum of two rabbits was to lower the temperature of their bodies fifteen degrees. In two adult persons the temperature was lessened three degrees, and only remained the same in one person who was a habitual drunkard. Afterward the experiment was tried on eleven adults, eight of whom suffered a reduction of temperature. Then experiments were tried on non-febrile persons, and experiments were also made showing that alcohol produced the same effect on febrile persons, except in a less marked degree. It is well known that alcohol does not enable persons who use it to bear cold so well as those who do not use it, and yet many people continue to insist that it is a supporter of vitality and of combustion, when direct experiments show that

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it lowers the temperature and depresses the powers of life. How much more demonstration is necessary to satisfy people that alcohol is neither a supporter of vitality, a food, or has any value whatever in the body; but, on the contrary, is always and everywhere an enemy to life? Whoever is deceived by it is not wise.

AGUE AND QUININE.—Western people, who have not yet learned all there is of the Hygienic treatment of disease, are sure that ague is a disease which can only be treated successfully by quinine. One of this belief proposes to discuss the question in THE HERALD OF HEALTH. Our friend offers to prove an impossible thing, and it would be just as sensible to get up a discussion on the possibility of perpetual motion. Ague has been cured in thousands of instances by the Hygienic system of treatment after the quinine plan of curing it had failed, and it is in every way more rational, more successful, and not injurious to the constitution, while thousands of ague patients in the West who have been drugged with this so-called remedy acknowledge that their constitutions have been ruined by it past the possibility of recovery. The extensive use of quinine has broken down thousands of constitutions, shortened a multitude of lives, and so injured the offspring of very many parents who have used it, that they can never grow to full stature or manly proportions.

PROGRESS IN EDUCATION.—Whatever relates to improvement in education has either a direct or indirect relation to human health. For this reason we are always glad to record any progress in this direction. We learn from the Paris correspondent of The Nation that the Minister of Public Instruction has sent to all the teachers in the public schools of that city a circular advising that the pupils be not tormented by cramming their heads with rules of grammar, learned by rote, which they can not understand, but that they learn correct diction by the analysis of interesting reading lessons. This is good, so far as it goes; but correct diction can not be learned by analysis alone. To learn how to write correctly, pupils must practice much on constructing sentences after correct models, both in speaking and composition. Rules do nothing, unless understood and applied. To learn them by rote, without also applying them, is a waste of time and mental energy which should be spared our children, as well as the time devoted to physical culture and building up a sound constitution.

PHYSIOLOGICAL OBJECTIONS.—Dr. Wyman, in his plea against the corporeal punishment of children and youth at school, declares that there are physiological objections to whipping girls. Undoubtedly he is quite right; but the same is also true in relation to boys. There are physiological objections to the use of the rod on either boys or girls. It is true that boys are more robust and will bear the whip better than girls; yet, it is not because they are boys, but because they are, in a majority of instances, stronger, and with less delicate nervous systems. The Boston and Cambridge educators have acted wisely in banishing corporeal punishment from their schools, and we hope people in other quarters will follow their example.

N. P. WILLIS.—The Press has spoken fully of N. P. Willis as a poet, an editor and a gentleman, but it has not mentioned the fact that he was warmly interested in all matters that have a bearing on physical culture and human health. For much of his life an invalid, he was naturally led to consider those questions which had a bearing on the lengthening of his own days. He never, we believe, gave up the use of medicines entirely, but he took comparatively little of them, and gave much attention to bathing and exercise. For many years his paper, The Home Journal, has been open to articles on this subject, and some of Mr. Willis's own letters on invalidism and horseback exercise for consumption are more valuable than whole treatises on this disease found in medical libraries. Fresh air and out-of-door exercise kept Mr. Willis from dying of consumption many years ago, and maintained him in comparative health up to nearly the time of his death.

ONE SERMON ON SUNDAY.—Mr. Beecher said to his congregation recently, that he had often advised members of his church to attend service only once on Sunday. "One sermon," said he, "if it is fit to hear at all, is as much as the generality of persons can profit by. By remaining at home in the evening they were often saved from Sabbath-breaking, and had a chance to become acquainted with their families." Mr. Beecher is right, and he but gives utterance to a physiological truth in this statement. If the clergy would generally adopt the practice of one sermon a week, upon which they should spend the same thought in preparation they now do upon two, their discourses would be more valuable, and we should have no less morality than now

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Diseases of the Liver.—We really hope to include in this article all that we wish at present to say concerning the diseases of this important viscus. Most of the derangements of which we have yet to speak belong to that class of obstinate diseases which can only be palliated, but do not admit of cure, and which every true physician dislikes so much to meet.

It would indeed be a delightful task to perform the duties of a physician, to minister to the ailments to which humanity is liable, if all suffering could be relieved, and every one who seeks for health could be guided safely to the goal. But unfortunately (?) man does not at present possess the power of restoring disorganized structure to its healthy status. Nature's efforts are always directed toward restoration; she always does the best she can for the poor unfortunates who have ignored her teachings and trampled upon her laws; but she can not do away with the penalties which inevitably follow whenever man puts himself in wrong relations to those laws.

The habitual use of rum, gin and brandy must inevitably induce the pains and tortures of a rum-drinker's brain and stomach or a gin-drinker's liver, for long-continued indulgence will eventually produce derangement of function and, perhaps, disorganization of structure.

A strong organization, with a large amount of vital force, may ward off the evil effects of such abuses and procrastinate the hour of retribution, but the evil day is sure to come if these habits are continued.

Man, by his intemperance in eating and drinking, by the abuse of that body which has been given him as a temple fit for the indwelling soul, brings disease upon himself, which the vital powers of his own system are unable to overcome.

And can the physician cure this disease? *He can cure no disease!* He can only aid Nature in removing the obstructions which induce the diseased condition; he can assist her in getting rid of offending causes, in eliminating impurities, in balancing the remedial effort, so that one organ may not be too much overtaxed, while others lie dormant, or perform less, perhaps, than their own customary work; the physician can and should do all this; but it is Nature's own prerogative to restore the system, so far as may be, to its normal condition; she claims this right as exclusively her own, and all efforts to deprive her of it by medical interference will only prevent her from doing successfully what she would be far more likely to do if left to herself.

One retribution which follows drunkenness, gluttony and indolence, is a condition known as

"FATTY DEGENERATION OF THE LIVER."

In this disease there is a great increase in the quantity of oil naturally contained in the hepatic cells; these cells are gorged with oil, while the normal granular matter is diminished.

Fatty liver is of frequent occurrence among drunkards, and among those whose systems are poisoned with syphilitic virus. Sometimes it accompanies consumption, or follows typhus fever, small-pox and erysipelas.

SYMPTOMS.—Enlargement of the organ; a pasty-looking complexion; sometimes jaundice; a greasy feeling of the skin; dyspepsia; constipation alternating with diarrhea; hemorrhoids; great decrease in the quantity of bile; general debility, bloodlessness, and sometimes dropsy and fatal exhaustion. This disease is often associated with enlargement of the spleen.

TREATMENT.—The first thing to be done is to remove the causes, whatever they may be; avoid all rich food, stimulants, spices, condiments, sugar, fat and milk; next, change the quality of the blood, so as to promote the absorption of the oily matter in the liver-cells, and replace it, so far as possible, with healthy tissues. This must be done by the digestion of wholesome food, by keeping all the pores of the skin open, by being supplied with plenty of pure air, quiet sleep and moderate exercise.

The tepid rubbing wet-sheet may be used; also compresses upon the abdomen, extending over the stomach and liver; the warm and cold spray, alternating, all over the body, to promote circulation and excite the absorbents; tepid hip-baths, with friction to hips and bowels; the wet-sheet pack *occasionally*, and, if there is dropsy, the Turkish Bath or Hot-air bath will be very beneficial. Electricity, too, and the electric bath will aid in the work; but this disease is seldom entirely removed.

Waxy Liver.—This peculiar infiltration into the structure of the organ sometimes coexists with fatty liver, or it may be present by itself; it is sometimes called albumenous, lardaceous or scrofulous liver. This disease is much more common among males than females,

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and is usually caused by constitutional syphilis; it sometimes occurs with scrofulous disease of the bones, with tubercular disease, arising from the use of mercury, or from repeated attacks of intermittent fever.

SYMPTOMS.—Deranged digestion; nausea, vomiting, diarrhea; abdomen distended by gas; fullness in the region of the liver and enlargement of the organ; there is usually little or no pain; the spleen may be enlarged, the urine albumenous, and there is sometimes jaundice and dropsy.

This is one of those diseases which steadily advance toward a fatal termination; but to hasten or retard it is, to a great extent, under the control of the patient. The treatment is similar to that for fatty liver.

Hepatic Tumors.—There are several kinds of tumor of the liver, the most common of which are hydatids, cancerous infiltrations, cystic tumors, cavernous tumors, and tubercular deposits.

HYDATID TUMORS

Are occasionally found in the areolar tissue, in the spleen, in the omentum, in the muscles of the heart, in the brain, kidneys, lungs, ovaries and bones, but they are said to occur more frequently in the liver than in any other organ. These tumors consist of a sac formed by condensation of surrounding tissues, lined by a thin bladder or cyst, and filled with a limpid, saltish fluid, and in this fluid are found floating numerous small bladders which contain the worm known as echinococcus, a species of immature tape-worm, such as infest the dog and wolf.

The growth of these tumors is generally slow, but they sometimes attain a size so large as to encroach upon the lungs, or extend far down into the abdominal cavity, and occasionally they make such pressure upon the portal vein as to cause dropsy and swelling of the feet and legs.

SYMPTOMS.—There is generally but little inconvenience beyond a sense of weight; the volume of the liver is increased, and there may be fluctuation. When the tumor presses upward on the lungs there is dry cough, palpitation and displacement of the heart, and vomiting; there may be jaundice, but there is no fever or pain unless the cysts inflame. The cyst may burst, and its contents pass into the stomach or intestines or out through the abdominal walls, and the patient may recover; but if it enters the cavity of the abdomen or lungs it is usually fatal.

The immature tape-worm sometimes dies, and the contents of the sac being absorbed recovery follows.

TREATMENT.—Careful diet, good air, warm and cold spray to the liver, rubbing wet-sheet, electric baths or electricity, hot-air baths, removal of fluid by tapping, etc.

CANCER OF THE LIVER.

This loathsome and almost universally fatal disease is found in the liver in almost every variety of form. It occurs in middle life or old age, yet it is occasionally met with in the young. It is often associated with cancer in other parts of the body.

SYMPTOMS.—Tenderness on pressure in the region of the organ; disturbance of stomach and bowels; pain in right shoulder; rigidity of muscles of the abdomen; enlargement of the organ, with irregularity in its form and nodulous or uneven prominences over its surface; mental irritability; dirty-yellow hue of the skin; loss of strength and energy, and general wasting of the body; occasional attacks of fever supervene, and sometimes jaundice or dropsy, or perhaps both, and, in the later stage of the disease, hemorrhage from the stomach or bowels, and diarrhea.

TREATMENT.—Except in the early stages, we do not expect to do more than palliate the sufferings and make the patient as comfortable as possible. The disease being located upon an internal organ, we can not, of course, make immediate applications, and must, therefore, rely upon general treatment. It is, however, not only a local but a general disease.

The diet should be light but nourishing, and taken in very moderate quantities; two meals a day are far better than more—several cases of cancer have been cured by the patient adhering strictly to a rigidly abstemious diet, like bread and milk or bread and fruit. By this course the cancerous elements in the blood have been changed and carried out of the system. Urquhart, in his "Manual of the Turkish Bath," reports several cases cured by those baths.

Such general treatment should be applied as will keep the skin active and purify the blood. Wet-sheet packs, half baths and rubbing wet-sheets, electricity, the electro magnetic bath, with local applications to the parts. The wet compress worn night and day for a time will be useful.

Injections of acetic acid (or vinegar) into the body of the cancer, by means of a needle-pointed hypodermic syringe, is considered one of the best local remedies; this acid will dissolve the cancer-cells, causing them to be absorbed and removed from the system.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

Close Carriages.—"Which is the best kind of a carriage for invalids to ride out for their health in—an open or a close one?"

A close carriage, with its cushions and linings filled with the emanations from the lungs and bodies of its former occupants, and with its windows tightly closed, so as to prevent the ingress of a particle of air from without, is one of the most unhealthful places in which a person, be he sick or well, can place himself. The idea of taking an *airing* in such a concern is the height of folly. An ordinary close carriage will not hold a sufficient quantity of air to supply the natural demands of a single person for ten minutes. What, then, can be the effect of crowding three or four persons into such a place, to remain, perhaps, for hours? Dr. Angus Smith, a celebrated English physician, has shown that "a crowded railway carriage, which goes at the rate of thirty miles an hour, is as unwholesome as the strong smell of a sewer, or as a back-yard in one of the most unhealthy courts off one of the most unhealthy streets in Manchester." Invalids who ride out for their health should shun a close carriage as they would a miasmatic swamp. Let them be well protected from the weather, but have them ride in an open carriage, so that they can breathe the pure air.

Fruit Diet.—"You believe that a person can maintain health and strength on an exclusive fruit diet. 1. How much and what kind of fruit should be eaten, and how often? 2. Do you know any persons who live on fruit diet exclusively, and do they enjoy perfect health?"

1. As to the quantity of fruit which a person should eat who eats nothing else, no definite rule can be given which will suit all persons. Some require much more than others. Each one must determine for himself how much he requires. I have lived for months upon a pound and a half of fruit per day—all eaten at one meal—and enjoyed as good health and felt as strong as I ever did. In my opinion, twice a day is as often as any person should eat, whether they partake of fruit or meat, or both. Native fruits are far preferable to foreign. Only such fruit as is fully ripened should be used. Foremost on the list stands the apple, with its hundreds of varieties, then follows the peach, the pear, the grape, berries of different kinds, tomatoes, melons, etc.

2. *Perfect* health is what no person in this generation has any right to expect, for we have all got more or less of the sins of our parents to answer for, even supposing it were possible for us to live perfectly hygienic in every respect ourselves—which it is not, as society is at present constituted. I know several persons who have lived on a fruit diet for years, and their health and strength has improved very much.

Medicated Soaps.—"There is in use, to a certain extent, an article which is styled 'Medicated Soap,' and which is highly recommended by its manufacturers for cleansing the skin, etc. Its use, however, is highly injurious—in fact, where it has been used it has produced the most deleterious effects, poisoning the cuticle of the skin so that it no longer performs its functions, and the effete matter which is exuded through the pores is made to appear upon the surface, causing a roughness which is almost disgusting. How can this be remedied? Can the healthy functions of the skin in such cases be restored by the Turkish Bath, or will the Electric Bath prove more effectual? Or what are the means necessary to produce the desired results in this matter? The face and hands are the only parts affected."

The Turkish Bath, with special manipulations of the hands and face, while in the bath, is the most effectual remedy in such cases. Where that can not be obtained, bathing the hands and face in cold water, followed by a thorough rubbing of the parts affected, will prove useful.

Obesity of Children.—"Can you offer any suggestions for reducing the flesh of a child 2 years old, weighing 60 lbs., in ordinary health, but unable to walk? Would Hydropathy avail, or should we leave all to nature?"

If a child 2 years of age and weighing 60 lbs. is in ordinary health, then the standard of health must be low indeed. Fatness is as much a disease as consumption. The first thing to be done is to restrict the diet, both in quantity and quality. Ripe, acid fruits should always constitute the principal part of the dietary, nothing else being allowed except Graham bread and vegetables. No drink but water. A daily bath of cool water in a warm room, followed by vigorous friction and rubbing of the whole body. As much exercise as can be taken.

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Deficient Exercise.—"What are the general effects resulting from deficient muscular exercise."

The circulation becomes languid, especially in the extremities, which produces a tendency to congestion of the head and internal organs. The feebleness of action occasions little waste of tissue, and lessens the demand for a new supply, consequently the digestion becomes impaired, the muscles weak and flabby and the respiration imperfect. If there is more food eaten than is required, as is usually the case, the machinery of the system becomes more or less obstructed, and the wheels of life turn slowly and irregularly. Appropriate exercise, at suitable times and in proper amount, quickens the circulation, and sends the blood dancing with joy to the remotest parts of the body; it increases respiration, thus bringing a larger quantity of that "elixir of life," oxygen, to purify and vitalize the blood; it causes a more rapid transformation of tissue, which creates a greater demand for food, and consequently improves the appetite and strengthens digestion; it rounds and hardens the muscles, and educates them into ever-ready, faithful and efficient servants of the will; it limbers the joints and strengthens every part of the system; it invigorates the mind, and renders it more active and efficient in all its operations; in short, it is one of the great natural agents which will enable man to reach that state of physical, mental and moral perfection to which he is surely tending.

Light for the Sick.—There are very few persons, even among those whose business it is to watch over and care for the sick, who appreciate the importance of light. To the invalid who is confined to his room there is nothing which will conduce more to his recovery, save an abundance of pure air, than a plentiful supply of the life-giving light of the sun. The common custom of keeping the sick confined in dark rooms, where the direct rays of the sun are never allowed to enter, is suicidal. The invalid should have the lightest room in the house—one, if possible, wherein the direct rays of the sun shall enter from sunrise to sunset. Plants which grow in the shade are always pale, weak and sickly-looking; but remove these same plants into the sunlight, and they will regain their natural, healthy color, and become strong and vigorous. It is the same with the human plant. If it has become weak and diseased by being confined in dark rooms, breathing impure air, or from other violations of the health laws, by removing those conditions, surrounding it with pure air, bathing it in sunlight, and supplying other necessary conditions, it will regain its normal condition of health and vigor, if it has a sufficient amount of vitality left to bring about the change.

Itch.—"Is the human race subject to more than one kind of itch? What is the cause and what the proper treatment for the itch?"

For all practical purposes there is but one kind of itch, as the cause is the same and the treatment the same in every variety, although some medical writers give different names to different forms of the same disease. It is caused by a minute insect which burrows in the skin. Cleanliness is an almost certain preventive. The most effectual and least injurious mode of treatment is to give the patient a hot bath—either of water, vapor or air—followed by a thorough soap-sudsing and rubbing of the whole body. After this, anoint the skin' with palm oil. If one application is not sufficient, repeat it.

Felons.—"Please tell me the cause of felons and indicate their treatment, as myself and husband both have them."

In the true felon, inflammation occurs in the periosteum or covering membrane of the bone, and effusion takes place between it and the bone itself. Cold applications will relieve the inflammation if taken in time. If these fail, the fingers or part affected should be cut open to the bone.

Hair and Hair Tonics.—"What would you recommend to prevent the hair from falling out, and to make it grow luxuriantly?"

Attend to the general health; improve the digestion so that the blood may become filled with the elements of nutrition; breathe pure air, that these elements of nutrition may become vitalized and prepared for their mission, and then invite the blood to the scalp, to invigorate it and nourish the roots of the hair, by a daily application of cold water, followed by a vigorous and prolonged manipulation of the scalp. Do not wear tight hats, and keep the scalp well ventilated. No oils, or so-called hair tonics of any description, should ever be used. The tendency of every one of them is to weaken the scalp and injure the hair.

Happiness and Misery.—"What constitutes happiness, and how can it be obtained and misery avoided?"

Happiness consists the satisfaction of our faculties, both physical and mental. It can be obtained by obeying all the laws of our being, and thus satisfying the natural demands of our faculties.

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Domestic Recipes.

PREPARED BY THE AUTHOR OF THE HYGIENIC COOK BOOK.

Apple Bread.—Weigh one pound of fresh, juicy apples; peel, core and stew them to a pulp, being careful to use a porcelain kettle, or a stone jar placed inside an ordinary saucepan of boiling water, otherwise the fruit will become discolored; mix the pulp with two pounds of the best flour; put in the same quantity of yeast you would use in common bread, and as much water as will make it a fine, smooth dough; put it into a pan and place it in a warm place to rise, and let it remain for twelve hours at least; form it into rather long-shaped loaves and bake in a quick oven.

Apple and Rice.—Well boil half a pound of good rice in one quart of pure milk, taking the greatest pains to prevent it from catching at the bottom of the saucepan. Pare seven large Pippin or Greening apples; take out the cores without cutting the fruit quite through; put a little raspberry jam into each hole and fill up with cream. Edge a deep pie-dish with a rim of nice pie-paste; lay in the apples, and level up the spaces between them with the boiled rice. Brush it over with the yolk of an egg, dust it well with powdered loaf-sugar, and bake forty minutes in a quick oven. To be eaten warm.

Apple Pudding.—Pare and chop half a dozen good sour apples. Butter a pudding-dish, and put in a layer of grated bread half an inch thick; add small bits of butter; put in a layer of chopped apples, with sugar and grated lemon-peel, and repeat until the dish is full, having a layer of bread at the top; pour over the whole one cup of cold water and bake thirty minutes.

An Excellent Pudding.—Take one and one-half pints of milk and one tablespoonful of flour; mix the flour smoothly with a little of the cold milk to the consistence of thick cream; boil the rest of the milk and pour it boiling hot upon the flour, stirring it all the time; add a little salt; sweeten to taste, and, when cool, add two eggs well beaten; have ready a buttered dish; pour the whole into it and bake forty minutes. It should be out of the oven fifteen minutes before serving. (Delicious to eat with cold fruit.)

Ruby Sauce.—Place a porcelain saucepan, having a close-fitting cover, upon the hottest part of the stove, with two quarts of water and one quart of fresh cranberries in it; stew at high pressure about twenty minutes, by which time every berry will have burst, reddening and thickening the water to the consistency of wine. Remove the kettle from the fire, and stir in sugar till the juice is palatably—not insipidly—sweet; pare, quarter and core some nice cooking apples and put into this, and simmer very moderately over a slow fire till the quarters are cooked thoroughly through—remaining whole—and, having absorbed the cranberry juice, are changed to a clear, semi-transparent and delicate ruby color. In cooking there should always be enough of water to keep the fruit constantly submerged. Either warm or cold this sauce is delicious. It is excellent for pies, tarts and a variety of puddings, and may be canned in the same manner as any other fruit, and will keep equally well.

Tapioca Pudding.—Pare seven nice tart apples; with an apple-corer (which no house should be without) remove the cores; lay the apples in a buttered dish; take one cup of tapioca (or sago) and pour over it one quart of boiling water; let it stand a few minutes; add two cups sugar, a little lemon juice and grated peel; pour over the apples and bake one hour.

Indian Pudding.—Two quarts boiling milk; stir in two cups of Indian meal, a handful of flour, half a cup of molasses, three pints of sweet apples sliced and two tablespoonfuls of butter; bake three hours.

Healthy Spices and Condiments.

A NEEDLEWOMAN'S exclamation—Ahem!

WHAT is the key-note to good-breeding? B natural.

A MAN proves himself fit to go higher who shows that he is faithful where he is.

WHY is life the riddle of riddles? Because we all must give it up.

TIMES are so hard it is suggested that pantaloons may as well be made without pockets.

AN old lady who imagined that the sea must be dirty because so many people bathed in it, was consoled on being informed that it was washed upon the beach every morning.

A STUDENT went into a bookstore, and inquired of the proprietor if he had any pocket Testaments in Greek. "In Greek!" echoed our good friend, hesitatingly, "I believe not, sir; but I have elegant ones in Morocco."

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PRENTICE says that a patient is in a bad way when his disease is acute and his doctor isn't.

A GOOD appetite, healthy digestion, and a free circulation of the blood, are among the blessings of labor.

"I'M afraid you'll come to want," said an old lady to a young gentleman. "I have come to want already," was the reply; "I want your daughter."

A LADY, writing upon the subject, says: "When men break their hearts, it is the same as when a lobster breaks one of his claws—another sprouting immediately and growing in its place."

A WEDDING was to take place at Nashville, one evening last week, and bride, parson and guests were ready, when it was announced that the groom was on a jury which was unable to agree, and had been locked up for the night.

"IF you had avoided rum," said a rumseller to a customer, "you could now ride in your carriage." "And if you had never sold rum," said the bacchanal, "you would have been my driver."

COAX sunbeams to your eyes, smiles to your lips. Speak hopeful words as often as you can. Get the name of being cheerful, and it will be as incense to you. Wherever the glad face goes it is ever welcome; whatever the laughing lips ask is very apt to be granted.

A MAN was lately invited to a dinner, and a dish of ice-cream was placed before him. It was a new dish to him. He tasted it, then beckoned to the waiter, and said, audibly: "That is a very good pudding, but do you know it's froze?"

A GIPSEY woman promised to show two young ladies their husbands' faces in a pail of water. They looked, and exclaimed: "We only see our own faces." "Well," said the gipsey, "those faces will be your husbands' when you are married."

A PATENT PHYSICIAN.—A certain physician, at sea, made great use of sea water among his patients. Whatever disease came on, a dose of the nauseating liquid was first thrown down. In process of time the doctor fell overboard. A great bustle consequently ensued on board, in the midst of which the captain came up and inquired the cause. "Oh, nothing, sir," answered a tar, "only the doctor has fallen into his medicine-chest."

Literary Notices.

THE ECLECTIC MEDICAL REVIEW.—We have not yet had time to examine carefully this medical journal for February, but judge from the subjects treated that it is ably edited. The chapter on "Hereditary Influence" contains but little that is really new, and some statements which are very old; but, nevertheless, it is interesting, and probably one of the best in the number. It would be well if medical journals would devote more space to such topics, and less to those which can have no practical value to their readers. We shall refer to this monthly again.

PICKWICK PAPERS.—Ticknor & Fields of Boston have announced their intention to publish an illustrated edition of the complete works of Charles Dickens in a cheap but elegant form. The set commenced with the publishing of the "Pickwick Papers," and will be continued monthly until complete. The first volume is now before us. It contains a beautiful steel engraving of Dickens, and is in every way a very beautiful book. The price of each volume will be $1 50.

THE NORTHWESTERN FARMER.—Dr. T. A. Bland, for many years a popular lecturer on Health Physiology, etc., is now publishing a splendid and valuable paper in Indianapolis, Ind., called The Northwestern Farmer. The last number contained a letter from Henry Ward Beecher, in which are mentioned many interesting incidents of his life and work, particularly his agricultural labors in that city in early life. We do not know when we have been more pleased than in reading it. Our friends will do well to make the acquaintance of Dr. Bland and his paper.

THE ATLANTIC MONTHLY for January and February contain their usual amount of interesting reading matter. Dr. Holmes's "Guardian Angel" will be a prominent feature in this magazine for the year 1867. The story commences well, and will, of course, improve as it advances.

THE RADICAL.—Boston: Adams & Co.; $3 a year. This monthly has become the organ of the liberal branch school of Unitarians. Some of the most vigorous thinkers of our day contribute to its pages. The February number is an interesting one.

OUR YOUNG FOLKS is one of the best magazines for youth yet published. Beautifully illustrated, neatly printed and ably edited, it can not fail to instruct and benefit the large class for whom it is designed.

THE LIBERAL CHRISTIAN is the organ of the Unitarian denomination, and one of the best religious papers published. It is always welcome to our table. $3 a year.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

October Number for 1865.—We will thank all those who have the October number of THE HERALD for 1865, and do not wish to keep it, to mail the same to us.

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Publishers' Department.

This Number.—We offer with this number a variety of contributions of the very highest value from authors of wide reputation. We have the pleasure of adding to our list of contributors the names of

Rev. HENRY W. BELLOWS, whose article on "Length of Days" will, we are sure, give great pleasure to all our readers;

Dr. GEORGE H. TAYLOR, who first introduced the Movement [Cure into America, and whose article on "The Chemical Phenomena of Vitality" will be read with interest;

Mrs. R. B. GLEASON of the Elmira Water Cure, a lady physician well known to the public as a teacher of the laws of health. Mrs. Gleason will, we are glad to inform our lady readers, continue her "Letters to Ladies" for several months, and we are sure they will form a valuable feature of THE HERALD for 1867.

Dr. DAVIS, in his article on "Human Longevity," discusses a much neglected topic, which it will be well for all to investigate. In no way can life be prolonged beyond its present average without thoughtful inquiry into the causes which shorten it, and adopting the appropriate remedies.

F. R. ELLIOT gives us a valuable chapter on "The Value of Fruit as Food." Mr. Elliot is so well known to the public by his contributions to the Press, and as an author of works on Horticulture, that any thing from him on this subject will be very welcome to our readers. We shall have other articles from his pen.

Prof. ROYCE gives a continuation of his article on "Weak Lungs and Voices." If our subscribers have any friends to whom these articles may have a special application, who may not be likely to see the series, they could not do them a greater kindness than to induce them to subscribe to this magazine. These articles will be continued several months, and they promise to be the most valuable contributions that have yet appeared in any journal.

Prof. BROWNE furnishes us this month with one of his most interesting chapters on the "Chemical and Physiological Aspects of our Bodies." We are to have a series of valuable scientific papers from Prof. Browne, the result of his scientific researches. They will be new, original and most valuable. The article in the present number, while not a part of the series, is preliminary to them.

The Poem, "Dr. Drake, the Quack, and his Victim," illustrated, needs no comment. Of course, everybody will read it.

And so we might go on mentioning the numerous other papers, which go to make this number one of the most interesting and instructive of the volume, but space forbids. Each will speak for itself.

While we are working hard for our readers many of them are working hard for us. Will not each do something to enlarge our list? If they have neighbors or friends who have not subscribed for this journal, induce them, if possible, to do so. Get up clubs in every neighborhood, and push on the good work.

Sewing Machines.—Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as New Years' Presents.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

An Interesting Experience.—"It is now twenty years since I was prevailed on by a friend to subscribe for The Water Cure Journal; I did it from curiosity, thinking it all humbug. I was then in my fifty-third year, a most miserable dyspeptic, subject to almost yearly attacks of severe sickness, and had taken medicine until I thought I might as well die as to take any more. I had not read more than two or three numbers before I concluded to try a pack in a wet sheet. I found it to have so fine an effect that I determined to follow it up. I took a few more packs, wore the wet compress a few weeks, and then, with the aid of 'Wilson's Practice,' I marked out a course for myself and followed it, and at the end of five months I found I was rid of all the distressing symptoms with which I had been afflicted, and weighed twenty-five pounds more than I had in twenty-five years. Since that time I have found no difficulty in curing all ordinary attacks of sickness in my family without giving medicine, and have not given or taken any from that day to this, although we have had several severe sicknesses to treat.

"And now, notwithstanding I have finished my threescore and ten years, and two years and a half more, I can say truly that my lungs are stronger and I am physically stouter than I was thirty years ago. I now feel more like living twenty years longer than I did twenty years ago.

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"MILLER, WOOD & Co. Grayville, Ill."

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that for a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

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Back Numbers.—Those who wish to be sure of back numbers had better subscribe at once, as we will not agree to furnish them during the entire year. Our editions for the last six months of 1865 were large, but it was not so large as the demand, and several of the numbers are out of print.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

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To the Reader.—Friends of the cause of human improvement who may see a copy of our magazine, are requested to lend a helping hand in extending its circulation, if only by their own names. Our aim is to do all the good we can in extending a knowledge of the laws of the body and brain. Many a person has cause to bless our labors, because he has better health from learning how to live, and better children from knowing how to rear them. Half the children born die before they arrive at five years of age. Why? Because of ignorance on the part of parents. Teach them the laws of life, and they would swell the lists of living men and women and bless the world.

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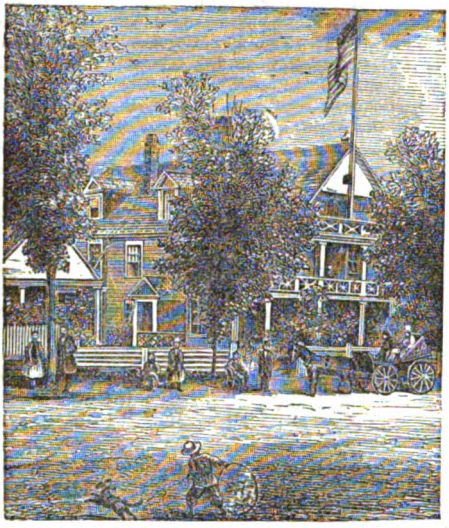
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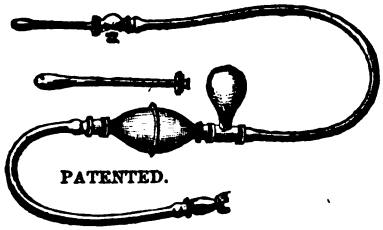
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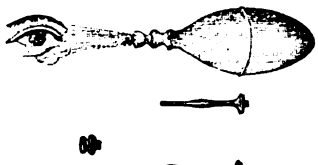
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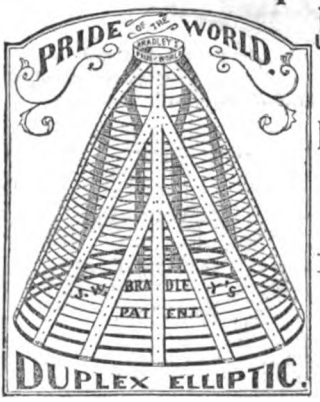
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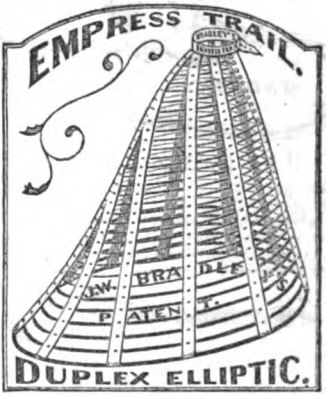
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DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

APRIL, 1867.

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General Articles---Hygienic and Miscellaneous.

MINUTES

OF THE

Brawnville Athletic Club.

EDITED BY MOSES COIT TYLER.

I.

THE EDITOR'S INTRODUCTION.

ONE clear, cold Friday in January, 186—, I arrived, on the Springfield and Worcester Railroad, at the town of F——, the nearest station, I was told, to the little, secluded village of Brawnville, where I had an appointment to lecture that evening. My correspondent at Brawnville, the Secretary of the association for which I was to lecture, signing himself in full Thomas Richard Henry, had promised to meet me at the station and carry me to the village, a distance, as I had understood, of fifteen or twenty miles. Unfortunately, all that I knew of Mr. Thomas Richard Henry was his handwriting; and, unfortunately likewise, all that Mr. Thomas Richard Henry knew of me was of about the same narrow category. When, however, any two of the descendants of Adam really desire to find each other in a crowd, at a railway station, nature suggests a system of spontaneous recognition; each man stretches his neck and stares for another man who is also stretching his neck and staring. On this occasion, traveling-bag in hand, I gave an abrupt plunge upon the platform, and at once ran up the signals of a stranger lost and anxious to be found; when, almost immediately, the signals were responded to by a little, parched, shriveled image of a man, with bright eyes and a lame leg, limping toward me by the help of a cane, and saying rather coldly:

"Is this Mr. T——?"

"You are a good guesser, sir! And I presume this is Mr. Thomas Richard Henry."

He gave no sound, articulate or otherwise. His small black eyes gleamed in their saffron frame-work of parchment and crow's-feet, and seemed only intent on piercing two holes through me then and there. Only his ears had informed him who I was; his eyes, evidently, had not yet made up their report. In a minute, however, still looking straight at me, with genuine Yankee economy, he answered two questions in one:

"The cutter is ready, sir."

"And I, too!"

In another instant we were side by side in the sleigh, buffalo robes around us, the huge black horse, in the joy and pride of his muscularity and of emancipation from the hitching-post, almost flying over the crisp silver crests of the snow.

There is perennial fascination in human nature! After all, the only thing worth notice in this particular solar system is not a thing at all—it is man! Cataracts, mountains, deserts, pictures, statues, temples, pyramids, what are they, save as related by some tie of action or passion to this million-headed, million-handed, million-hearted essence—humanity? Rome is not so in-

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teresting as any ragged and unwashed Roman in the streets of Rome. A new man—he who introduces me to a new man is my greatest benefactor. A new man is a new Revelation from Heaven—an Apocalypse of mystery and power, of joy, agony, wisdom!

And to me the great charm in the profession of a public lecturer is the opportunity it affords for seeing and knowing fresh souls. First, you have the strange interest of knowing them before you have seen them. And this alone is an everlasting miracle—that we can wrap up our thoughts and feelings in a sheet of paper; that we can become acquainted while a thousand miles apart; that we can exchange greetings, and converse and laugh together with still an ocean or a continent between us. We peer into each other's letters in order to trace the lineaments of each other's faces; we expect autographs to be photographs; and we wonder what all these men are like, from whom have come these voiceless messengers of ink—how tall, of what complexion, voice and mien, of what heart and eye and brain.

For my part, I go forth upon a lecturing campaign as upon an exploring expedition. I go forth with the curiosity and the eagerness of a Columbus, a Sir John Franklin, or a Dr. Kane. I go forth to discover for myself new continents of human nature; to penetrate into tropical realms of human love; to risk crushing and death amid icebergs and Arctic floes of human selfishness; to find my way through mysterious seas of the soul to new cities and civilizations of human custom and prejudice.

And here I was, on that cold Friday in January, in a cutter on my way to Brawnville, sitting in dead silence by the side of a man with whom I had freely conversed at the distance of a hundred and fifty miles. We had exchanged three letters. I had wondered what he was like. Something, scarcely definable, in his letters, had attracted my special notice. The choice of a particular word, the turn of a single sentence, the gleam through the rifts of one phrase of a sentiment gentler and deeper than common-place souls are likely to be afflicted with, had created in me the expectation of finding in him something more than a common-place soul. Yet his appearance and manner were disappointing. He was frigid, expressionless, repelling; in one word—a New Englander! Whence comes it, O ye gods of courtesy! that New Englanders, especially of the smaller towns and of the unpaved districts, will persist in sheathing their big hearts and their strong brains in coats of ice, just as those ferocious monsters—the old knights of chivalry—used to sheathe their bodies in coats of steel? There sat Mr. Henry, my correspondent and guide, completely ignoring his guest, completely absorbed in his horse, eyes fixed as flints on distance and futurity; his thin, sharp blue nose pointed immovably forward, like the bowsprit of a ship.

So, in utter silence, we rode for ten or fifteen minutes. I became certain that Mr. Thomas Richard Henry would not be the first to speak, if we waited till the last trump.

I meditated.

This is getting awkward. I ought to break this man's ice-crust. There is a soul somewhere inside of this frost-bound, lip-sealed mortal—no man with such eyes as his but had a soul back of them—and souls are worth digging for, even through ice-shells—souls against gold nuggets, any day.

I knew that no ordinary methods of talk would meet the emergency. I opened out thus:

"Mr. Henry, there are two very odd things about you Brawnville people."

"Ugh!"

That sound—how can it be translated into visible speech? Jaws and lips firmly set, eyes straight ahead; nose ditto; hands on reins; diffused over the whole visage just exactly the amount of geniality and emotion one is accustomed to behold in—an icicle!

But that sound—"Ugh!" Most expressive monosyllable! Eloquent negation of eloquence! It meant an entire speech. It meant this: "I'm not at all surprised; I don't object to hear more; I don't particularly care—do just as you please." So I did as I pleased. I continued:

"Yes, sir, two very odd things; and one of them, sir, is your own name."

"Ugh!"

His nose and eyes still ahead; general physiological conditions unchanged.

"Yes, sir; and when I saw your name at the bottom of your first letter I burst into a laugh."

"Ugh!"

"And what do you imagine I thought, sir?"

"Ugh!"

"Why, I thought, there will be no difficulty in remembering this fellow's name, 'Thomas Richard Henry!' Why, for all the world, that's only just Tom, Dick and Harry!"

I could see that the first shot had gone through. My new friend slowly relaxed; a quiet, shrewd glimmer crept over his wizened face; a couple of sparks twinkled from his eyes; and in some place far down in his throat, somewhere between the uvula and the bronchial

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tubes, perhaps in a cosy corner of the larynx, he actually laughed. To be sure, it was not much of a laugh, only a sort of guttural vibration, a snigger, very low, almost inaudible; yet it was a laugh. I knew that my shot had told. I inscribed victory on my flag—and waited.

During the next five minutes his lips were gradually getting ready to act. Several preliminary twitches and compressions took place, and then:

"Well—that—is—queer. That's just—what—all—my boys—and girls—call—me!"

"Is it possible," I replied, "that you allow your children to speak of you so disrespectfully?"

"Oh—bless—your soul! You—don't—think—I—have—one hundred—and thirteen—children—do you?"

"Well, I confess I *had* not thought you quite so much of a man. Why?"

"Don't you—see—sir? I'm only a poor—lorn—bachelor. I keep—the—Brawnville—school."

"Worse and worse!" I rejoined; "and do you mean to say that you, the schoolmaster of Brawnville, with all the solemn responsibility of your great vocation weighing upon you, actually permit such liberty to be taken with your pedagogic dignity? Why, sir, every urchin that calls you 'Tom, Dick and Harry' should be hung up half a day on a nail by his left ear, or be made to stand on his head till a little reverence should have time to trickle down into the top of his cranium!"

"Hold, sir! I was—going—to explain; the boys—and girls—don't know that I know—what they call me. I hear—a great deal more than—they think. But, between ourselves—I like it. I like nick-names. The fact—is, sir—I am—all alone in the world. I am a very solitary—being. This nick-name seems to bring people near. My only pleasures are in the school, in my library, and at the Club. Perhaps I ought to say that I have one other pleasure—it is walking by myself in the woods. This nick-name has spread from the children to the grown folks; and when, as is often the case, I overhear myself called Tom, Dick and Harry, why, sir, it really cheers me up; it gives me a sense of human fellowship."

These words fell from his lips with a quiet, tremulous earnestness that won my heart. He had begun to speak, making long pauses between his words; but as he lost himself in what he was saying, he spoke with as much promptness as was compatible with so much thoughtfulness and sincerity. A sweet, almost a pathetic, beauty clothed with its own life, for a moment, those dry, pinched features. I found that I was not mistaken in conjecturing the presence of a rare, choice soul lying in ambush behind that forbidding and insignificant face. I was so delighted with the delicacy and ingenuity of his theory of nick-names, that I resolved to draw him out into a further discussion.

"Yes," I replied, "there's truth in what you say. Nick-names, after all, are our real names; they are the outgrowths of our characters. The names given to us in infancy are not outgrowths of character; they do not express an individuality; they were given to us before we had any individuality; they were given to us from accident, from caprice, from vanity or avarice. Did you ever hear the story of the poor English woman who lisped, and who, in taking her baby to the priest to have her christened, tried to tell him that she wanted the child named Lucy?"

"No, sir, I think not."

"'Well,' the priest said sternly, 'what is this child to be named?' 'Luthy, thir.' 'Lucifer? What a diabolical name. I'll not christen a child by the Devil's name. Call him John!' And so before the poor, terrified, lisping woman could explain the sexual impediment to the very excellent name of John, down went the holy drops, and the wretched girl, named John, was handed back to its disconsolate mother."

Upon this, Mr. Henry burst into a genuine and hearty laugh, and seemed to appreciate the ludicrous predicament of the poor mother and her child.

"Now, my point is this," I continued; "our baptismal names fit our characters just about as accurately as the name of John fitted that little child's sex. Unless a person has a nick-name, he goes through life nameless. A nick-name is the verdict which our acquaintance pass upon our characters."

"And what is more, sir," joined in Mr. Henry, "people don't trouble themselves to get up a nick-name for a man unless they decidedly love him or decidedly hate him. Now, I *know* the people at Brawnville don't hate me. So I take 'Tom, Dick and Harry' to be a sort of pet name in the mouth of the community, and though I never told them so, I feel inwardly pleased, I feel comforted, when I find I am spoken of so familiarly."

"What you say, Mr. Henry, reminds me of a sentence in one of Charles Lamb's letters about the death of Norris, the janitor of the Inner Temple, when Lamb was born. 'Old as I am waxing, I was still the child he first knew me. To the last, he called me Charley—I have none to call me Charley now!'"

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This last remark of mine had an unfortunate effect upon my new friend; it seemed to lock him up. Perhaps he was staggered to find how suddenly he had been drawn from his reserve, and was rebuking himself for his precipitate loquacity. His old manner returned. A bend in the road, a whirl, and his whole attention was again bestowed upon the horse. The sensibility, the thoughtful tenderness, stiffened out of his face. The New England tortoise, in a kind of remorse at having been betrayed to come out so far, drew his head once more into his shell—and I was left alone.

There was silence in the cutter for the space of a quarter of an hour. My reflections took this turn: If this odd genius were not so extremely odd a genius—if he were what Mr. A. Ward calls an "ornery cuss"—I would not be bothered with another attempt to draw him out of his shell. But as he is an extraordinary curiosity, a *rarissima avis*, I'll venture upon another experiment. I think I'll try it now.

"But, Mr. Henry, I mentioned that your name is not the only odd thing about Brawnville."

"Ugh!"

"I was struck with the oddness of an invitation to lecture to an Athletic Club—the Brawnville Athletic Club."

As I pronounced the last words, Mr. Henry gave a start as if I had communicated to him a galvanic charge; and without uttering a sound he turned his face squarely upon me, gave me an eager inquiring look, and as quickly reverted his gaze to the front. It was evident that the Club, of which he was the Secretary, was a subject which took hold of him. I was vastly amused at the unique way he had of manifesting an interest in this new topic of conversation, and felt encouraged to proceed.

"Of course you know, sir, that a lecturer finds his services called for by all sorts of societies, learned and unlearned, sacred and profane, by Lyceums and Libraries, by Mechanics' Institutes, by Colleges, by Young Men's Christian Associations, and by Young Men's Associations with the Christian left out; and I remember in England going down two or three times to a charming place, Henley on Thames (where, by the way, this new poet, Swinburne, lives), to lecture to a Chess Club—but this is the first time I ever had the honor of being invited to lecture to an Athletic Club."

Again the words with which I closed the sentence gave him a start; and again he gave me that swift, eager, searching look.

"The fact is, Mr. Henry, being myself a professed Don Quixote on the subject of athleticism, I was infinitely pleased to learn that here in this secluded little New England town, there was enough interest on that subject to form a bond of union for a vital and energetic association, such as I understand yours to be."

He slowly turned his eyes upon me, and slowly perused my face; but no audible word escaped from him.

"It seems to me, Mr. Henry, that the great peril of the American people in the near future is not from the unslaughtered serpent of Secession, or from the drunkard at the White House, or from the dotard at the Foreign Office, or from Mormonism or Imperialism or Irishism, or from any other ism except the Diabolism of Dyspepsia, the Anarchism of o'er-wearied Nerves and Lungs. Why, sir, we have no enemy in America, or out of America, that can break our skulls; but we have one in our very midst that is quite able to soften our brains. There's a great deal of clatter in the Old World about our being on the verge of national bankruptcy; but, for my part, I do not feel half so anxious about the national bank as I do about the national belly. I do not know whether our currency be inflated too much; but I am very sure that our lungs are inflated too little. In my opinion, Mr. Henry, it is not of so much consequence to us how many wives any old Mormon blackguard has, as it is how many blue devils our statesmen have, and our preachers, our editors, our lecturers. Since I have got back home I have heard a great deal of cant about encouraging domestic manufactures; well, there is one description of domestic manufacture that it is high time we should begin to discourage, and that is the domestic manufacture of saleratus and whisky, of pie-crust and sweetmeats and hot soda-biscuit."

While I was proceeding in this strain, my companion kept moving in his seat, quickly turning his eyes upon me, and as quickly turning them away, but not offering to speak. I paused to give him a chance. After three or four minutes of silence, as he did not seem inclined to pick up the thread of discourse I picked it up myself.

"Why, Mr. Henry, what this dear *old* New England needs at present is not more churches but more athletic clubs. If every village that has two churches now, would just put both congregations together, to worship in one building, and to practice gymnastics in the other, there would be more godliness in this land, and more manliness, too; the fashionable theology would be shamed out of its disgraceful Paganisms; and

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the diseased rubbish which was shot upon Christianity by forlorn old monks who had the stomach-ache would be carted off by the scavenger; and men and women would be more prayerful and more charitable and more virtuous, because they would have a more regular supply of the gastric fluids, and less torpidity in the liver, and fewer obstructions in the intestinal canal. Why, sir, it strikes me as I go about the country that the particular kind of grace that we just now need to grow in is the grace of a vigorous circulation and a sound digestion."

I now discovered that my reticent friend was getting ready to express himself. I wrapped the buffalo robe a little more closely around me and settled down into a posture of expectancy.

He turned toward me grimly, and turned away, several times, and at last broke silence:

"Mr. T——, if you would not think me too forward, being a stranger to you, I should like to shake hands with you on those sentiments."

"Certainly, Mr. Henry; by all means; those are my sentiments and this is my fist."

And there, on that lonely road, amid the lawless masses of driven snow, the horse all the time plunging forward as if to prove himself a first class Muscular Christian and a loyal member of the Brawnville Athletic Club, Mr. Henry and I gave to each the right hand of fellowship, as a symbol and a pledge of fraternity in the glorious communion of those who believe that all God's laws are sacred, and that all God's workmanship is good. We both laughed heartily as we shook hands, conscious of the romantic absurdity of such an act on the part of two men muffled up in furs and robes, riding side by side in a cutter on a cold January day.

In a moment, Mr. Henry, with a manner bright but subdued, said:

"I was afraid, sir, awhile ago that you would think me too bold and familiar in talking to you so much on so short an acquaintance; but really, sir, what you have just said has precisely touched my own pet mania. You must excuse me for having talked so much as I did a few minutes ago."

And thus, as it appeared, all that ice-clad reserve, all that frigorific New England numbness of manner, were not the result of any selfish whimsicality or sullenness, but the outward crust in which the fine modesty of a soul nurtured in these rural solitudes had protected itself. I hastened to atone for the injustice which even in thought I had done to him, and earnestly told him that so far was he from having talked too much that he had not talked enough; that I had been anxious to draw him into conversation, and to compare views with him, and especially to hear all about the Brawnville Athletic Club—how long it had been in existence, on what principles it was conducted, how many members it had, what difficulties it had encountered, what victories gained.

My new friend now talked freely; as, indeed, all men do, if you will but touch the key which strikes the chord, vibrating from the heart to the tongue. We had landed on a platform of cordial sympathy. With no longer any trammels of diffidence, with no more hesitation, with a natural fervor of enthusiasm, in a stream of really noble talk, he began to give me a full account of the Club.

Before we reached the end of his charming narrative, however, we got to the end of our journey; for in the midst of a most comical description which he was giving me of the various prejudices among the people at Brawnville, with which the Club had to contend, we reached the brow of the hill beneath which reposed, like some huge winter bird in its protected nest, the pretty village we had been talking of.

Recognizing my delighted surprise, Mr. Henry instantly reined in the four-footed athlete that had borne us there so swiftly, and gave me time to take in a full view of the tranquil scene. It was between two and three o'clock in the afternoon. The sun, approaching now its western couch, threw back upon the pretty village a radiant yet softened gaze—a gaze that was returned with many a happy smile from the two church steeples and from all the loftiest roofs of the peaceful town.

"I shall take you," said Mr. Henry, as the horse started down the hill, "to the house of our President, Judge Fairplay. He begs that you will be his guest during your stay in Brawnville. Perhaps after dinner you will walk over with the Judge to the Club House and inspect our Gymnasium and Library, and the other departments of the Club."

"Nothing would suit me better! But Mr. Henry, what you have told me about the Club is as interesting as a novel. When am I to have the rest?"

"Oh, at any time that suits your convenience!—but, I was just thinking of another thing. From the very inception of the Club, indeed from the time its formation began to be agitated among a few of us, I have kept for my own private satisfaction a complete diary of the undertaking. I have never yet shown it to any mortal. But I think I could let *you* see it."

"Do, by all means!"

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"Well, I'll bring it to you, by-and-by, at the Club House.

* * * * * * * * *

That night, after the lecture, being as usual too wakeful to go to bed, I insisted on Judge Fairplay and his family retiring at their usual hour, and leaving me alone in the parlor to the company of the great, crackling wood fire on the hearth and of the thick quarto volume of manuscript which Mr. Henry had put into my hands.

I had expected the book to quiet my thoughts and fit me for sleep; instead of which I found it so full of exciting facts, and of all manner of quaint, amusing things relating to health topics, that I grew wakeful instead of sleepy, and could not close the book till I had read it through. I resolved that the MINUTES OF THE BRAWNVILLE ATHLETIC CLUB should not be buried but printed; and the last distinct thought I had before gliding into the land of dreams was that of urging Mr. Henry to let me lay portions of the collection, in monthly installments, before the great family circle of men and women who, in all parts of this vast continent and far away over the sea, in our beloved Mother-land, are readers of THE HERALD OF HEALTH.

[TO BE CONTINUED.]

Boarding-Houses.

MRS. H. B. STOWE says, "Domestic service is all the while fitting a girl physically, mentally and morally, for her ultimate vocation and sphere—to be a happy wife and make a happy home. But factory work, shop work, and all employment of that sort, are in their nature *undomestic*, entailing the constant necessity of a boarding-house life, and of habits as different as possible from the quiet routine of home."

There is no doubt but this is true, but do we find it to be the prevailing feeling among the young women of the present day? Do we not find them choosing rather any other employment than this, when the time comes for them to earn their own living? Hence they leave a father's roof for a crowded boarding-house, without any supervision of matron or mother.

A young friend remarked to me not long since, "I am disgusted with boarding-house life. The proprietors only wish us to take our meals and lodge with them, instead of making for us the home we pay for; if we wish any pleasure we must go out for it. I do not wish to go to the theater or billiard rooms. I am a stranger in the city, and have few acquaintance. I do not wish to go to any place that my mother would object to. Where can I go? There are no parlors where we can meet for a little sport or innocent amusement among ourselves, but what up comes the landlady or her husband to tell us they can not have so much noise, and that if we want to have games or plays we must go out of the house. If we sing we are disturbing them, if we laugh, or do any thing except read or converse in the most approved style, we are converting the house into a mad-house. There are several fine singers and musicians boarding here, and I hear many say they ought to have a chance to play on the piano and sing in the parlor, but the piano is always locked and the key in the landlady's pocket; so what is one to do?" I could find no satisfactory answer, and could not wonder at his dislike to boarding-houses generally.

The universal element of our natures, this desire for society and excitement, requires a deeper investigation and a more careful regulation than has hitherto been given to it. I think there is much of the sin of the world chargeable to boarding-house keepers. They exert no good influence over the young men who go from the country to seek their fortunes in the city of sin and crime. They seem to treat with contempt the fact that those boys have left home, with all its endearments and sweet pleasures, and are now afloat upon the wide, wide world. Why do they not introduce amusements and make their houses substitutes for the houses they have left, thus keeping them at home nights? Instead of that, they make themselves and their houses disagreeable, thus driving those inexperienced boys out into the street, to billiard saloons, to gambling hells, and to other dens a thousand times worse. I fear that upon the souls of boarding-house keepers will rest much of the crime we see daily about us.

There are, however, some noble exceptions to the general rule; among these the "Water-Cures," or rather "Hygeian Homes," stand pre-eminent. Those who place themselves under their care may rest assured of (all that) personal kindness and deep interest so refreshing to the stranger's heart. They unceasingly endeavor to promote the welfare of all, physically, mentally and morally; making their houses places of pleasure, of pure amusement, of high morality, of social intercourse, and of virtue. They may not see the result of all this now, but leave it with Him who has left them this encouraging assurance, "Inasmuch as ye have done it unto one of these, ye do it unto me."

HELEN MAR.

MADISON, 1867.

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Adulteration and its Remedy.

BY A. L WOOD, M. D.

THERE is scarcely an article used as food or drink which passes through any process or change from its natural state without being adulterated and made to appear what it is not. Occasionally the adulterating agent is as harmless as the substance adulterated, but generally it is the reverse, some of the most injurious and poisonous materials being freely used. The following extract from an article in The N. Y. Tribune, entitled "Death in the Pot," shows up merely a single feature of this subject, which in its extent, interests almost every civilized human being, for few there are whose health is not injured more or less, if their lives are not materially shortened, by the use of articles rendered poisonous by adulteration:

"Those who in spite of the Levitical law or the wisdom of Mohammed, will persist in eating lard, will be pained to hear that by a process peculiarly nasty—we beg pardon, but in Webster's biggest dictionary there is no word so proper to use—lame hogs, sick hogs, unwashed hogs, whole hogs, with hogs found dead in the street, are thrown undressed and uncleaned into a boiler, and the steam let on. The component parts of the hog are thus severed, the solid parts sink, the lard is drawn off and sent to market as a beautiful steam-refined article. What is then done with it is known only to the initiated. There are those who believe that it suffers another change into that mysterious and exasperating grease known as "boarding-house butter," which, spread upon a hot and hideous abomination called bread, made from that kind of flour of which we have recently spoken, and floated down into the human interior by pure Java coffee made of beans or something worse, alleviated by blue milk from the carts, and tempered by sanded sugar, has a tendency to produce that state of the physical system known as dyspepsia, and which we are sure not seldom ends in strings, and strychnia, and justifiable *felo-de-se*. In such case, the ingenious extractor of the essence of pig in Cincinnati may be regarded in a strict moral sense as a murderer; but there is a crafty way of taking off people of which the gentle grand juries never take cognizance."

The extent to which this cheating and adulteration is carried on is truly astonishing. Much of the meat that is sold in the market is from diseased animals and it is often impossible to distinguish the good from the bad. Flour is adulterated in a great variety of ways, especially the fine and white kinds which are most generally sought after, such substances as alum, carbonate and sulphate of lime, soapstone, white clay and bone dust, being freely used. Damaged flour is frequently used and injurious mineral substances added to conceal the fraud and increase its whiteness. Some of the most poisonous mineral substances including arsenite of copper are used in the preparation of good (?) green tea from a poor kind of black tea, which in its turn may not have a particle of the tea plant in its composition, to such an extent is cheating in the tea trade carried on in the "Flowery Kingdom." The articles used in the adulteration of coffee and sugar are less injurious than those mentioned above, but not so those employed in the fabrication of confectionery, some of the most virulent mineral poisons being used in coloring it. Lead, copper, logwood and other dye-stuffs; burnt sugar, alum, acetate of lead, potash, cayenne, the lye of ashes, sulphuric acid and other similar articles are used in the manufacture of wines, liquors, etc. And thus it is in the manufacture of every preparation used as food or drink where the ingenuity of unscrupulous men has been able to devise a way of pandering to their cupidity. That such a state of things should exist is truly deplorable, but it is highly important that it should be known that it may be carefully guarded against.

The remedy consists in purchasing and using only such articles as have not passed through any artificial process or preparation from the natural state, except in cases were they are *known* to be free from adulteration. Happily, such a course is the most conducive to health, happiness and longevity. Those substances which suffer the most from adulteration are the very ones which should be wholly abstained from—as tea, coffee, liquors, tobacco, spices, pickles, fine flour, confectionery, sweatmeats, etc., while those which are best adapted for supplying the wants of man—as fruits, grains and vegetables—are always to be obtained in their natural state, from which they can be prepared for the table. The greatest difficulty occurs in the home preparation of the different kinds of grain, but this can be readily obviated by the use of a simple hand-mill, which will easily grind for family use a sufficient amount of any kind of grain in any required manner.

IT is said that a person fond of fruit rarely becomes a hard drinker. The two tastes are antagonistic. The culture of good fruit ought to go hand in hand with Temperance.

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Man Capable of Higher Developments.

BY ELIZA R. SNOW.

Man's tide of existence is fearfully chang'd—
From God and from nature how widely estrang'd!
Vice, dandled by custom, mocks nature's designs,
And existence is lessen'd where virtue declines.

We wake into being—how helpless at birth!
How short, at the longest, our visit on earth!
Too short to develop (we merely begin)
The germ of the Deity planted within.

As a father transmits from the father to son,
So God, our Creator, our Father has done;
There's no attribute God, in his glorified form,
Possesses, but man, too, inherits the germ.

Though frail and imperfect, unlearn'd and unwise
We're endow'd with capacities needful to rise
From our embryo state, onward, upward!—at length
To a fullness of knowledge, of wisdom and strength.

Man becomes his own agent, with freedom to choose,
With pow'r to accept and with pow'r to refuse;
With a future before him, the sequel of life,
To which this is a preface with consequence rife.

He may learn how to strengthen this life's feeble chain,
And redeem the longevity man should obtain—
Develop capacity, greatness and worth,
By improving himself and improving the earth.

He should squander no talents, no health and no time;
All, all is important—age, manhood and prime.
As we sow we shall reap, what we earn we'll receive—
We'll be judged by our works, not by what we believe.

We now lay the foundations for what we shall be,
For life's current extends to Eternity's sea;
Whatever ennobles, debases, refines,
Around our hereafter an impress entwines.

We're the offspring of God; shall we stoop to degrade
The form which at first in his image was made?
To honor our beings and callings, while here,
Secures an admission to life's higher sphere.

In the likeness of Deity gracefully form'd,
With his own noble attributes richly adorn'd;
For a grand immortality man is design'd—
Perfected in body, perfected in mind!

GREAT SALT LAKE CITY, *February*, 1867.

The Physiological Anatomy, Physiology and Pathology of Man.

BY RUFUS KING BROWNE, M. D.,

PROFESSOR OF EXPERIMENTAL PHYSIOLOGY AND MICROSCOPIC ANATOMY IN THE NEW YORK COLLEGE OF DENTISTRY; FORMERLY PROFESSOR OF EXPERIMENTAL PHYSIOLOGY AND MICROSCOPY IN THE NEW YORK MEDICAL COLLEGE.

NUMBER I.

In the series of papers this begins we shall acquaint the reader, first, with the physiological elements which together form the organs; second, with the several tissues, formed from those elements, which constitute the completed structure of the organs; third, of the functions of these organs and tissues, the sum of which constitute the human body; and last, of the variations of those functions, which constitute the states called *disease*.

OF LIFE.

A definition of life is valueless, because, being verbal only, it can offer us no such understanding of it as we can arrive at from the observation of the phenomena of living bodies. Neither can analysis, either proximate or ultimate, present to the student any but a very faulty, if not wholly erroneous, notion of what that quality we call life is, for the reason that in the process itself we must destroy and extinguish the forms and combinations on which the phenomena of life wholly depend and proceed. Thus, either form of analysis *pre*-supposes the destruction of the very existence of the functions and the substances whose living character it presumes by that method, to ascertain. For the products of such analysis, or the separate simple substances it yields when the process is concluded, are simply the ex-organic remains, each of which, without exception, are totally devoid of the properties of the structural substances they before united or physiologically fused to form. Thus, to illustrate by analogy, if we analyze saltpeter into its two components which by uniting formed it, we find nitric acid (NO_5) and potash (KO). But neither of these products of decomposition possess the properties of the neutral salt; and if, continuing the process, we analyze either of these again into their simple elements, none of these have the property of the neutral salt. The very properties *that* possessed, and which constituted its individuality, have disappeared in the act of analysis.

We see, then, from this example, that what-

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ever number of scientific facts to store the mind this analysis may yield us, it literally leads us away from the precise appreciation of both the substances and their properties, regarded as an organic living mass, while it is precisely this latter alone we seek.

On the other hand, too, neither the simpler elements nor the tissues of the living organism the former coalesce to form are made up by the fortuitous concourse and uniting of the separate elements referred to, for these simpler elements of tissue are themselves the progeny of similar parent elements. They commence their formative career as living masses of matter. It is these which, by their multiplication and changes of form from step to step of their living progress, build up the body, and not the separate elements of analysis.

Thus, although by ultimate analysis organized bodies can be resolved into inorganic, simple elements, yet the most familiar acquaintance with the latter can give us no true insight into the incessant processes and changes which constitute the animation of the former. In pursuing our course, therefore, the only elements from which we can derive any correct understanding of the processes of life, of physiological events, are the anatomical elements or "units of organization," and not the elements of matter.

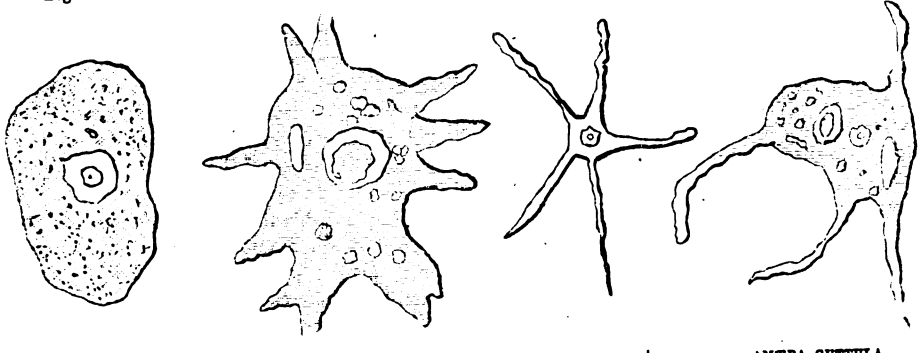
*Simple Organisms.**

In beings of a simple character there is apparently a uniformity of substance. The entire creature seems to consist of a small mass of clear, structureless material, which possesses in every part the power of moving in any direction, and which grows and multiplies by portions of it being from time to time detached.

There is also a time when even the highest organisms begin in such a simple, slimy, colorless, porous mass, and from these colorless, transparent masses every thing characteristic of a living body is formed, and as the matter of which all the tissues and substances peculiar to the organism are composed were once in this state, so these same masses exist at all periods of the life of even the most complex tissues and organisms.

PLATE 1.

Fig. 1. Fig. 2. Fig. 3. Fig. 4.



AMŒBA RADIOSA. AMŒBA GUTTULA.

In the instances of creatures of this simplest of physiological characters, the body does not consist of parts, each having a definite character; it is not built up of the hermetical junction of such parts, but is a living form, a simple shape of substance anatomically uniform throughout.

If we now, by means of the microscope, make a true or anatomical analysis of the living bodies of higher animals, consisting of a considerable variety of tissues artfully arranged, we ascertain anatomical elements which have received different names.

I. GRANULES. II. GLOBULES. III. FIBERS. IV. MEMBRANES.

1. Granules are minute particles, which exhibit no definite form or magnitude, and are of uniform consistence throughout. They are represented in Fig. 1, Plate 2.

2. Globules—small spherical or oval bodies, composed throughout of the same substance. A correct view of their character may be formed by examining a drop of milk under a magnify-

* Different forms of the simplest known organism, the Amœba—found in rain water—imbedding foreign matters, enfolded in its substance. Figs. 2 and 3, Pl. 1.

Amœba guttula and radiosa. Prolongations and eminences indicate changes of shape of animal in motion.

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ing power of two hundred diameters. They are represented in Fig. 2, Plate 2.

3. Fibers may appear as very fine, close lines, the breadth of which can not be measured, or as distinct cylindrical threads, or as flattened bands having a definite diameter. They may run side by side, or they may pursue a direction different from each other at any possible angle. They are represented in Fig. 3, Plate 2.

4. Membranes are a more or less thin film of substance, of greater or less extent or size, which sometimes appears perfectly uniform and even transparent, and in some situations has a granular or fibrous appearance. It is not really made up of distinct fibers separable one from another. A colorless bubble on water, if it were flat, would present a very similar appearance to simple membrane. Represented in Fig. 4, Plate 2.

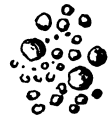
PLATE 2.

Fig. 1.



GRANULES.

Fig. 2.



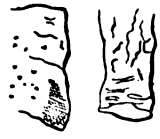
GLOBULES.

Fig. 3.



FIBERS.

Fig. 4.



MEMBRANES.

Now, if we make an anatomical analysis of the grown tissues of man, we should find that in their compound and diverse forms they consist of the more or less intimate conjunction and, in some situations, the coalition of these elements. But although these exist in great numbers or quantity in the mature structure, they are themselves products of the peculiar changes in form, shape, and even anatomical character of another element, which is both the germ of growth and the peculiar form of animal substance from which and by which all tissues are built up. Hence, all the different tissues possess in the growing, living state, disseminated at nearly equal distances through their substance, bound in close structural cohesion, little masses of matter which appear perfectly colorless, homogeneous, and of varying consistency or density, but sometimes almost diffluent.

In these little masses all the essential changes in the formation of the tissues takes place. Each mass is spherical or oval in form, and often exhibits imbedded in its substance one or more smaller masses (called nuclei), which are somewhat less transparent than the substance of their bed. In many cases in the nuclei are other smaller masses (nucleoli), and sometimes within these other still more minute masses may be found by the aid of very high magnifying power. Each of these little masses inclosing the others were once and still are called "cells" with nuclei and nucleoli.

These little masses are the builders of the tissue, and the peculiar physiological changes which take place in them constitute the act of forming the tissues. They do not disappear in the various changes of tissue formation, but remain to constitute, at minute intervals, in every part of the body, a great part of certain tissues, the formation of which into organs was wholly effected by them.

[TO BE CONTINUED.]

THE MOTHER'S INFLUENCE.—Children require affection. If they do not get it from their parents they will get it elsewhere. And would a parent trust a child's affection to strangers? Thus we see the importance of parental affection. Secure the love of your child, and you secure his attention; then you can mold him, but not otherwise. If the rude society of the street, of promiscuous children attract him—if here he finds his greatest pleasure, he will there find the means of his education; and this early education, the principles then implanted, will never be effaced. He will be good or bad, according to these early impressions; and he will be influenced by them; he must, from necessity; that inquisitive mind of his must gather, and grow on what it gathers. It is important, then, to see that he gathers from the right source. There is no source like that of the parental fount; no one will so take his interest to heart as the parent; and with this advantage the mother may mold her child as she wishes. There are exceptions; but the truth holds good in general. F. G.

A DOWN-EAST editor—a very crusty old bachelor—learns that professors of dancing in New York have recently introduced a new style of cotillion called the "Kiss Cotillion," the peculiar feature of which is that you kiss the lady as you swing the corners. The editor is a crusty sort of a person, who never dances, but says he would not mind waiving his objections to the amusement so far as to "swing the corners," now and then, in this new cotillion.

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Letters to Ladies.

BY MRS. R. B. GLEASON, M. D.

LADIES—In my former letter to you I trust that the lack of physical culture among our women was made apparent. Now for the reasons for this. First among the causes stands the lack of muscular development. And why this want? Simply because muscles like minds are developed by use, by activity. Women, with languid air and despondent tone, say, "We have no strength." And why? Because they have not worked and earned it. That is, they have not worked in the way which makes muscular tissue. American women, as a class, are not indolent, but very active, while much of their time is given to those pursuits which excite and exhaust the nervous system, but do not develop muscular power. Little as we think of our four hundred and fifty muscles, they really form the larger part of the human frame, save in those burdened with an excess of adipose tissue.

Now, if we permit these four hundred and fifty muscles to become weakened from want of appropriate exercise, we certainly can not keep good physical balance. By these we breathe, work, walk, talk, and can not even wink without their aid. Muscles are made up of fasciculi, or bundles of fibers, each bundle being composed of small fibers, while each fiber consists of small filaments, or threads, inclosed in a delicate sheath. These are supplied with artery, vein and nerve. But a better idea of the fine, firm filaments which make up our muscular system can be got by examining boiled beef or the leg of a fowl than from any description that can be given. Perhaps our reverence for this part of our organization would be so increased that we should take better care to cultivate it, if we comprehended its delicacy and its power, its simplicity and complexity, so wonderfully combined. Not only the wisdom of the Great Father, but his tenderness toward us is shown in this, as well as in every other part of our frame.

As a sex we are inclined to value muscular power too little, and are more ready to cultivate any other quality than this. Feebleness should be regarded as a "feminine failing" rather than a "fashionable accomplishment." Not that I would prove that a wife should be a match for her husband in physical power. It is an old proverb, that "Comparisons are odious;" so to me are all measurements of moral, mental or muscular strength between men and women. We may as well talk of the equality of hooks and eyes as the equality of the sexes. Each have their peculiar gifts and their need of help from the other.

Now, the trouble appears to be that our girls have been so busy growing good, agreeable and intelligent, that they have neglected the physical, the true foundation to make these graces a happiness to themselves and a help to others.

A woman should not be a choice casket of charming accomplishments, too frail to even show them off to advantage, and thus give more anxiety than amusement—more care than comfort to those allied to her.

We should not foster the feebleness of our infancy. The pride of the father and affection of the mother love to meet all of childhood's wants. Early love sees in its fair but frail one all needed perfection of body or of spirit. The petted bride is all the dearer for her helplessness. Manly strength, when warm with its first love, is on the alert to see that its idol is not fanned too roughly by the breezes of heaven; nevertheless it is true that the husband of many years asks that his companion may have health, strength, self-possession, steadiness of nerve and cheerfulness of spirit.

If my consultation-room told tales it could give many a case in confirmation of this. And not women only, but anxious husbands and fathers ask what can be done to save the loved ones from an invalid's life or an early death.

But the means I have to suggest are so simple that I fear you will turn away, not in a rage, as Naaman did from Elisha, when told to go wash in Jordan seven times to cure him of his leprosy, but rather in indifference, because the means will seem so unimportant.

If I could "bid you do some great thing," instead of seven small things, such as common sense and the necessities of life commend, I should hope to cure you all at once. First, remember that the muscles of our growing girls should be strengthened by exercise as well as their minds. Childish instinct prompts to this, and would complete the good work begun, were not little misses so early fettered by fancy fixings. Between the necessary care not to harm the dress, and the confinement induced by its style, there can be little happy, healthful sport, such as gives strength to the body and cheer to the spirit. The young of this generation suffer more from lack of exercise than those in the past. Their mode of dress is more elaborate and allows less freedom of motion; then, too, in earlier times growing girls, more than now, helped their mothers about house-work, which, within proper limits, is the best exercise ever

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given girlhood or womanhood. It not only develops the body, but cultivates energy, economic sense and self-reliance, which are indispensable to good health and true mental balance. Whoever works cheerfully at useful manual labor takes in knowledge at the very tips of the fingers—yes, good health and a good spirit at the same time.

Did not our Divine Teacher shed a sweet halo over all the economies of life, when he said to his disciples, "Gather up the fragments, that nothing be lost," and that, too, when by his word he fed the five thousand with five loaves and a few small fishes? Should not this incident, so sublime yet so simple, strengthen and cheer every woman in the exercise of domestic economy?

Did not the same Saviour from sin and sorrow say, "Let him that would be greatest be servant of all?" More than this, he illustrated his teachings by washing the feet of his disciples, when their walk in sandals, over a dry and dusty way, made it a need for cleanliness and comfort. After the word and works of our Lord, shall we turn with contempt from any labor which meets any human need? I speak thus at length on this point, not only because work is necessary for the right development of body and brain, but to be done easily and healthfully, it must be performed in the right spirit. A little story to illustrate: A mother, having been absent from home at the dinner-hour, came into the dining-hall just as the tables were being cleared by busy hands. Among the working ones was her little, dark-eyed daughter, in blue-checked pinafore, who hastened to gather up a suitable dinner for her mother, who was just then worn and weary with long watching by the bedside of a sick friend. After this the little girl went on gathering spoons, piling plates and picking up fragments as before. Soon she turned musingly to her mother and said, "I have been thinking of Ruth's sweet words to her mother: 'Entreat me not to leave thee, or 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 I will die, and there will I be buried.'" As she finished this recital she added: "Mother, that is just the way I feel toward you, and I wish I could be of service to you, as Ruth was to her mother. But you are not in need, as Naomi was, and if you were, I should have no place to go and glean as she did." But said the mother: "You have just gleaned me a good dinner from what was left by others. You are now gleaning bits of bread, potato and pudding to be saved for the poor, who have no harvest-field to go gleaning in like that of generous Boaz, and so come here for what we can save for them. Even the little work you may do is preparing you to be more useful to me in many ways by-and-by. Little girls learn many things from books; but much knowledge must be taken in through their small hands, if they ever get it. If they wish to grow to be good as Ruth, useful as Ruth, they must, with ready feet and ready fingers, do whatever needs to be done for the comfort of those around them. They will not have to glean sheaves of wheat or barley, but they will find gleaning as needful and as noble in every household—gleaning which will save a mother many a weary step and many an anxious thought."

This little incident suggests some sober thoughts in reference to the girls of these days. Some of them promise well, and some seem preparing for a useless, sickly, selfish life. Amid the sterile hills of New England girls must work and learn to *love* work. In many sections of our country the rich fields with their ample harvests make the family support so secure that even farmers' daughters are excused from all energetic work. As for the fairy fingers in villages and large towns, they have less stimulus to wholesome industry and more temptation to folly, so that the good sense of many a *good* mother can not arrest the tide of vanity in her gay and growing girls. Young misses bewildered with beaux, brilliant silks, bright lights and late hours, seem to feel often as if they could do without a mother and the mother without them.

Where is the young miss who runs the giddy rounds of fashionable life who will say, with sweet submission to the maternal voice, "All that thou sayest I will do," as did our ancient Ruth? Remember, Ruth lived in rude ages, was born and brought up in a heathen nation, but from her mother-in-law had learned to love the God of Israel. Many a daughter do we find, born in the best of families, baptized in the best of churches, taught in the best of schools, living under the light of that blessed Gospel which teaches that those who would be either good or great must serve; and yet, when her indulgent mother asks her aid in some needful domestic duty, turns away with a frown and a flaunt, saying, "I hate housework!" Truly, this ought not so to be. While we rejoice that girls now-a-days have both time and means for improving mind and manners beyond what their

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mothers possessed, still they should not be allowed to grow up mere birds of beauty, helpless and selfish. This will most surely be unless they are taught to work and made to work, and that, too, right early—almost as early as our little friend who, when scouring knives at seven years of age, was praised by a neighbor for skill in business, to which she quietly replied, "I was brought up to work!" That little girl is now grown to be a young lady, and her beneficent sunshine thrown over a large household, of which she has charge, makes every one feel that she was well brought up.

Now do not dream that I think women should grow to be good housekeepers and nothing else. I only mean that not the overseeing but the doing of housework is the best of gymnastics, as a basis for physical, mental and moral strength.

"Woman's sphere is home," if she has one that gives her support and useful work; if not, it is anywhere she can find the two combined. It may be on the battle-field, in the hospital, or by the sick in her own city or town; it may be as artist, clerk or copyist, or as cook, seamstress or laundress in some other home than her own. Woman's right to labor gives her the privilege of doing whatever needs to be done, provided she can do it well.

As the study of Latin is a good start for a good scholarship, so a good home-training in housework is the best preparation for success in any other occupation. Why, then, this dislike for domestic duty—this prejudice against labor? Whatever our heavenly Father has made necessary to be done there is dignity in doing, if we do it well. Who, then, should be ashamed to wash, bake or sweep, when the cleanliness and the comfort of this life which God has given us demand that it be well done and daily done.

A few years since a lawyer came to our Cure after his daughter, who had been with us for some months, and was greatly delighted to find her, in figure, in complexion and cheer, so much improved. Before leaving he asked me "to tell him what to do to keep her in so charming a condition." I said, "Have her exercise." "Well," he inquired, "how—on horseback?" To which I replied, "Riding is good, walking is better, and working is best." Just then a shadow passed over his genial face, and with a sigh he said, "My wife dislikes domestic work, and so has never brought up our daughters to do it." Then he added, "I know you are right. But while my clients heed my counsel, my house is not under my control." That woman may be competent to give and receive husbandly counsel, to keep a home and care for children, if they have this threefold blessing, let them be early trained to work. Should their ship in life be a single craft, they can sail all the more successfully if they have had this discipline.

But as you are all weary by this time of hearing of house-work, as well as doing it, we will turn to other means for muscular development. Dio Lewis's System of Light Gymnastics is more complete than any other yet devised, and better suited to the wants of women, whether weak or strong, sick or well. It is for girls what military drill is for boys in relation to health, strength and general bearing. These exercises are better than dancing to give ease, self-possession, and a ready use of all the muscles. They develop the chest, strengthen the muscles that support the spine, improve the gait, and so do for the whole body what dancing does for heel and toe. Beside this they improve the voice, strengthen the lungs, help digestion, correct constipation, warm the extremities, give tone to the muscles about the hips, etc.

Dancing, according to the present mode, gives but moderate exercise, and may be called rather a pleasant diversion, an easy cultivation of the graceful, than a means of muscular development. If it could be held within proper hours, and with good surroundings, it might have a place among social amusements. But as it is, we feel about dancing as Pollok said of theaters: "Many good and honest men maintained they might be turned to good account, and perhaps they might, but never were." So dancing might be a means of health; but between bad hours, bad dressing, bad eating and bad associates, it has been more harm than help to both body and spirit.

We are often asked about skating, and scarce know what to say. It gives both good air and good exercise, but it has many bad liabilities. Under its exhilaration our excitable girls, with little muscular tone, are apt to skate too long, and thus, when warm and weary, are liable to take cold from want of extra clothing or a warm place to rest. Then, aside from drowning, there are sundry serious accidents to which they are exposed. Since skating has come so much in vogue we have seen several cases of injured spines and sprained joints which will be slow of cure, and some are disabled for life. Walking, as an exercise, is by no means to be disregarded. Fresh air, change of scene, erect position, free inspiration, make it invaluable. No work, no exercise or amusement can take its place. To get the full benefit of walking one needs to be so clad as to give freedom to both the upper and

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lower extremities. But the dress question we must leave for some future letter. Horseback riding is good, especially for those with weak lungs, lazy livers, poor digestions, etc. Recently we have heard it recommended for spinal disease, and have read of a wonderful cure thereby. But it would seem, in this case, that the muscles which support the spinal column were simply debilitated. Hence the sitting erect and moderate exercise on horseback strengthened them.

We have known many seeming cases of spinal disease which all manner of appliances, such as setons, blisters, cupping and scarification, failed to cure while the patient kept close to bed, lounge or easy chair, that rapidly recovered under the discipline at a Water-cure without any of these helps, or rather hinderances.

For those who have become greatly enfeebled by disease or from lack of exercise, the Swedish Movements are an excellent aid. By this method the patient can have the circulation quickened and the muscles strengthened with little or no personal effort, the work being chiefly done by an attendant.

These varied aids are indeed valuable helps to meet the emergencies of invalidism; but can never alone develop genuine womanhood. Our preference for useful work as exercise is as strong as that of the toper for his favorite beverage when he said, "Water will do occasionally, but for a steady drink give me whisky." Yours for the work, but not for the whisky.

ELMIRA WATER CURE, 1867.

Revelations of a Retired Doctor.

BY THEODORE THORNTON, M. D.

AN AUTOGRAPHIC PRESCRIPT.

BY the time my readers get somewhat acquainted with me they will not be surprised that I have begun with a new word, or rather an old and obsolete one, which I have seen fit to put to a new use, to get rid of that practically lying word "preface"—that is, to indicate the opposite of postscript; for they will have learned that my whole life, or, at any rate, so much thereof as concerns the topics foreshadowed by my general heading, has been that of an innovator.

First, a word about my motives. After having spent much more than an average life-time in the medical profession, and at length retired from active practice, I feel that I am prepared to form a candid and unselfish estimate of the science and its practitioners, including myself—and to deal impartially with one's self is, perhaps, the most difficult of all human achievements.

In this state of mind I have consented to prepare some brief sketches for THE HERALD OF HEALTH under the above title. They will be personal in their bearings, and even egotistic at times—necessarily so from the nature of their topics—but still they will always aim at that sort of information calculated to make my readers wiser and better. But when I play the part of teacher I shall be careful to avoid the too common faults of old men—dogmatism and prosiness.

I will begin at that beginning which doctors are supposed to have as well as other men. I say "supposed," because it is a "mystery" about which the wisest of us are kept too long in utter ignorance, beyond what our squeamish and therefore reticent mammas see fit to tell us, which is nothing at all with sense in it. For my beginning, I remember to have been pointed to a hollow tree in a grove, not far from my real birth-spot, in which, I was gravely assured, the doctor had "found me, by purest accident, and brought me, when a wee bit of a baby, in his big-coat pocket, as a present to my mother"—from which tree a playmate subsequently told me his father had chopped a rabbit, and that I had been "sold.' My playmate found it pretty hard work to make me believe his version. But, when my reason finally assented, it bruised my bump of reverence not a little, and flattened it down, too, to be forced to the conclusion that my mother had told me a fib! And yet I found some consolation, in later years, in the fact that all the other urchins of my acquaintance had been sold by a similar story. I remember that, after I had obtained the forbidden fruit of physiological knowledge on the subject of my own origin, I had a hearty laugh at the expense of a younger sister of mine, whom I found hunting for babies among the hollow trees, in full belief of the maternal version of my genesis, which, seeing that it took well, had been attributed, in turn, to other new-comers!

But, to be serious, I was born in the "Old Dominion." My father was one of the magistrates of his county. (What else he was will appear hereafter.) As a "squire" he was expected to have at least some acquaintance with the Constitution of the United States and of his own State, and also with "Stroud's Virginia Code." He put law-books into my hands at a very early age. This was well calculated to repel me from rather than to attract me to books in general. His library was very meager as to general literature, and especially so as to books

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calculated to interest the mind of a boy. Now and then I would get hold of, and read with all the more satisfaction because it was prohibited, some volume of fiction, such as Blue Beard or Baron Munchausen, each of which cost me several nights' sleep. How I became possessed of the first named I am unable to state. The latter was promised to me one winter by a cobbler, who used to come round once or twice a year to make and mend shoes for the family, and he brought it, sure enough, when he next came with his kit of tools on his back, the opening of which—always an event of profound interest to me—I watched, with all the intentness that a cat does a mouse-hole or a dog a rabbit's burrow, to see the precious book fall out upon his bench, along with his lap-stone, and his knee-strap—of the last named of which I always had a secret dread, because I used to hear him threaten to "take the strap" to the less tolerated slave children.

As my father had intended me for the law, the writings of the veracious Baron were, after all, not inappropriate, as a preparation for the seemingly legitimate work of insisting that black is white and a thief a model for honesty, or standing ready to prove it by a score of unimpeachable witnesses, and the like things which lawyers are expected to do to earn their fees and give proof of their being "smart fellows."

To prepare me for the profession chosen for me—not because of a known or supposed fitness for it, according to the tests of Phrenology, but because, as an only son, my considerate sire thought that was the line of action in which I would be most sure to reflect honor back upon his own name—to prepare me for it, I was sent to schools and academies not a few, and finally to college. But, more strictly told, I went to college of my own accord, my father having died meanwhile and left me the wherewithal to pay for my tuition.

I.

HOW I CAME TO BE A DOCTOR.

The time at length arrived when it became necessary to determine whether I would take the profession my father had selected for me or some other. My own inclination was to carry out my father's wish, but I was not permitted to do so.

"Not permitted to do so!" I think I hear some reader exclaim; "who was there to prevent you?"

I will tell you. I had fallen in love with a cousin. She was quite as old as myself, and the possessor of a large share of will-power. She had the control of me completely; and what made her management of me all the more easy, she impressed me with the belief that she was the most unselfish of feminine mortals that ever swayed a lover's destiny, and that all she said or did was the prompting of disinterested love for me. She took it into her head that I hadn't the mental traits befitting a lawyer. She admitted that I had ability in my way; but, without telling me to my face that I was weak in the upper story or 'a down-right simpleton, she gave me to understand, in love's winning way, that I didn't begin to come up to her ideal of a lawyer. She furthermore argued that there was too much temptation to sin in a lawyer's career, and she reminded me that I was now a professor of religion and a member of the church. (She had already dictated my church, declaring her purpose to join the same one herself, which she didn't do, by-the-way.) Her idea seemed to correspond, in this respect, to that of most people—namely, that doctors are honest men, while lawyers are rogues, from the necessity of the case, and therefore sinners whose chances for heaven are very slim. Her opinion as to the relative mental requirements of the two professions under consideration was also in accord with that of most parents; for, if there is a son in the family who is considered particularly "smart," he is "picked out" generally for a lawyer, while the numskull is set down for a doctor, because it is thought "he will do for *that*."

Thus we see that he whose professional concern will be, most of the time, with property only, is supposed to require a better intellect, and in fact better culture, than he who has, mainly, to do with human life!

But, to conclude my autographic love-story, I took the advice of my lady-love, and selected a preceptor, and entered upon the study, in his office, of the "mysteries of the recondite and venerated science of medicine." Stimulated by the approving letters which I received at frequent intervals from my affianced, my first year of study passed very happily, so far as my office experience was concerned, even love running smoothly with me and mine. And yet I do not wish to be understood as finding no truth in the assertion of the great dramatic delineator of human frailties, which tells us that

"The course of true love never did run smooth."

The sequel will show that I had reason, in subsequent life, to admit the force of his line.

II.

HOW I LEARNED TO BLEED.

Near the village in which I was pursuing my

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studies there was a public work in progress, which employed a large number of the sons of Erin. This afforded me an unusually early opportunity to try my skill at practice, such an one as seldom falls to the lot of country students, to whom, in the absence of those hospitals accessible to the city student, the opportunities for clinical training are, in most cases, very rare from the nature of things. My preceptor, being somewhat advanced in life, while not very firm in health, and withal rather aristocratic in his tastes, was inclined to give me full swing among the "canalers," as the aforesaid laborers were called, because of the nature of their work.

Mostly, country students are expected to learn that indispensable art to an old-school doctor, phlebotomy, on an Irish potato. It occurred to me that as Irishmen were as plenty around me as the vegetable wearing the history-contradicting affix of their nationality, I might as well practice on them as their "praties."

With my mind thus made up on the question of the *quo modo* of my bleeding experiments, I was anxious to put my project through.

I did not have to wait long for a subject, especially as I was not inclined by a knowledge of conditions to be very discriminating in selecting him. It was the season of the year when bilious fevers were prevalent in that field of practice.

Very soon I was sent with some calomel to a young canaler, who, I was given to understand by the doctor, was laboring under an attack of remittent fever. As I reported upon the case "quite intelligently," as my preceptor complimentingly said, he suggested that I had as well take charge of the same, for he thought I could get along with it pretty well under his general direction; but if any thing unusual occurred in the case to let him know of it, and he would accompany me as consulting physician.

Much flattered by this category, I went, next day, to pay my second visit to the patient. Having no experimental knowledge of the "run" of diseases, or any book knowledge as yet, in fact, and finding the fever just as high as the day before, I tied up his left arm as I had seen the doctor do it, and opened a vein with my spring-lancet. The blood gave a single spirt and instantly ceased to flow. The patient, who was seated in a chair, reeled for a moment, and then pitched forward upon the floor of his shanty, and struggled as if in a regular convulsion! Retaining my presence of mind as well as I could, I tried to tie up the vein, but he struggled so incessantly that I had great difficulty in accomplishing it, unused to the work a I was. By the time I succeeded, the patient' eyes resumed more of their natural expressio —they had been very much averted and con torted—and he looked fiercely at me and de manded to know if I was "afther blooding hi to death;" that I had "a'most kilt him, sure!"

I assured him that it was all right; and I confess that I felt encouraged by one of the symptoms now presented—a profuse perspiration, which the shock of the bleeding had caused to start out, undoubtedly — because I knew enough from what I had read, little as it was to see that that was the end of that paroxysm of fever, at any rate.

Next day, I confess, I returned to the shanty with not a little apprehension for the worst. I would not have been at all surprised had I found him dead, for I had not yet come to know that an Irishman is not so easily "kilt," and that, in fact, he seems, like the cat, to have nine lives to an American's one. But imagine my surprise at finding him clear of fever and needing no further treatment. When, on my return to the office, my preceptor inquired, "How is O'Flaherty getting along?" I answered, "First rate —he is well!"

"Impossible!" rejoined the doctor, with a knowing voice and an ominous shake of his head; "he has only had the fever three or four days, and it always runs at least seven, often fourteen, and in many patients even twenty-one days!"

The doctor was not satisfied till he saw for himself, when he pronounced him "all right, sure enough!"

Then I ventured to tell him what I had done. On my doing so, he again shook his head, but not so ominously as before, and said: "You violated all the accepted rules of practice, run a great risk of killing your patient, and did decidedly wrong to bleed so late in the attack, and after purging so freely with the calomel and jalap! Had the patient not been a person in the prime of life, and possessed of an unusual fund of vitality, you would have killed him, sir!"

I did not dare to contradict my venerable preceptor, and therefore I kept mum. But, nevertheless, I thought the bleeding had cured the case by accident. I now suspect that Nature did it in spite of both the calomel and the lancet, and a doctor-and-a-half to boot. I say "suspect," because, with all my later prejudices against the old "sheet-anchor of the profession," as Dr. P., the Professor of Practice in my Alma Mater, used to call the lancet—in which he be

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lieved next to his brandy-bottle—I am not sure that the powerful impression made by the spring lancet, aided by its startling "click," produced upon the nervous system of poor O'Flaherty, and through it upon the circulation of the blood, did not, after all, serve to cut short his fever—break some of the links of that "morbid concatenation of symptoms" which Professor D. used to descant upon from the chair of Therapeutics, to the exciting of my serious apprehension that something else was in danger of sustaining a "break," and that was his eloquent jaws!

Of these jaw-breaking technical phrases, too generally indulged in by our "learned profession," whether when teaching (?) students or profoundly impressing patients, I shall have occasion to say some plain things in future chapters.

[TO BE CONTINUED.]

A Discourse to Medical Students.

BY REV. HENRY WARD BEECHER.

DELIVERED BEFORE THE NEW YORK MEDICAL STUDENTS' CHRISTIAN UNION, SUNDAY EVENING, FEB. 3, 1867, AT PLYMOUTH CHURCH, BROOKLYN.

"AND Jesus went about all Galilee, teaching in their synagogues, and preaching the Gospel of the kingdom, and healing all manner of sickness and all manner of disease among the people."—MATT. iv. 23.

IT is hardly proper to say that our Saviour was a physician, as well as a divine and moral teacher; but it would be strictly true, should we say that he deemed the healing of human sickness to be a preparation for, and an important accompaniment of, the work of moral teaching. They were intimately associated, and often blended, in the same operation. And you will not forget the commissions which he gave to his disciples at various times. When he gathered the twelve, and sent them forth, he did not send them forth, you will recollect it is recorded in Matthew, simply to preach.

"When he had called unto him his twelve disciples, he gave them power against unclean spirits, to cast them out, and to heal all manner of sickness and all manner of disease."

It is not a little remarkable, that in recording this commission the moral part was left out, and simply the healing part was recorded. The seventy, you will recollect, were sent forth afterward.

"After these things the Lord appointed other seventy, also, and sent them two and two before his face into every city and place, whither he himself would come. Therefore said he unto them, The harvest truly is great, but the laborers are few; pray ye, therefore, the Lord of the harvest that he would send forth laborers into his harvest. Go your ways; behold, I send you forth as lambs among wolves." "Into whatever city ye enter, and they receive you, eat such things as are set before you; and heal the sick that are therein, and say unto them, The kingdom of God is come nigh unto you."

The preaching of the name, the presence, the authority and the power of God's kingdom was in intimate association, in their commission, with the healing of sicknesses.

Again, in the final commission, which was given at his ascension to his disciples, you will see that the same things are blended, as recorded in the sixteenth chapter of Mark's Gospel, from the fifteenth verse onward.

"And he said unto them, Go ye into all the world and preach the Gospel to every creature. He that believeth and is baptized shall be saved, and he that believeth not shall be damned. And these signs shall follow them that believe; in my name shall they cast out devils; they shall speak with new tongues; they shall take up serpents; and if they drink any deadly thing, it shall not hurt them; they shall lay hands on the sick, and they shall recover."

Now, was it an accident that when our Master sent forth his twelve disciples he made the healing of sickness co-equal with the preaching of moral truth? When, again, he sent forth seventy other disciples, and again joined these two functions, was it an accident? And was it an accident when, having fulfilled these two functions on earth, and he was about to be withdrawn from visible presence, he still again united these seemingly different and separable duties?

When John, the forerunner, was imprisoned, hearing various rumors he sent to inquire of the Master who he was; and Christ must needs authenticate himself to John. Listen to the words in which he does it, as recorded in the seventh chapter of Luke's Gospel:

"When the men were come unto him, they said: John the Baptist hath sent us unto thee, saying, Art thou he that should come? or look we for another? And in that same hour he cured many of their infirmities and plagues, and

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of evil spirits; and unto many that were blind he gave sight. Then Jesus answering said unto them, Go your way, and tell John what things ye have seen and heard; how that the blind see, the lame walk, the lepers are cleansed, the deaf hear, the dead are raised, to the poor the Gospel is preached."

He undoubtedly reserved the climax for the last. Preaching the Gospel to the poor was undoubtedly his highest mission; but that was intimately associated with healing the sick; and he refers to the latter as giving token of the fulfillment of the prophecies concerning him, as well as to the former.

He refers to this fact of healing as evidence of the fulfillment of those prophecies more explicitly in the eighth of Matthew:

"When the event was come, they brought unto him many that were possessed with devils; and he cast out the spirits with his word, and healed all that were sick: that it might be fulfilled which was spoken by Esaias the Prophet, saying, Himself took our infirmities and bare our sicknesses."

Have you ever given attention to the vast amount of medical attendance which our Lord gave to the poor of Palestine during his short ministry?

I shall not recite those instances which are drawn out with some pictorial fullness, since they will occur to you. The case of Peter's wife's mother, who was sick of a fever; the case of the woman with an issue of blood; the case of the blind men; the case of the demoniacs; the case of the lepers; the case of the paralytics; the case of the men that were let down through the roof by cords; the case of the man with a withered hand—these give a vivid idea of the merciful power of Christ; but they do not give you, necessarily, a conception of the exceeding fruitfulness of his life, and of the enormous number of cures which he wrought. Let me read you a few passages where they are gathered together:

"And at even, when the sun did set, all they that had any sick, with divers diseases, brought unto him all that were diseased, and them that were possessed of devils [and all the city was gathered together at the door]; and he laid his hands on every one of them that were sick of divers diseases and healed them; and he cast out the spirits with his word, and healed all that were sick. That it might be fulfilled which was spoken by Esaias the Prophet, saying, Himself took our infirmities and bare our sicknesses."

On another occasion,

"Jesus went about all Galilee, teaching in their synagogues, and preaching the Gospel of the kingdom, and healing all manner of sickness and all manner of disease among the people. And his fame went throughout Syria, and they brought unto him all sick people that were taken with divers diseases and torments and those which were possessed with devils, and those which were lunatic, and those that had the palsy, and he healed them. And there followed him great multitudes of people from Galilee, and from Decapolis, and from Jerusalem, and from Judea, and from beyond Jordan."

Was there ever such a medical practice?

According to another record:

"He spake to his disciples that a small ship should wait on him, because of the multitude, lest they should throng him. For he had healed many; insomuch that they pressed upon him for to touch him, as many as had plagues, and he healed them all."

Again:

"The company of his disciples, and a great multitude of people, out of all Judea and Jerusalem, and from the sea-coast of Tyre and Sidon, came to hear him, and to be healed of their diseases; and they that were vexed with unclean spirits; and they were healed. And the whole multitude sought to touch him, for there went virtue out of him, and healed them all."

Elsewhere it is said:

"And Jesus went about all the cities and villages, teaching in their synagogues, and preaching the Gospel of the kingdom, and healing every sickness and every disease among the people. But when he saw the multitudes, he was moved with compassion on them, because they fainted, and were scattered abroad, as sheep having no shepherd."

Elsewhere we read:

"And when they had passed over, they came into the land of Gennesaret, and drew to the shore. And when they were come out of the ship, straightway they knew him. And when the men of that place had knowledge of him they sent out unto all that country round about, and ran through that whole region round about, and began to carry about in beds those that were sick, where they heard he was; and brought unto him all that were diseased. And whithersoever

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soever he entered into villages, or cities, or country, they laid the sick in the streets, and besought him, that they might touch if it were but the border, the hem, of his garment; and as many as touched were made perfectly whole."

A single other record:

"And he went up into a mountain, and sat down there, and great multitudes came unto him, having with them those that were lame, blind, dumb, maimed, and many others, and cast them down at Jesus' feet; and he healed them, insomuch that the multitude wondered, when they saw the dumb to speak, the maimed to be whole, the lame to walk, and the blind to see; and they glorified the God of Israel."

Would it be extravagant to say that never was there so great a physician on earth as the Lord Jesus Christ? It is true that the medicaments which he used and those which the medical profession used were different; but that matters not. The peculiar function of medicine is to heal; and whatever may be the medicine, if the healing takes place, that suffices. And in view of these facts, is it extravagant to say that no other profession, aside from the Christian ministry itself, is so identified with moral and Christian influences as that of the healing art? Can you find for artist, or orator, or lawyer, or any other profession, aside from the direct teaching profession, any such recognition, and honorable recognition, in Scripture, as this, which it receives in its great type, Christ? Nor will it be a violent inference should I affirm that, as on the one side the teaching of religious truth may be closely united to the healing art, so, on the other hand, the healing art itself has as important moral duties and opportunities. I will not say that a man may not be a skillful physician without being a Christian; but it is just and fair to say that if a skillful physician is a Christian gentleman, he can well nigh double the influence and usefulness which he would have as a mere physician. It is right to say that medical skill and moral wisdom are co-operative. They were joined in Christ, and they should be joined in the physician.

In olden times men gloried in power. Manliness was associated with some degree of hardness. It was seldom merciful. But as religion, by developing the higher elements of human nature, has made the office of comforting more and more honorable, our modern heroes will be found among the heroes of mercy chiefly.

Now, the physician is peculiarly an instrument and agent of consolation, as well as of cure. He is brought into contact with those phases of human society which require sympathy and moral relief as well as technical aid. He sees more than any other man of the poorer classes of society. The very bottom of human life, where poverty revels; where broken down, discouraged men hide; where the humble poor are wedged in and bedded beyond extrication in misfortune; where criminals at last, having spent the fiery fervor of crime, come and lie suffering and helpless in disgrace; where vice fills its victims with torment—the bottom of society, much more even than the bottom of the ocean, is covered with foundered ships, with shattered wealth, with lost treasure, with overwhelmed men, helpless, and dying, and dead.

Among these, by the necessity of his vocation, the benevolent physician is called to move. And where, if not here, may a man who *believes* in religion find a field for labor and subjects for consolation? From what other source, so naturally, and so nobly, may there come the consolations of a true faith? Truth is no longer, under such circumstances, a matter of speculation. It is like a styptic to a bleeding wound; it is like stimulants to a failing pulse. And oftentimes the remedies that are most needed, and that come nearest to the seat of disease, are moral remedies.

No one so much as the physician sees the very interior of the family. At one time or another every family has its dark hours, when sorrow brings its gloom, as the night its darkness. It is a child, whose little steps are feeling the way with faint footfall to the celestial gate. It is the father in whose hands are the staff and stay of the house. When he is dead poverty will drive asunder the whole household. It is the mother. Not more do all the nerves run back to the base of the brain, and unite there to receive from the cerebral mass their various influence and errands, than does every child and every member of the family send a sensitive cord to the mother's heart, as the source of their life. It is a son, full of hopes and honor; or it is a son disgraced and dying in darkness. It is a daughter, whose beauty, youth and exquisite nature make death seem thrice a violation of benevolent love to those who see but the hither side; or it may be a daughter whose life has been crossed, and who longs for dying more than they that wait for the Bridegroom. Whatever may be the anguish or the issue, none stands so near, so vitally connected with the shadowy side of household life as the physician. Surely here is opportunity. If one has faith in Christ and im-

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mortality, he has the means of consolation; and as his Master, while forgiving sin healed the body, so he, while restoring health, may inspire religious life and recuperation from sin.

Who, likewise, comes so near to the individual, so closely into confidence with the personal history of each individual as the physician? It is an hour of confidence, when he stands by the bedside. In health men are nerved to conflict. Pride, or secretiveness, or interest, strain men tensely, and they throw off and resist intrusive influences, and we have little access to them. But in sickness the world is laid down; business rolls in the distance; the physical relaxation works softness of the feelings, and men feel the need of sympathy. They relax and melt under it. And he who visits their solitude with cheer, he who assuages their pain, he who checks their despondency and promises health and brighter days, comes as a benefactor and friend. The heart lies open to him as a plowed field. Oh, if one has good seed to sow, now is his springtime!

I do not advocate an indiscriminate flow of religious talk. I do not believe it wise for one with professional rigor to give moral advice with each potion. One must have good sense —or why is he a physician? There is to be a wise judgment of time and place and circumstance, which ordinary discretion will almost unfailingly indicate. But, however many exceptions there may be, surely, in the daily rounds of practice, a Christian physician of a warm heart, a loving nature, and an ardent Christian faith, can not fail to find opportunities when moral aid will be even more kind than medical aid.

Nay, there are stages in every disease such, and in some cases the whole disorder is such, that men are more medicable by moral inspirations than by any other means. That resiliency by which the system springs away from morbid influences, that rousing and reaction by which nature beats back from the wall deadly assailants, may be produced by moral influences acting through channels of thought and feeling on the vital system, far more powerfully and wholesomely than medicines acting through the nerve or through the circulation.

These, and considerations analogous to these, I might adduce at much greater length and in more variety, with profit, I trust. It can scarcely be too much urged upon every Christian young man who proposes to enter this high and honorable and responsible trust, and to administer it toward his fellow-men, that he is a sower going forth to sow the seed of eternal life, as well as one that goes forth to restrain disease, and bring back life pure to its fountain.

But there are some views that I desire to present of another kind, and to which I will turn your attention.

There be many that suppose Christianity is a wrecker's boat, trying to save a few hundred while the ship of this world is foundering, and not expecting to do any thing with the old world itself. Now, we hold that Christianity is not an expedient for extricating a few men out of the many, but a formative power designed to build up the whole of society, in physical, social and moral elements. It aims at a civilization which, under great and well-appointed laws, shall at last give health and strength and purity and enjoyment, not to favored individuals and families, but to the race. We anticipate a day when nations shall be what the most favored individuals are now, when the whole world shall have a public sentiment made of wisdom as eminent and pure as that wisdom which now controls the selectest circles. And all men that have any function in life are workers, whether they know it or not, together with God, in bringing to pass this final prophetic civilization. And has the physician no task in this great work of upbuilding human society? I hold that he has a most important task. The medical profession, as a whole, have a duty, not simply to the individuals to whom they minister, not simply to the families in which they move, not simply to the classes of men out of which their patients are taken, but to the whole community, and to the whole course of divine civilizing influences.

Preserving health, and teaching men how to preserve it, is more and more rising in the minds of the thoughtful into proportions greater even than the honorable tasks of healing. In the order of time and development, first naturally, were these functions of healing; but, after all, healing is but *tinkering*. It is but repairing a leak. It is but putting on a hoop that has sprung off. It is but making an old machine work a little better. It is good, it is indispensable, it is fruitful in moral results if one wishes and labors to make it so; yet, after all, as compared with the ideal sphere, the mere reparation of health is like the repairing of anything else. He that gives lines to the ship, he that builds her—some George Steers—is he not better than the workman that afterward docks her, and scrapes her bottom, and puts on new copper? Is not he that plans and constructs a higher workman than he that patches an

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mends? Is not the maker, the inventor, the world over, considered as more than the repairer, the tinker? And is not the man who knows how by moral and intellectual means to so educate the community as to mold it to health, and maintain it in health, engaged in a nobler calling than a profession that goes to the other extreme, and simply props up the waste, and repairs the damages, and amends the wear and tear that life has brought upon the body?

The Chinese, I am told, have a custom of paying the physician a salary as long as the family is healthy, and of stopping his pay so soon as any one in the family gets sick; and it is found to be a salutary custom. [Laughter.] I repeat it not for pleasantry, for it seems to me there is in it an element of remarkable truth. It is a better, a higher, a nobler work for a man to keep a family healthy, than when they get sick to make them healthy again.

The health of communities is one of the paramount interests of political economy. Not individuals alone, but cities and states are under the physician's care. Individuals may have discharged their duty, but the medical profession, has not discharged its duty, when it has simply attended to those that are broken down, or to those that have been sick. It has—and it will understand its duty more and more as time goes on—been put in trust of the health of the community, and it is its business to see that the community suffers no damage in this regard.

This involves the authoritative teaching of men in the uses of food; in the uses of air; in the uses of exercise in sunlight; in the cleanliness of person and of neighborhood; in the morbific tendencies of appetites, passions and vices. All these, it seems to me, belong to physicians as a profession. The generic influence which issues from the whole body in the community should raise the average of intelligence in matters of health, and should augment the power of hygienic law.

The unnecessary and preventable deaths of children in towns and cities is not only terrific, but is a shame and a blot upon our civilization. I know not that my statistics are accurate, but I have an impression that one-half of those who are born into this world die before they are five years of age. This fearful mortality can not go on without bringing opprobrium upon the medical profession. Unless more light and knowledge is thrown upon the subject of health, they can not stand acquitted as having discharged their whole duty. God never meant at at the threshold of life one-half of the hildren should fall slain, and that for the most part on account of preventable ignorance of the causes of health, and the means of preserving it. Consider what a drain it is upon society, that one-half of its product of human life—a product, too, compared with which no grain, no fruit, no mechanical product can be mentioned—should be slaughtered at the beginning.

The deaths of adults in the prime of their working power, is continually a tremendous loss to society. There are special exceptions, of course. There are cases in which men must needs die in mid-life. Accidents may destroy men. Some may carry in them constitutional elements of death which no physician's skill can remedy. But, as a general truth, men do not need to die till they are old. Babes ought not to die, and young men ought not to die. Go down and read the record of ages in Greenwood. Go and examine the Register's book. It is shocking to see how young men die. Now, do you suppose this is in accordance with God's decree? And who is intrusted, if not the medical profession, with the administration of those truths and those influences which are at last to wake up society to some conscience, and their knowledge to some efficient prevention of this monstrous slaughter of human life, and this perpetual depletion of society's strength?

The enfeeblement of those who, though they do not die, do worse—live, performing themselves no work, and withdrawing from the busy hive of society many who must needs tend their weaknesses—this is greatly to be deplored. How many are there that are lost to society, if you count the waste offspring, the premature deaths of adult men, and those that are lying useless and drawing useful men to their care and nursing? One of the burdens that bends the back of society, and bends it though it be a camel's back, is the sickness that does not need to exist. The want of knowledge of the influence of food and air on the heart, on the brain, on the stomach, on the liver, on the lungs, on every part of the body, is astounding. I am amazed when I think of the profound ignorance that reigns on this subject in intelligent communities where the spelling-book is put into the child's hand almost as soon as it receives the mother's milk. We are not lacking in schools; we learn to read and write; we study mathematics and the natural sciences; we are acquainted with material measurements; we are familiar with liquid and solid measures; we know every thing in the world but that which it most becomes us to know—how to take care of ourselves. The last thing that a person thinks of studying about is himself. Every man knows more about

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his watch than about his stomach; more about his loom than about his thoughts and feelings. Men sleep, because it is the fashion to get sleepy and to sleep; but the law, the philosophy, the practical knowledge of sleep, very few men understand. Very few men understand that eating is any thing more than taking food into the mouth and swallowing it, and continuing this process till they do not want any more. The relation of food is strength; the relation of a certain kind of food to a certain kind of strength; the wisdom of eating according to the requirements of the body, and not to repletion—how few men understand these things! How few men know the moral bearing of these things! How few men know that a large share of their mental and spiritual troubles are caused by dyspepsia, and are to be traced to physical disorders of the stomach! [Applause.]

These topics of vital political economy come directly within medical jurisdiction. I do not believe that the physician as a citizen is any more bound to secure clean streets than I am; but it falls alike within his and my jurisdiction to see that the truths respecting cleanliness are sounded out. If the physician would both preach and practice in this matter, I think that even in Sodom and Gomorrah, over there [New York City], we should have clean streets yet. We run arteries and veins of poison through the city, and they are called *sewers*. What with jockeying, and jobbing, and cheating, they are made to be injection pipes, syringes of infection, running through houses and neighborhoods and streets. What an abomination is there in the whole administration of them! Now, whose business is it to remedy the evil? It is your business, it is my business, it is every body's business; but professionally it comes under the bishopric of medical men, and they are bound, as knowing more of these things, to sound perpetually in every house and neighborhood and district, the testimony that there is of the deadliness of the poison which exists all around about us, and in our very midst, and to stir up each other's pure minds to the necessity of creating a public sentiment that shall demand that there shall be cleansing, *cleansing*, CLEANSING. Ah! if there was a bolus to clean our city out, as there is to clean out a man, the doctor should give it! [Laughter.]

It is a part of the business of the medical profession to teach the great truths which stand connected with health in the matter of air and light. Most men seem to think that God made the sun to be a poet and a painter, and to do retty things, or to be a husbandman, and to produce harvests; but that the sun has any relation to the whole question of health in every man, they do not know. And why should they? Who teaches them on this subject? Who tells them that in a hospital where there is sunlight on one side, and no sunlight on the other, th diseases are more deadly and the deaths are mor frequent, by one-fifth, on the side where the sun does not touch than on the side where it does? Who tells them that a chamber where the light never comes in is unwholesome, is poisonous, is unfit for a human being to occupy? Who tells them what the use of air is? The principal use which men seem to put air to is to destroy it. They go into their houses and shut out the exterior air, and burn by stoves that which is inside, and poison it by breathing, and then, when it is thoroughly destructive, they go on breathing it, and sucking it in, as if it were a confection and a luxury! Is there any body that teaches men what air means when applied to travel in steamboats? It is enough to set one to retching just to remember the cabin! Is there any body to teach the community the benefit of air in railway cars, in churches, in lecture-halls, in places of crowded assembly? We should scorn with ineffable scorn to sit down at a plate where a man had just eaten his meal, and take the knife that had been in his mouth and put it in ours; but we will sit down and breathe the air that he has breathed, and that his wife has breathed, and that his children have breathed, and that the servants have breathed, and that forty others have breathed, and will think it just as good for our breathing, and will breathe it over, and over, and over again, as if it was a precious morsel! There seems to be no power to impress men that God made pure air for promoting health, and that impure air produces the crime of sickness—for I think that sickness is a sin. If a man is sick and is not guilty, he ought to prove it, that his case may be made a special exception.

Who shall teach men what is wholesomeness in food, as to kind, as to quality, and as to frequency of taking it? Who shall teach men the function of food? Who shall teach men that the body is a boiler and furnace, and that food is the instrument not only of raising heat, but also of generating many other elements among which are thought and feeling? Who shall teach men that there is a reason for eating, and that reason is to determine the quantity and kind of food eaten, and the frequency with which eating should be indulged in? There is need that somebody should enlighten the community on these points; for now men feed as

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animals do, without knowledge, grossly, and to a large extent unwholesomely. And these are interests which medical men of all schools alike should feel imposed upon them. While they are not to abandon their more specific vocation of healing the sick, wherever they go, in all the families that they visit, in their own associations, in their relations to the public press, to public influence and to public sentiment, it seems to me that the medical profession should feel bound to discharge this part of their duty as citizens—the duty of keeping society informed respecting the demands of political economy.

What may be done by medical science, and a public spirit, with suitable provision of law, was shown last summer in the invasion of cholera in New York and Brooklyn. They were summoned, they brought out their store of knowledge and experience, they banded together, they formed a distinct plan of campaign against this invading enemy; and wherever it appeared there they were instantly to stamp it out. To an extraordinary degree they prevented the incursion of this terrific destroyer. They showed themselves to be more than a match for a pestilence that, if it had been neglected, might have swept like an angel of death through the community. Ignorant men say, "It showed what God can do, and sometimes does do, by his providence." On the other hand, it shows that where men are enlightened, where they believe that the revelations of God's natural law are coincident and co-operative with the revelations of God's moral law, they, by employing their knowledge can meet, can forestall, can resist and destroy, those terrible scourges which from time to time visit us. The results of last summer are incomparable arguments in favor of temperance, precaution, and knowledge as to the laws of health.

Then, again, the medical profession should, I think, be charged with the responsibilities of teaching the young the moral force of God's physical laws. The older I grow the more profoundly I feel that all our natural laws are divine laws, and that morality consists in obedience to them. A man thinks he is immoral because he breaks the Decalogue. So he is. The law that was proclaimed on Sinai is obligatory; but I think the law in your stomach is, too. I think God made that, and I think he sounds out penalties from that. There are sanctions both of pleasure and pain, in the hand, in the eye, in the ear, in the tooth, in every nerve, and along every river-course of blood. Wherever there is a body there are laws. And I think it to be a part of our privilege to know them. It is morality to obey them, and immorality to disobey them. Everywhere, and under all circumstances, disobedience to law is immorality, and obedience to law is morality, though in differing degrees. And the physician, it seems to me, above all others, is set to teach the connection between the violation of natural law and penalty. For men sin in ignorance on this subject. Almost every week I receive letters from men broken down in health by indulgences which they tell me they fell into ignorantly. They can find no relief, they say, and they write to know if I can tell them of any relief. Our families are either ignorant of these laws, or a false delicacy prevents parents from teaching their children concerning them. I hear persons of great intelligence saying, with scornfulness, "Why should I want to know what I am made for? Why should I want to know about the valves in the heart, about the cells in the lungs, about digestion in the stomach, or any thing else connected with the body." They seem to think that there is something ignoble in being informed about these things. The most exquisite, curious and complex of all the results of God's creative skill in this world, the human body, they seem to disdain any knowledge of. They seem to think that delicacy requires that they should know nothing about how they are born, how they are to develop, how they are to act, how they are to generate life-forces, how they are to establish families, and how one generation reaches over into the next. About these matters and the meanings of men's instincts and impulses and passions, what Christian father and mother feel that they are bound to inform themselves first, and then to teach their offspring? There are some who do, but not many. And it seems to me that it is the physician's duty to tell Christian parents that they ought to understand the laws of health and the laws of indulgence, and what the young need, more than any thing else, is to be taught that these laws are as infallible as any others, and that the relation between transgression and penalty is invariable, and that the infliction of the one is certain to follow the other. It is not a threat that makes a man stop sinning—it is the certainty of punishment. There is no one thing about which young men are more beguiled and deluded than the belief that they can transgress natural law and yet jump the penalty. You can steal and not be seen. You can pick a lock or a man's pocket and escape. If you are arrested you may break jail. If you are convicted you may in some way avoid being sent to prison. Or, you may get a pardon if you are sent to prison. But no man can break a law of nature,

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and then dodge the sheriff, or bribe him, or avoid conviction, or escape condemnation, or set aside the sentence, or get pardon, or even reprieve. Punishment for a violation of natural law is just as certain as that the sun itself shines; and no man violates a law of his body, or any part of it, that there is not registered in him a penalty. And yet, young men, with burning passions, go dashing into one abyss of indulgence, and rebounding from that into another, under the infatuation that there is no penalty that will overtake them. And here, in the midst of this community, and all around about us, natural laws are being trodden on, and are rising up to avenge themselves, and are wounding and bruising and slaying multitudes. And is there no need that some one should teach young men that there is sin in breaking natural laws, and that the penalty will certainly come back upon the transgressor?

Now, is not this the physician's business? Our schools teach little, our academies teach little, our colleges teach little on this subject. They dig out the ruins of Babylon and Rome, they exhume past centuries, they scale the stars, they disturb the earth with geologic probings, while young men right in their presence are burning up their marrow as the wick of the candle is burning up the tallow. There is not a day that they are not, by overtaxation, by undersleep, by wrong eating, or by secret indulgences, destroying the very pabulum of their life, the very stamina of their constitution; and nobody has any thing to say—neither the president, the professor nor the chaplain! A young man has gone on month after month, and week after week, holding out more and more plainly the signals of declining health and strength, but no one inquires into the cause of his trouble, or takes much notice of his perilous condition until it is too late to save him. At last his sun goes down, his companions wear crape at his funeral, and the minister says, "In the mysterious providence of God this young man has been prematurely called away!" It is false! He was a victim of ignorance of the laws of his being, or of the wickedness and the terrible consequences of a violation of those laws. And it is a shame that such ignorance should exist. And you, doctor, are not exonerated from blame. It was your business long ago to have enlightened men respecting those laws, and to have taught them that the way of the transgressor was hard. This young man was a suicide. It does not take a man with a rope around his neck to be a suicide, or with a potion of poison in his stomach. Many a man commits suicide by eating, and many a man drivels his life away in infinitessimal ways; and somebody ought to teach the young about these things. Oh, that I knew enough to do it myself! I sometimes feel as though it would be worth my while to intermit my preaching for a winter, and go to some institution where I might obtain medical instruction that, better informed myself, I might come back and call together the young men of my charge in the lecture-room, and point out to them the damnation that is concealed under so many guileful forms of indulgence and pleasure in the world.

It seems to me, therefore, that there should be medical lectures. Medical associations should be formed to provide for popular instruction in these respects. Men should deliver medical lectures to young men, and women should deliver medical lectures to young women. I do not believe the modesty of woman loses any thing by acquiring virtuous intelligence respecting her physical organization and the laws which relate to it. What God creates no man and no woman need be ashamed to know; and especially where it is knowledge of creations that belong to their own selves, and take hold of the very essence of their being, and constitute part of their function and duty; and it is a shame that at this stage of civilization both sexes should not be instructed in these things.

In the new and beneficial tendencies developing, here is a field for others; and there is scarcely any that is more important than this. And let me say in this matter, that it seems to me physicians should undertake the enlightenment upon health topics of the families under their charge. They are bishops; the neighborhoods in which they serve are their dioceses; and as the bishop in spiritual things makes inquisition from church to church, so the physician should make inquisition from family to family, and see that the children have the means of instruction, and that they are catechised. I never catechise the children of my church, although I was catechised when I was young, and was taught that catechising was an essential part of early instruction. I had to learn the *Shorter Catechism;* and I used to wonder what the *Longer* one must be! But I think I would be willing to teach the children of my charge the *Longer* and the *Shorter Catechism*, if I had a catechism in which every alternate question was a question about physiology and health, and it was so constructed that when I taught them respecting their spiritual welfare I could teach them respecting their physical welfare also.

I will suggest but one other topic—for the

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scope of this subject is so great that not one, but many discourses would be needful even to sketch the superficial part of it.

I feel the need in my own professional labors of intelligence among my people of the relations that subsist between physical conditions and moral states; and I long for the time to come when physiologist and physician, both united in one, shall have given such instruction that the community shall have become intelligent in these matters.

A large number of temptations to moral evil are physical, and are remediable. Ill health is often not only a sin, as I have said, but it is a prolific mother of sins. There are many men who feel that they are sinful because they are irritable and peevish. They do not know that they are irritable and peevish from excessive labor, from undersleep, from watchings, or from indulgences that rasp and exhaust their nervous system. And if ill temper is a sin, are not those causes wrong which induce ill temper? Why should I preach to men the duty of maintaining a rein on their temper when I do not preach to them the duty of maintaining a rein on their stomach?—for the stomach is where the temper comes from. But that is scarcely considered within the province of the pulpit.

When a man comes to me gloomy and desponding, and I see by his complexion, by the color of his eye, and by his history which he has given me, that his gloom and despondency are the result of the condition of his liver—under such circumstances shall I say, "Pray against it?" What! pray against effects produced by a man's liver? He needs physical medication. Not that prayer is at any time out of order or out of place; but it is a vain thing for a man to suppose that a physical cause will be taken out of the way in answer to prayer, when he is ignorant of the physical means of taking it out of the way. Do not I know that many men are unspiritualized by excessive addiction to meat? And where that is the case, why should I undertake to preach to men ethics supernal? Why should I idealize? Why should I stand before men that are puffed and bloated and wheezing from over-abundant eating, and attempt to lift them up to heaven, when there are vast herds of beef lying between them and heaven? How is it possible for me to lead a man that continually swills his abominable beer up through purity of thought and motive to the altitude of Christ's teachings?

The physician is the natural interpreter of God's law in the human body in its relations to moral results, and he has a right to teach the people just as much as I have, and toward the same results that I am called to strive after; and more and more, I think, as society grows older will it be found to be the duty, if not of each individual in it, yet of the whole medical profession, to show men that their moral states have an intimate connection with their physical conditions, and that their physical conditions have an intimate connection with their moral states.

I meet many persons that I know are in great need of spiritual help, but who can not be helped spiritually until some physical habit to which they are addicted is given up. But how can I say to a woman that comes to me for advice, "Madam, you are an opium-eater?" And how can I say any thing else to her when I know that it would be casting pearls before swine? What is the use of my attempting to do any thing for a person who is in her state? How can I do any thing for a man that comes to me with incertitudes, and vacillations, and all manner of despondencies and discouragements, and with inceptions that never accomplish themselves? Do I not know what secret drain is destroying that man's whole economy? And how can I talk Bible to him when I know there is no relation between moral thought and the recuperation which he needs? Why, do you suppose a man can abuse his God in his nerves and in his passions, and tread down the laws that God has established all through his body, and then, standing on the ruins that he has made and is continuing to make of his physical system, lift himself up to inherit the glorious promises in Christ Jesus? It is impossible!

Do not I see, on the other hand, how easily spiritual experiences are producible when the blood is pure, the brain healthy, the stomach sound, and the liver, that proteus of mischief, attending to its own duties, and to nothing else? Men that are rightly instructed in matters pertaining to health, and that maintain obedience to natural laws, are very easily led along the Christian way. Many seem to think that the Christian way is hard. It is hard because men are perverted. It is hard to get into. But I declare that Christianity is only another name for nature—divine nature; man's nature theologically considered—and that no man can be said to be moving so naturally and easily as the man that accords with Christ Jesus.

While these topics are mine, then, on the spiritual side, are they not the physician's on the physical side? Do we not meet in the one work, and strive to fulfill the apostolic prayer, "I pray God your whole spirit and soul and

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body be preserved blameless unto the coming of our Lord Jesus Christ?"

The pulpit needs the physician; the church needs the physician; the city needs the physician; the school needs the physician; the parents need the physician; the children need the physician.

Ye are not healers of the sick alone; ye are teachers of the ignorant as well. It is yours to repair the wastes of life; but better yet, God makes you almoners of bounty to the state, for augmenting its strength, maintaining its resources of men and means, preventing its waste to the detriment of the exchequer, not only, but of every great living interest. And as time goes on, the great task of instruction, the great task of revealing God in nature, will more and more be seen to devolve on the medical profession. And then it will be found that prevention is better than cure, and that to forestall disease is far more noble and honorable than to heal it.

In these various labors of relief and instruction, you hold a place advanced among the very foremost of philanthropic men. In all ages physicians have been reckoned as among the most intelligent, and as a class they still make good their old renown. They have been cherished as friends and counselors of our darkest hours. They still deserve our utmost trust, and our most affectionate respect. We never enough ponder, nor can we ever enough pay them for that rescue, those reliefs, which they bring in the hour of trial.

Never, in any land, have physicians been charged with want of public spirit or patriotism. In the great and terrible war which has just swept over our continent, they added new laurels to their crown. None more promptly than they ran to the service of their country. None more cheerfully endured great hardships and privations. None exposed themselves more willingly, yea, eagerly, to the fiery stroke of battle itself, that they might rescue the wounded and heal them. And many laid themselves down pierced unto death, seeking to save life. None wore themselves out with more assiduous kindness and honorable fidelity. And when the names of those that did most on the battle-field are planted high, we would not lower them, nor take from around them one leaf; but right by their side, and full as high, let their names be recorded who healed the wounds that the warrior made, and who sacrificed as much, and showed as great a patriotism and zeal in the work of mercy and of love.

And, finally, among them we rejoice to know may be found multitudes who follow the Saviour with a living faith, and who, everywhere, while they heal the body, seek also the cure of sin. May the blessing of the Great Physician rest upon them, make them more and more useful, and at last crown them with honor in that land "where there shall be no more crying, nor any more pain!"

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

It is but right, in such a series of articles as this, that the writer should presume that the readers understand the terms "Pitch" and "Force;" that the terms "High" and "Low," "Loud" and "Soft" need no explanation.

We have two modes in speech of changing the pitch of the voice; viz., by skipping from one key to another, and by sliding from one to another. Every one makes use of both these modes whenever he talks, though some are much more easy in making these changes than others. If we should observe any two persons while they are conversing we should be sure to notice a difference in this respect, and if we were to improve an opportunity to observe two persons, one of whom is pleasing and the other not pleasing in his modes of speech, we should see that no small amount of this difference comes from the ease and freedom with which one changes his key by means of skips and slides, and the entire want of this ease and freedom on the part of the other. We should also observe that the former has far more *range* in these changes, or more "compass of voice" than the latter.

In the manner of effecting these changes, as in every thing else that we do, we can improve by culture. Those who seem to be almost perfect in the use of their voices can be brought nearer to perfection, while those who are farthest from perfection can be rendered less imperfect by careful culture.

For the purpose of securing this culture, let the exercises recommended in the last article be repeated upon every key within the compass of the voice, from the lowest to the highest. Do this by commencing on the medium key, *your own* medium key, for each voice has its own medium key, which may differ from that of every other, and vary from that up and down the scale. Do this upon all the vocals represented there, upon all the sentences given, and upon other sentences.

Again, skip from the very highest key, at once, to the very lowest, and from the lowest to

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the highest. In like manner, skip from the middle key upward and downward and back to the middle key, until any key within the range of the voice can be taken at will and without difficulty, and until, in most cases, the compass of the voice is materially increased.

Now let us attend to the "Slides," which are changes of the voice upward or downward during the utterance of a single sound, or of a series of blending sounds, which form a syllable. These are made upon the violin by slipping the finger along the string, at the same time the bow is drawn across it.

In the proper utterance of the sentence:

"As soon as I arrived he conducted me to his house,"

it will be observed that there is a slight upward slide on the word "I," an "Upward Slide" of the "Second." Repeat this sentence a few times until the ear can distinguish and the voice execute that slide in the sentence; then pronounce the word "I' by itself with the same slide. Now try to enunciate "E" with the same slide. If any doubt occurs as to accuracy, repeat the sentence,

"As soon as E arrived, he conducted him to his house,"

and compare the different utterances until accuracy is secured.

In this way proceed with all the Unobstructed Vocals, as represented in the last article, until any of them can be enunciated with an "Upward Slide" of the "Second."

Now take another sentence; as,

"It is I, be not afraid,"

and repeat it without any emotion, noticing the downward slide on the word "I," which will be the "Downward Slide" of the "Second," if thus delivered. Practice upon this, as above directed until the word "I" can be enunciated, with a "Downward Second." In like manner introduce and practice upon all the vocals, until each can be enunciated with this slide.

Now, without any emotion, ask the question,

"Did you say E?"

and reply to it, saying,

"Yes, I said E."

If done as directed it will be seen that in the question the "Upward Second," and in the reply, the "Downward Second" are given. Having thus trained the ear and the voice in those two sentences, enunciate "E," first with the "Rising" and then with the "Falling Second."

In this way practice upon all the Unobstructed Vocals, until the "Upward and Downward Second" thus brought in contrast are familiar to the ear, and easily produced by the voice.

Repeat the last question and answer with earnestness, and the vocals will be enunciated with an "Upward" and a "Downward Third."

Let the question be asked "with surprise," and the reply be given with corresponding earnestness, and the result will be slides of the "Fifth."

If the question is now asked so as to express astonishment, and the reply be given with a degree of earnestness that shall correspond, the result will be slides of an "Octave."

The directions given for practice on the "Slides" of the Seconds will apply to the longer slides. They should be practiced upon with great faithfulness.

Having thus trained the ear and the voice, we can find examples for practice in books that are always at hand. No better works can be found for this than Shakspeare's, but all of our standard writers abound in good examples, and the selections in our school reading-books also furnish them.

Some whose ears are naturally acute in determining the quality of a sound will think that too much effort has been made to make this subject plain, but the writer, only the day before this was written, found, as he has often before found, in a class of fifty, that one half of them could not tell whether a "Slide" was "Upward" or "Downward" when a "Slide" of only a "Second" was made, and many of them hesitated as to the direction when a "Slide" of a "Third" was made.

THE RAINING TREE.—The island of Fierro is one of the largest in the Canarie Group, and it has received its name on account of its iron bound soil, through which no river or stream flows. It has also but very few wells, and these not very good. But the great Preserver and Sustainer of all, remedies this inconvenience in a way so extraordinary that man will be forced to acknowledge that he gives in this an undeniable demonstration of his wonderful goodness. In the midst of the island there grows a tree, the leaves of which are long and narrow, and continue in constant verdure winter and summer, and the branches are covered with a cloud which is never dispelled, but resolving itself into a moisture, causes to fall from its leaves a very clear water, and in such abundance that cisterns placed at its foot to receive it, are never empty.

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Sweet Lips, Cherry Red.

BY GEO. W. BUNGAY.

When the cherries were red
As the lips of a maid
(They could not have been sweeter),
I heard a sweet song overhead—
A soft song in sweet meter.

Hid in branches of green,
Where the robins had been
(The shy birds might have stayed there),
A beautiful damsel was seen—
A bright bird of a maid there.

Her white hand broke for me
A ripe bunch from the tree
(She may break hearts hereafter);
Like a cloven cherry I see
Her lips parted in laughter.

"We may press to the lip,
And gratefully sip"
(She did not think of kisses),
She said with a smile, and a slip
Of speech so winning in misses.

Cherries filled with red wine
Hold a nectar divine
(I thought she was diviner),
And I wished the darling were mine,
Or that I was a minor.

"The best spirit," I said
To the bird overhead
(Better than wine and dearer),
"Comes from the sweet lips, cherry red,
And I wish they were nearer."

Dress.

BY MRS. O. F. M'CUNE, M. D.

Human beings not being clothed by their Maker, but left to clothe themselves by their own ingenuity and mechanical skill, have sought out many ways of dress. Many of them seem guiltless of either comfort or consistency. The dress of barbarous nations is very simple; as mind advances, so dress becomes more complicated, until now a large part of the time and means of our people is spent on dress.

I purpose to speak of the inconsistencies of dress. Men, on the whole, dress so as not to outrage either their physical or moral natures, so I will pass them by.

But women seem to ignore all ideas of comfort or consistency. Among the thousand things women are capable of inventing to adorn themselves, very few are adapted to the uses for which clothing was intended—namely, protection and beauty. The first thing we should aim at should be to so dress ourselves that every part is *equally* covered. This is the only true basis; from this we can rear a superstructure of beauty which will not either pain the beholder or ourselves.

Health is only maintained by equal circulation. When one part of the body has one thickness of cloth over it, and at the same time other parts have six or eight, it is impossible to sustain a balance of circulation. This is always the case in the ordinary dress. Instance: the feet being further from the great circulating apparatus, the heart, should be the warmest clothed; then, too, the air of the house is several degrees cooler at the floor than a few feet from it, which is an additional reason for more clothing. What are the facts in the case? Very many women wear but one pair of thin stockings, no matter what the thermometer says. At present the thin soles and slippers have given place to thick soles and high boots, which is admirable. Still, above the boot, the leg has too little clothing. We ought to know that the parts of the body most thickly clothed will have the best circulation; consequently, heat. At every pulsation of the heart the blood should go to the extremities quickly and easily, or perfect health can not be maintained. If the surface is habitually chilled the circulation is imperfect; then in the parts where the clothing is the thickest there is necessarily more or less congestion, and the blood is retained or circulated sluggishly.

We should study to avoid so many thicknesses over the abdomen and small of the back. From our necks to our waists we dress too thinly; then below the waist what an amount we wear! Did you ever stop to think what a woman does when she feels chilly on a wintry day? Instead of putting on an extra pair of drawers and stockings, and, if the weather is severe, a pair of warm leggings, she puts on a flannel underskirt, clothing the part which is already over-dressed warmer, instead of the extremities, where the blood is struggling to go its accustomed round! Just try the plan I propose, when you feel a sense of chilliness, and see how quickly you will be warm.

The best way to equalize the clothing is to put on long under-flannels—or they may be made of any thick material—which reach to the feet, and tuck them under the stockings. If extremely cold, two pairs of stockings and leggings will be a comfortable dress. The shoes should be lined with thick cloth, and loose enough to allow free circulation.

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Under no circumstances should an underskirt e worn; this adds to an already over-dressed art. No skirt should be worn under the hoop-kirt; all the clothing should be put on in rawers, as this clothes the entire limbs equally, nd has no gathers or folds about the top as a kirt has. The skirt worn over the hoop-skirt ould have only half as much cloth—one-third f the length—at the top as at the bottom, ereby avoiding as much weight as possible. ll the clothing should be suspended from the oulders. A waist with buttons on and but-n-holes in the bands is preferable; this adds ickness to the dress of the waist, as well as a pport for the clothing. Suspenders are good hen properly adjusted. The point is to give erfect support without pressure on any part. ome think they can give sufficient support by orsets. They are very injurious; they always ompress the waist, no matter how loosely they re worn, for these flexible parts are drawn in y very slight pressure. How the lungs, liver, tomach, etc., located in this region are to per-orm all their delicate functions, when com-ressed into one-third or one-half their natural imits, puzzles me to imagine. Nature, ever eady to adapt herself to circumstances, carries n her functions in spite of all our efforts to trangle her. So many a lady lives, or rather eems to live, allowing only half as much room o these all-important organs as nature designed hey should have. All this suffering is under-gone for a lifetime simply because a small waist s considered genteel. As soon as the pressure s lessened the internal organs press the ribs out, which gives a feeling of discomfort, and hinders ot a few from reform in this particular. If hey would persevere but a few weeks or months, ach day making the bands looser, they could ndure it without inconvenience, and would be mply repaid by an increase of health and spir-ts.

If, at the same time, the waist was rubbed with a cloth or sponge wet in cool or cold water, he difficulty would be more easily overcome; for, as you all know, no woman who dresses ightly has any muscle over her ribs, the pressure and stiffening having caused the muscles to be absorbed, as all muscular substance is, from con-finement and pressure. The rubbing with cold water would stimulate the dormant skin and ren-ovate it. I have never known a woman to dress tightly, taking her own assertion for it. The sensible man or woman is so pained at the waists thrust before their view, that they often wonder if common sense is any longer one of woman's accomplishments. A dress made and worn after this plan would be as perfect as a long dress can be; but this is objectionable. Such full skirts must necessarily be heavy, because so much cloth is put into them; then the hoop is constantly thrust against something—pulling, now here, now there, which would be very tiresome were we not so used to it; nevertheless, it is a great waste of strength, and a great cause of so many weaknesses among women. Now these difficulties are all obviated by a short dress and pants, with one skirt or none. Dr. Dio Lewis's gymnastic costume is an excellent style. It has a Garabaldi waist, drawn up on the shoulders so as not to interfere with the free use of the arms; a skirt, not very full, reaching from four to six inches below the knee, worn, if you prefer, with one light skirt made of some light, stiff material. The pants are large and loose, drawn up at the bottom by an elastic band. This, with thick under-garments to the feet, and warm, high boots, completes the dress. Of course, the arms need as much clothing as the legs. The ankles are further protected by leggings. This is an artistic costume, and I wish some of the fastidious people would visit Dr. Lewis's school, at Lexington, Mass., and see the bright, happy faces and perfect forms of the girls there at school, which is due not only to their gymnastic drilling, but to their dress as well.

This dress, although much prettier than the "Reform Dress," as it is termed, has one fault which the "Reform Dress" obviates—namely: In the gymnastic dress the stocking is shown, which leads some to ligature the leg tightly in order to keep it smooth, which is an evil the straight pants reaching to the ankle are free from; but such a prejudice exists against the straight pants that comparatively few can so far overcome their feelings as to wear them. An elastic band buttoned to the stockings and to the waist obviates the difficulty of ligature. The public will become accustomed to this dress if their ideas are not outraged at first. The greatest reform the world is in need of is a reform in the dress of its women. Now, they are all worn out by the imperfect manner in which their limbs are clothed, and carrying so many dry goods; so they have no strength to do the numberless duties which devolve upon them. If all women were properly clothed for a few years we should see such a change as would be difficult to realize. Faces that are now pale and sunken, and eyes that are now lusterless, would then be glowing with health and bright with vivacity; a light, elastic step in place of the swinging, slipping style, and flat, shrunken forms rounded out to nature's beautiful proportions.

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Action and Reaction.

NEWTON'S third law of motion is expressed in these words: "Reaction is always equal to action, and opposite to it in direction." An egg dropped from a given height upon a table strikes it with a certain force, proportionate to the weight of the egg and to the square of its velocity at the time of impact. The effect on the table will be more or less manifest, according as the conditions vary; it may not disturb its polish, it may dent the surface, and it is conceivable that it may penetrate or even pass through the top. Whatever the effect on the table we ascribe it to action; on the other hand, the effect produced on the egg is due to reaction. That is, whatever be the force of the egg, the table meets it with an equal and opposite force. The reaction may merely jar the egg, or crack it, or break it to pieces. If the egg passes through the table, it might seem that the action is greater than the reaction; but the table has received only so much of the action as is necessary to pierce it, and the remaining force carries the egg forward until other reactions shall bring it to rest. An egg dropped a few feet upon a hard substance will be broken, because the reaction is sudden, and the force too great for its fragile shell to withstand; but we may drop the egg from a far greater height into water or upon a mass of down without any injury to it. The reason for this is not that the reaction has become less than the action; it is still equal, but the action is communicated to many thousand particles so slightly whereat that a little force suffices to displace them, and the little force with which each reacts is less than the tenacity of the shell, and of consequence the reaction transmitted by the thousands of individual molecules affects the egg so gradually that it remains intact. In fact, if we consider the action of the falling egg at each successive moment of its descent, instead of at the instant of striking, we shall find the reaction due to the resistance of the air to have commenced with its fall, and although the velocity of a body falling through a vacuum increases as the square of the number of seconds, yet the resistance of the air in an opposite direction increases as the square of the velocity, and the reaction finally becomes so great that the velocity becomes a constant quantity. Thus reaction affects action from its inception to its conclusion. If it were not so, with what effect would hail-stones, or rain-drops, or even snow-flakes reach the surface of the earth! The height of their fall would give them an immense velocity, but the resistance of the air checks their speed, so as to give a drop of ordinary size a velocity of less than forty feet per second. This is mere mechanics, and if the law did not embrace a wider range of phenomena we should not feel warranted in dilating on its application. If we suffer the terms to lose for a while their technical sense, we shall see that it embraces a far wider range of facts.

The fire that warms me as I write is an example at hand. The coal in burning gives out a definite amount of heat proportionate to its combustible materials and the oxygen they consume. The action may be delayed or hastened, so that the fire may be smouldering and feeble, or active and intense; in either case the sum of the action will be the same. The reaction, or the effect on the coal, is to reduce its solid particles to the constituents of certain æriform bodies which pass from sight. If we consider only the heat evolved as the action, it finally disappears, as heat but gives us what we may fairly consider its reaction in the force which expands the stove, the air of my apartment, the capillaries of my body, and permits the warm blood to circulate freely and pleasurably in my veins. In yet another sense we may consider that the action was simply the chemical union of the coal and the oxygen, and its reaction heat and light; then the heat and light, starting as new forces, produce other reactions, which in turn may continue the series, to be further continued through infinite changes.

So, too, electricity, in the wider sense we have given the words, is but a full exemplification of the law; for all the cardinal phenomena of the force are expressed in attraction, which is action; and repulsion, which is reaction. Of course, the mechanical sense of the words is lost, for that has reference more to the effect of force on matter than to mere force. If we express the phenomena in the terms employed in the last paragraph, we should say that the action of the rubber developed the reactions, heat and electricity; the action of the electricity developed the reactions, heat and light; the action of the heat developed the mechanical motion of the bodies expanded by it, and so on. We will not weary the reader by pursuing the analogy further than to notice that in every case, if we can only gather the complements together, a definite amount of action has an equal amount of reaction in an opposite direction; so much chemical action, so much heat; so much friction, so much electricity and heat.

The reader has undoubtedly anticipated the next remark: that if the law has so wide a range

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in the material world its analogies may be carried still further. In certain conspicuous examples, that every one is familiar with, there is no need to tarry. If the reaction is not gradual, undue exhilaration may be followed by a corresponding depression; overwork by excessive stupor; burning zeal by freezing indifference; ardent love by deepest hate. Or, if the reaction in mental emotions is sudden, the effect will be utter prostration, if not insanity. If the reaction is gradual, or if it is expended on many objects, no such results will follow.

We wish to carry the thought still further into the ordinary details of life, and impress the fact that all excess is sure to meet with its corresponding reaction. The vital powers, whether animal, mental or spiritual, are capable of a certain amount of endurance, beyond which they can not be expected to resist. So far as their strength goes, they are able to counteract opposing influences, either so as to put off the day of final defeat or to subdue them altogether. The ordinary fatigues or excitements may thus be overcome, nay, even be a matter of victory, if they result in a stronger arm or a more vigorous purpose; but excess is ruinous. The strain is too great, and the reaction must come. A youth of debauchery and crime is followed by disease and misery. A life of excessive toil ends before its day. A life of idleness no less meets its reaction in vacuous age. If we sum up the analogies of this sort we shall be forced to see the reaction of excess. Just at this point there will come up the greatest difficulty in the practical application of the principle, namely, What is excess? Yet it admits of an easy solution. Whatever is unnatural is beyond nature, and is therefore an excess.

A dram of liquor is an excess if nature does not require it. The first dram is succeeded by the natural reaction, which is mere animal excitement, and the excitement has its reaction in headaches. The continuance in the practice of drinking liquor has no less surely its reaction in its countless well-known manifestations. There is no need to follow the theme, and trace the reactions of gluttony, of fashionable life, of midnight revels, of the criminal orgies of the gambling-hells and the stock-brokers' auction.

Everywhere the same lesson is taught. Avarice, envy, pride, an ungoverned will, an unbridled tongue, each has its peculiar reaction on the possessor, each leads him further from the path of duty and honor. On the other hand, he that governeth his own spirit is better than he that taketh a city. As a man soweth, so shall he reap. S. A. N.

A Case of Love Cured.

BY GEO. W. BUNGAY.

On the evening of Wednesday, the 16th of January, I had a lyceum lecture appointment in a town in the State of Wisconsin. Busy over my books in a warm room, I did not notice the sudden change in the atmosphere until I attempted to cross the yard leading to the college chapel, when Old Boreas threw his icy arms around my neck and garroted me, stealing my breath momentarily, and leaving me so little of my voice that it was difficult for me to speak. Stout men, and lovely women, and sweet children came to the meeting, notwithstanding the thermometer with its icicle finger pointed to a freezing point 28 degrees below zero. Two stoves sputtered, crackled and blazed away in the front corners of the chapel, and there the auditors gathered in groups until the blood had warmed to its natural temperature. I was near one of these ardent heaters, which made up in energy what it lacked in strength, when a young man stepped to the desk and filled a tumbler with water from a pitcher which contained water for the use of the lecturer.

At the proper time I was introduced to the audience, but the cold had so thickened my voice that it was with the utmost difficulty I could sculpture my speech into symmetrical sound. I looked at the pitcher with wistful eyes, but the man who had taken away the glass did not take the hint. That which was mere hoarseness at first soon became a croak, and I was about to sit down in despair, when a young man, whose face was as fair as a woman's, showed his womanly nature by furnishing me with the much-needed glass of water. A sip of the *aqua pura* was enough to give me a fresh start; but I had not proceeded far, when two or three of my personal friends began to whisper, and then they quietly withdrew from the chapel. I was annoyed, embarrassed and distressed. Were they ill? Had a fire broken out at their homes? Were they offended at my words, or disgusted with my hoarse utterance?

Halting in my lecture, I asked the chairman in a whisper the cause of the chill which now seemed to settle down upon the entire assembly. "A lady has fainted," was the reply. Glad to find that nothing more serious had happened, I plucked up courage and rattled away with my lecture, and was getting along bravely, when a tall young man put his head in at the half-open door and called for a doctor. This call fell like a sheet of snow upon me and my hearers. Had an epidemic broken loose in that neighborhood?

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Was the atmosphere of the room poisonous? Did my sentiments operate like drugs upon those who received them? Putting on a bold front, and bracing my nerves for the task before me, I dashed away at the rate of ninety words a minute, and was doing well, when some ill-mannered boys took it into their little shallow heads to go to the side windows and see the work of the wind-artist, whose figures were carved in the snow. My good nature gave way under this last snow-flake upon my burden, and I gave a rebuke which restored order at last. It was through much tribulation that I reached the end of my lecture. When the audience was dismissed, I found that the lady who had fainted just before I commenced to speak was still lying in an adjoining room. She was in the arms of the stout brother who had called for the doctor. Another brother and a sister were present, with several neighbors, and last, but not least, two doctors. The latter were men of average intelligence in their profession, but they did not know what ailed their patient. She was in convulsions most of the time, and fit followed fit in a most alarming manner. When I entered the room I suggested that the atmosphere was bad; there was mixed with it an odor of chloroform, which had been poured upon the patient's head. I touched her pulse, and at her request held her hand, as another fit was coming on. One of the doctors, thinking I was a physician, became jealous and angry, and remarked in a whisper to some one in the room that the case was not in his hands, and that he would now withdraw and have nothing more to do with it. So he left the room in disgust and returned to his office. The other physician was his partner, and he had a little more foresight; indeed, he seemed to have almost the vision of a seer, as the sequel will show. He knew that I had not objected to their medications—that I had not made any suggestions, even in relation to the case, and he soon made the discovery that I made no pretensions to a knowledge of the practice of medicine; but his partner obstinately held to his stubbornness, and refused to visit the patient at her house the next day. I did not intend to be "bluffed" from my purpose by the nervous jealousy of the over-sensitive doctor, so I paid the patient a visit the next morning. She had spent a sleepless night. Opiates failed to woo the Lethean visitor to her pillow. She was a severe sufferer, and was sinking rapidly under the sudden attack of illness. In conversation with a friend I discovered that the patient and her lover had just been conducting a querulous correspondence. They had one of those "love spats" so natural to sensitive and finely organized persons. Their letters had been written with porcupine and not with dove quills, and the very day on which she had the fit the most severe letter of the lot had come to hand.

The history of the love affair finally reached the ears of the doctor, and, like the wise man he is, he said: "Telegraph to her lover to come here; his presence will do her more good than my medicines." The tall brother, who had called for the doctor before, called for the lover now, and he came at the call as fast as the steam steed could carry him. His visit had the desired effect; explanations were made, old vows were renewed, the fits disappeared as ghosts do at the break of day, the time for the nuptial ceremony was "fixed" upon, and before this can appear in type the accomplished young lawyer and the beautiful patient will be man and wife.

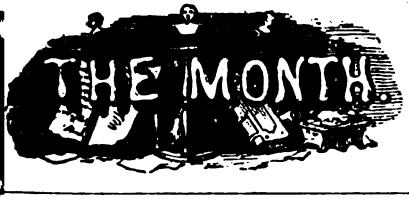
I shall not attempt to diagnose this case. It was a dangerous physical malady growing out of disappointment in love. The young lady was 18 years of age, a perfect type of physical beauty—tall, straight, symmetrical—and her handsome features were tinged with the roseate color of health. The excitement of disappointment caused a rush of blood to the heart, and exhausted nature gave way in a fainting fit. For my part, I believe in love, and have no doubt that broken hearts often result in severe sickness and premature death. Love is a panacea for broken hearts. It is more potent than any potion the most skillful doctor can administer. Washington Irving said he never knew of but one man who had a broken heart, and that he broke his heart lifting a grindstone. But Irving was an old bachelor and a humorist, and even he did not intend to leave the impression upon the mind that love did not affect the health and happiness of the human race.

A Man on One Meal a Day.—The Temple Bar says that Dr. George Fordyce, the anatomist and chemical lecturer, was accustomed to dine every day, for more than twenty years, at Dolly's Chop House, in Paternoster Row. His researches in comparative anatomy had led him to conclude that man, through custom, eats oftener than nature requires, one meal a day being sufficient for the lion. He made the experiment on himself, and finding it successful, continued the regimen.

It is strange that some men hate vice and are vicious, love virtue and do not follow it!

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General Topics of the Month.



NEW YORK, APRIL, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ The Publishers *do not hold themselves as indorsing every article which may appear in* The Herald. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

BY M. L. HOLBROOK, M. D.

Weak Backs and Sides.—The two illustrations (Figs. 1 and 2) which are here introduced, are intended to illustrate two very different states of development of the muscular system, and particularly of the muscles of the sides and back. The first one shows a



Fig. 1.

normal state of these parts and is what we ought to find in all grown persons. The other is what may be seen in most people and is an exact outline of the form and size of waist taken from a recent fashion-plate monthly. The first shows a strong back and strong sides; the other shows weakness and deformity. The first shows an outline of body and limbs of which the owner might have been proud; the other, one of which the possessor should have been ashamed. The one is not likely to get out of order; the other is weak and never in good working condi-



Fig. 2.

tion. The first shows a well grown, well cultivated back and side; the other, one that has been nipped in the bud and growth prevented. Fig. 2 shows what is the condition of a very large number of people in all educated societies. Weak backs, and sides, and chests, are so very common that they are the rule and not the exception. Women are not the only persons who complain of them, for they are inherited from the mother and are often a source of great suffering in the male offspring, and we have seen very many cases which seemed never likely to become outgrown. This defect is common among nearly all whose habits of life are such as to allow of deficient and unequal action of the muscles of these parts. Generally, this unbalanced and deficient action of the chest and back produces much pain and suffering as well as weakness. The pain arises from the point of muscular attachment to the bones, these parts being more sensitive than the rod muscular tissue.

Many persons trace a weak back and chest

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to a severe and violent strain, but it is more likely to occur in persons who exercise too little than in those who work hard and do heavy lifting. It is true that these weaknesses often occur as the result of violent exertion, but rarely as the result of regular and systematic labor, even regular but hard lifting strengthens these parts, provided it is practiced carefully. By far the largest part of all weakness of this part of the body is the result of imperfect muscular education in youth and much sitting, particularly where there is confinement of the parts by bad methods of fastening the clothing about the hips, so as to impede the circulation of the blood and prevent a free and full movement of the muscles. School girls almost always complain of backache, because their backs and sides are so badly dressed, because there is so much sitting and so little muscular effort. If they were all obliged to spend a part of each day in the gymnasium lifting small weights, performing healthful gymnastic feats with dumb-bells and other apparatus, they would not thus suffer. The hothouse culture we have so much of is running out the race of strong women and mothers of large families, and physically deteriorating American people, so that health and strength is the exception and not the rule. Largeness and strength of the muscles of the chest and back indicate power to endure, to live long and to become the progenitors of strong children. "Back bone" is but another expression for "a good muscular system." A strong chest is generally accompanied with a healthy state of the nervous system, at any rate, the nerves are less likely to become disordered when the spine is erect and all the muscles attached to it free from sensitiveness than when it is the reverse.

Weak sides and general weakness of the abdomen and chest are too often the premonitory symptoms of dyspepsia, consumption and early decay. This low development of the muscles ought to be guarded against most carefully. It is often laid in very early life. Children whose limbs are small, the texture of whose tissue is flabby, and who in any way inherit a tendency to excessive nervous development over the physical, can only have good chests and backs by careful management. Give them a chance and they will outgrow the weakness, but undertake to educate them in the usual method and they will most likely perish. Such children can not vegetate too much; they can not have too much air and sunshine. These, with wholesome food, are the great elements which promote growth. Children often, where their nerves are excitable and their brains active, become so enthusiastic in playing with their mates as to overtask themselves and lose flesh. Such children should be kept more quiet; let them go much with their parents, if in the country, to the fields and gardens, and indulge in the more quiet ways of amusement. A clean, healthy, good-natured dog is often a better playmate for a child than a companion of his own species. Sleep and quiet, without confinement or restraint, are worth every thing to such children. This treatment of children is calculated to help them outgrow that condition, which in after life is likely to be accompanied by muscular weakness of the spine and chest. There is, however, a large number of persons who are constantly troubled with pain in the back, muscular weakness along the spine and in the sides and chest. They are the victims of a false system of education or of bad habits of body. They should be careful about taking violent exercise, and yet they should commence

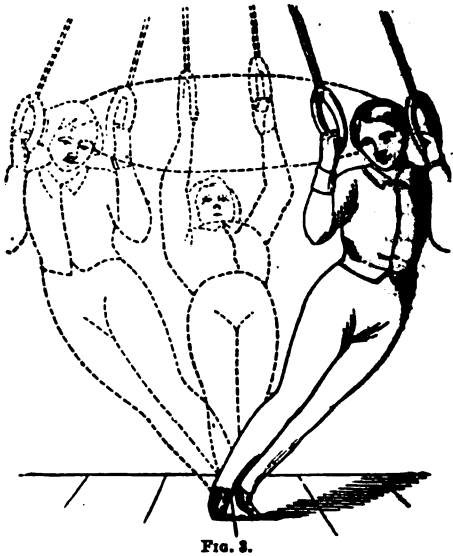


Fig. 3.

a system of physical training calculated to give relief. Too much sitting will not do. Frequent changing of position will be found highly useful. All clothing which in the least impedes a full respiration or the ability to move the arms easily in all directions should be prohibited. Most people, and particularly women, dress too tightly about the arms, so as to prevent their putting them up perfectly straight over the shoulders. So far as exercises are concerned, they should always be taken when the clothing is in part removed or else there should be a suit used for the purpose, one which is appropriate and allows perfect freedom of movement. The exercises at first should be mild, and it is perhaps

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best that they should be passive. Let the back and sides be carefully rubbed five or ten minutes each day by a strong attendant, when the patient is taking a tepid sitz bath, and in nine cases out of ten very great relief will follow. As soon as active exercises can be endured, the lifting of light weights very slowly will prove useful. They might profitably be increased gradually as the patient can bear it. In addition to this, the circular exercise on the Pangymnastikon (Fig. 3) is one of the very best that can be devised. A regular daily use of this exercise would do much to render the muscles of the arms, shoulders, sides, back and chest flexible, prevent congestion and weakness at the points of muscular attachment, and restore the health. Persons who are liable to have consumption will find this exercise a valuable preventive. We too often attribute consumption to weakness of the lungs, when it is really caused by weakness of the muscles of the chest, and whatever will tend to develop and strengthen these will prevent and in its early stages sometimes cure it. There are a multitude of exercises which will prove advantageous. They may be invented to suit the particular case, but what is better, prescribed by a physician who has made exercises a special study, as, for instance, those who understand the Movement Cure and gymnastics. No medical education is complete that does not include these branches of study, these hygienic agencies. It is wrong that they are not taught in our schools and colleges, and that they are not held in high repute and considered necessary as a part of our medical education. There is more virtue in rightly-directed exercise than in all the drug-shops of the world, but unfortunately few medical men know how to prescribe them. They think it sufficient to advise walking, riding, sailing, etc., as the case may be. It would be full as sensible to prescribe drugs in the same way. As long as this state of things continue, invalids will be drugged when they should be physically educated, because no other plan is known. We do not write this in derogation of the medical profession. They spend years and years in study; they go through years of preparation, and study to become thoroughly posted in the treatment of all manner of diseases; but very often, as is the case now, some of the most valuable aids to the treatment of disease are not taught in medical colleges at all, and students are obliged to go elsewhere to learn them, a thing unfortunately too few of them do. There is, however, a better time coming, and we believe our children will live to see it. The world is moving!

IMPROVEMENTS IN MEDICAL EDUCATION.—The Commencement exercises of the medical colleges of all schools of medicine, have mostly been held during the month of March, and it is very appropriate that something be said just now upon the subject of improvements in a medical education. It seems to us that there is not a medical school of any pathy that is sufficiently comprehensive to meet the wants of the spirit of the times. We do not mean to say that a long enough term of study and a sufficiently extensive list of subjects are not required to be mastered, but that there are many special branches of medicine which have been developed, which they omit entirely; or, if they do not omit them, barely hint at them, and these specialties are often, perhaps always, of more merit than many branches that medical students are required to master. We do not know of a medical college where there is a professor of Hygiene, whose duty is to teach thoroughly the best method of preventing disease. What doctors know on that subject they must pick up from random study. Nor is there any attempt made in any school that is worthy of the name to teach, in a scientific manner, the value and right use of hygienic agents in the treatment of disease, either as a help to drugs or as superior to them. There is no hygienic agent but has great value in the treatment of disease. Take exercise, for instance. Doctors of course know its value, but why is not the right use of it taught systematically in the course of a medical education? The Movement Cure alone is now acknowledged to have a high value in treating nearly all chronic diseases; more can be done with it in producing healthy changes in the body than by any drug, and yet to learn any thing of its right use we must go outside of the medical college. The same is true of gymnastics; so in regard to bathing, it ought to form a distinct feature of a medical education, no matter of what school; but the complete use of all sorts of baths, and the value they have in treating the sick is usually passed over in silence. The same is true of nearly all hygienic agencies; indeed, there is about as much known which is of the highest value to the physician that pupils must go outside of the medical college to learn, as there is taught within its walls. It is useless to say that these specialties are not important, for they are generally thus recognized by many of the best of the profession. Then why are they not taught? We wait for an answer.

There is now some agitation in the public mind in regard to founding a new Medical

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School as a branch of the Cornell University. The idea is to make it different from any medical college in existence, and instead of having it Allopathic, Homœopathic, or any other pathic, it is designed that it shall give its pupils the advantages of all the best things of all schools of medicine. Such a school, if carried out according to the letter and spirit of the idea, on a liberal and comprehensive scale, would be a great success and advance materially the cause of medical science, but, it will not be complete unless it provides for Hygiene and embraces the latest improvements in treating the sick.

Good Bread.—Dr. M. Cormac, in writing of the superiority of bread made from unbolted meal, says:

"The disuse of whole meal bread I esteem a positive drawback in our civilization. I do not think that there is an adequate consumption of the food that the grasses, the pot-herbs, and the beans of pulse, which God bestows on us, are so well calculated to yield. Our principal, and really very imperfect substitutes for the productions of the vegetable world, are wheaten bread and potatoes. Potatoes, to be sure, are a great stand-by, but they are not enough. And, then, in the spring months they deteriorate very rapidly, and no longer constitute a desirable exclusive or even partial nourishment. Wheaten bread, then, is our great resort. It has come to be the principal representative of the vegetable world. Wheat is a great, nay, an admirable gift of Providence. But we vitiate that gift by our own improvident and injudicious management. Loaves, to save room in the oven, are crammed close together in the act of baking. The consequence of this is that the oven is overheated in order to strike down through the mass of paste. An immensely thick and hard crust is formed at the top and bottom of the loaf, while the rest of it is most undesirably left without any crust whatever. Now, loaves should be crusted all over. The bread would be much better baked, the top and bottom crusts would not be so hard, and the loaf would prove at once more wholesome and palatable. I will not enter here into the consideration of moldy bread, and of bread with excess of water, and it is all too watery. Nor shall I speak of the various adulterations or perversions to which dishonest persons have had recourse for their own profit and to the public bane. I here wish merely, or at least principally, to dwell on the great evil of omitting the bran in the confection of bread. By leaving out the bran we injure the bread's efficiency, we lose a noteworthy portion of azote as well as a considerable amount of the phosphates, both of them of the utmost moment, even when bread is but a partial ingredient in the general nutriment, but yet much more so when, as in the case of hard-working men and women, as well as children, it constitutes the principal sustenance.

"Owing to the absence of the bran, habitual constipation among those who mainly consume such bread ensues. And owing to the partial absence of nitrogen and of the sufficient phosphates, the body is not adequately supported. Habitual dyspepsia and debility, and in females amenorrhea ensue, and the whole system, along with the bodily powers which ought to sustain that system, deteriorates. The evils which thus accrue from this wretched, ill-baked, watery bread, alike deficient in nitrogen and the phosphates, eaten as it commonly is, three times daily, I really have no fitting terms to describe."

The whole subject of bread making is an important one, and it is our intention to discuss it at length in these columns during the coming volume.

Physique of our Senators.—A Corresponding Member of the Philadelphia Academy of Natural Sciences has been taking the measurement of members of the U. S. Senate, including their height, weight, size of chest and measurement of the head. It appears from this table that twelve of them weigh over two hundred pounds each; fourteen are over six feet high; thirty-one are more than fifty years old; nineteen measure over forty inches round the chest, while thirty have heads measuring twenty-three inches or over. Compared with other men, they are two and a half inches taller, weigh twenty-six pounds more, are four and a half inches larger round the chest, while their heads are five-sixths of an inch larger round. Their average age is fifty-one years, while men generally do not live more than thirty-three years. These figures are very interesting, and show that large men generally live longest and are most apt to rise to position. Some of the members are, however, very much below the average. The head of Senator Lane of Indiana measures only twenty-one inches; Mr. Riddle weighs only one hundred and seventeen pounds, while his head is twenty-three inches round. We should like to give the table in full, but

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have not the space, and must content ourselves with giving the measurements in full of Charles Sumner, who is six feet three inches high, weighs two hundred and four pounds, measures forty inches round the chest and twenty-three inches round the head; and B. F. Wade, well-known as the Senator with plenty of backbone, who is five feet eight and three-quarter inches high, weighs one hundred and eighty-five pounds, and measures forty-one and a half round the chest, and twenty-three inches round the head. If these measurements had been extended, as they might have been, they would have been more complete. Who now shall measure carefully as many prominent farmers, doctors, teachers, clergymen, merchants, clerks, tailors, shoemakers, etc. We should like to gather statistics of classes for publication.

BAD FLOUR.—The revelations which are being made by a few persons in New York, whose attention has been called to the subject of bad flour, are quite startling. A few years ago the subject of bad milk was pretty thoroughly discussed, and the fact demonstrated that a good deal of adulterated and diseased milk was sent to the New York market. It is now declared that very much of the flour in market is from damaged grain, and that it is very frequently adulterated with some poison which will apparently hide its poor qualities. The necessity of pure food, if we would have pure blood and strong frames, is so apparent that the evil becomes one of great magnitude. For ourselves and our patients we have long ceased to use New York flour, preferring, at great expense, to get it ground from the best wheat in country mills, where adulteration is no profit. But for the poor, who can not do this and who are the principal sufferers, the case is a hard one. There is no way to remedy this state of things but to improve the honesty of tradesmen and dealers. As long as it is considered no sin to sell poor flour, a majority will do it. Any honest man who will open a depot in New York where only pure and good flour shall be sold, and who will advertise and make his business known, will make a fortune. What would be better yet, would be the invention and general use of a steel mill which should cost but a few dollars, take up little space, and grind any kind of grain fit for every purpose required. Then every family might buy their own wheat and become their own millers. It need not have a bolt attached, as the whole grain is more nutritious and healthful than when the fine and the coarse parts are separated.

THE GOURMANDS' CLUB.—There has recently been established in Paris a Gourmands' Club, where the rarest dishes are to be served up at small cost. Certain old gourmands who had ruined their digestion, thinking this club was one which would be of advantage to them in allowing extensive gluttony without its penalties, applied for admission, but their dyspeptic stomachs forbade them much enjoyment, when they desired of the president to find them an appetite, whereupon they received the following queer prescription: "Take," says he, "a bath the first thing in the morning; after which, while walking about your room, drink two or three glasses of mineral water; a couple of hours afterward take a basin of bouillon with some bread in it, and a glass of good wine. Then go out and visit your friends. At 4 o'clock eat a biscuit and drink a glass of madeira; resume your walk, and at 7 o'clock dress for dinner, when you will find yourself able to eat an entire leg of mutton and more."

This, it is believed, will give a gourmand an appetite, but it all seems very strange to sensible minds. Enjoyment of food is all very proper and desirable, but this only comes in the highest sense by industry, temperance and moderation. No gourmand ever enjoyed his dainty fare half so well as an industrious, temperate, healthy working man or woman, and none ever will.

THE WATER WE DRINK.—The London Journal of Pharmacy contains some valuable suggestions on the "Water we Drink." We make room for a few paragraphs:

"1. All water that has received drainage containing animal and vegetable matter in a state of putrefactive decomposition, and especially excrementitious matter, either is or is liable to be in a state unfit for use as drinking-water, and the chemist can not determine by analysis whether the dangerous state exists or not.

"2. All rivers necessarily receive drainage, and they are generally contaminated with sewage and other decomposing organic matter which may render the use of such water injurious to health.

"3. Shallow wells situated in large towns ar subject to pollution from infiltration, from leakage of sewers, and other similar causes, and as these waters are stagnant, the organic matter present, if it has not passed, is liable to assume its most dangerous condition.

"4. Spring water, when favorably situated, is free from suspicion of its containing or-

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ganic impurity that could prove injurious to health.

"5. Rain-water if properly collected and stored is the best and safest water to use for domestic purposes, and especially for drinking.

"6. In the absence of rain-water or good spring-water, the best and most palatable water should be selected from other sources, choosing that which is most free from organic matter, and which has been least exposed to sewage contamination. In order to guard as far as possible against the influence of living germs, by which it is supposed that disease may be propagated, it is recommended on the highest authority that when water to which a suspicion attaches is used for drinking purposes, it should be previously boiled, the heat of boiling water being destructive to the vitality of such germs. A supply sufficient for the day should be daily submitted to the boiling temperature, and this, after it has cooled, may be rendered more palatable by the addition of a little juice of lemon."

IRRITABILITY AND MEAT.—Mr. Beecher, in one of his recently published sermons, makes the following allusion to the relations between a healthy stomach and a good temper: "I have known men who prayed for the grace of good temper in vain, until their physician proscribed their eating meat; for they were of a peculiar temperament, that could not endure such stimulation. So long as they ate animal food they could not control themselves, they were so irritable; but as soon as they were put on a farinaceous diet they were able to keep their temper. They sought in prayer relief from their irritableness. Their physician by the aid of science, revealed to them the cause of that irritableness, and their prayer was answered. They were not unwise in praying; but they were wise when to prayer they added medical advice. It is quite in vain for you to pay for a tranquil spirit, or a genial, hopeful spirit, when your organs of digestion are out of order. Not that one that is suffering from sickness should not pray for health; but prayer is to be conjoined to diet."

APOTHECARY WOMEN.—The English people think they have made a wonderful stride in progression, because three young women recently passed a preliminary examination in arts, at the Society of Apothecaries in London, by the side of thirty or forty of the opposite sex. They are not physicians, or surgeons, but have a simple license to do certain things in medicine, more particularly to become apothecary women, or, as The London Lancet has it, apothecareses, which means: one who practices the art of preparing, compounding, preserving, keeping and selling medicine. This profession in England comprises the most numerous class of medical practitioners, and, of course, these young women will have more or less to do with prescribing for the sick. It is infinitely better, however, to allow them to become thoroughly versed in all that pertains to their profession, instead of granting them the privilege of dealing out drugs; an art which is, we hope, soon to be superseded. Women, instead of seeking this position, should seek to become thorough Hygienists, versed in anatomy and physiology, and all the laws of the body, and the right use of all the hygienic agents. Every woman should have this knowledge, whether she practices the healing art as a profession, or only as becomes a wife and mother. It is of much more importance than a knowledge of pharmacy, and we believe if intelligent women would become well educated in this particular, as a few are doing, they would meet with pecuniary success, and soon do away with both the profession of apothecary and drug-doctor.

LETTER FROM DR. DIO LEWIS.—DESSERT. LEXINGTON, Mass., *March* 13, 1867.—MY DEAR DR. HOLBROOK: I have kept up for several years a series of observations upon the influence of the last course at dinner—the dessert. I am confident that its abandonment would materially contribute to the health of our people. Without this addition we are overfed; with this, we are half the time on the verge of a fever. If its omission would seem niggardly, let it come first in the meal. This expedient is satisfactory even to the most greedy, and reduces the amount of food craved fully a quarter.

Yours truly,

DIO LEWIS.

THE day-laborer, who earns with hard hand and the sweat of his face coarse bread for the wife and children he loves, is raised by his generous motives to true dignity; and though wanting the refinements of life, is a nobler being than those who think themselves absolved by wealth from serving others.

IF thou art rich, then show the greatness of thy fortune; or, what is better, the greatness of thy soul, in the meekness of thy conversation; condescend to men of low estate, support the distressed, and patronize the neglected. Be great!

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Miscellaneous.

Medical Reminiscences of N. P. Willis.

NO. I.

BY J. B. F. WALKER, M. D.

THE late poet, whose name stands at the head of this article, although widely known to the world as a man of letters, was withal a health reformer in the highest sense of that term. He was born in Portland, Me., on the 20th of January, 1806, and died exactly on his sixty-first birthday. He inherited a good constitution, both of his parents being healthy; his father still living in Boston, upward of ninety years of age. For at least twenty years of the latter part of Mr. Willis's life, he was in ill health, but with that perseverance char acteristic of the man, he continually fought against it, and with a success deserving of every commendation. He was never what may be called a strong, robust man, able to bear any amount of physical and mental labor; he had greater spirit than his physical organization would sustain, and often found himself obliged to give up pet projects, simply because he was not able to execute them. While abroad he was compelled from this cause to discard many of his plans; but he bore his numerous ailments with fortitude, and always treated them as lightly as possible, often making them the subject of jest and fun. Not only was he a martyr to the agonies of sharp and sudden attacks, but he suffered all the languors of chronic disease. With the exception of Henry Heine, there has hardly been a man of letters doomed to such protracted torments from bodily disease. It required the genuine elements of heroism to bear up under such a load of infirmities; he had more courage and fortitude than most invalids possess, and as his experience with the medical profession, and the various appliances of the healing art was extensive, necessarily so from the position which he occupied in the world, we may well study the conclusions he arrived at, drawing such lessons from them as shall be of practical benefit.

The writer of this article enjoyed for some years a personal acquaintance with Mr. Willis, and upon more than one occasion was called upon to act as his medical adviser. It was often an expression of his, that he intended to die "with the harness on," working at his profession, as Editor of The Home Journal, as long as mind and body were able to control the pen. For many years he continually anticipated death, but he toiled on to the last, "coining his brain for bread," and only consented to be removed from his city residence to Idlewild when the doctors pronounced him in a dying condition. This vigorous persistence was one of his personal traits of character, which his friends can dwell on with the warmest satisfaction; it was more than half the battle of life against disease and death, and should be imitated by all invalids.

Having had his attention directed for so many years to the subject of invalidism, we find in all his writings more or less matter which pertains directly to the laws of life, and the best methods of warding off or overcoming disease. The columns of The Home Journal were open for the discussion of these subjects from the pens of such medical writers as had any thing to offer, and Mr. Willis frequently prefaced their articles with remarks of his own, thus showing the deep interest he took in them. From the position he and his journal occupied, the influence thus exerted must have been wide-felt and productive of an immense amount of good. All true lovers of health reform will be grateful to him for the good accomplished in this direction.

MR. WILLIS'S THEORY OF LIFE.

To live as variedly, as amply, and as worthily as it was possible for his human faculties, while upon this planet, was his aim. Keeping this rule always in view, we find his writings full of sparkling gems when he touches upon his own health, or that of the American people. Writing from Idlewild in 1854, in the spring-time of the year, he says: "Ah, could this sweet re-June-venescence of stream and foliage be copied by our country's flesh and blood—a country in which people grow old faster than in any other, and where, instead of repeating our life of youth, we autumnify in summer, and winterify in autumn, omitting seasons with a diseased hurry in which there is no justice to fruit or seed! And, as to the Indian summer—green old age—it blossoms in Europe, in every homestead, though denied to their climate. We have it in our climate—but we have no second summer of parents and grandparents, blooming in vigorous and hale renewal, tranquil and venerably beautiful, after life's stormy equinox of care!"

There is much good health philosophy in learning to be self-content "So it is!" exclaims Mr. Willis, watching the brook at Idlewild. "Take summer from us—stream or man—and, 'with the winter of our discontent,' comes a strengthening of the floods within us, these again stilling and lessening with the return of more genial surroundings. Come, brother brook! let us murmur contented along! What

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we lose in one season, we gain in another—the lonelier and colder around, the louder and prouder in ourselves—the weaker, the stronger—the drearier, the more clothed with music and majesty of our own."

HIS FONDNESS FOR THE OPEN AIR.

"October's dying day was a Sabbath of profound beauty," he writes. "I drove along the Hudson, a mile or more—taking wife and children to church—and, with the last note of the bell, stood tying my horse to the fence. Ah! thought I, as I looked around, that little church is but a chapel within a vast cathedral—the Hudson a broad aisle, the Highlands a thunder-choir and gallery, Black Rock a pulpit, and a blue dome over all—and lo! Nature, in her surplice of summer, ready to preach the sermon! Why not do my worshiping out of doors? I have always found it easier to be devout when pacing slowly, than when sitting still. I should pray better, even in a church, if I could walk the aisle, instead of remaining motionless in a pew. 'The groves were God's first temple,' and it was, perhaps, because men could there walk and pray that the early saints were more pious. The more the body is pent up, the more thoughts wander, is a common human experience, I believe—truer even of pews than of prisons."

In his "Letters from Idlewild," we find the following excellent remarks about open-air exercising: "Avoiding out-door air for the hour about sunrise or sunset, there is no danger even to invalids in exercising in the night air, if the exercise be sufficiently vigorous to keep off a feeling of chilliness. This should be the rule in all forms of out-door exercise, and is an infallible preventive, as far as my experience extends, against taking cold in any and all weathers, provided it be not continued to over-exhaustion or decided fatigue. Such exercise can never give a cold, whether it rain, or sleet, or snow, unless there be some rare peculiarity in the constitution. It is the conduct after exercise which gives the cold—the getting cool too quickly—by standing or sitting still in a draft of air, or at an open window, or in a cold room. The only precaution needed is to end the exercise in a warm room, and there remain until rested and no moisture remains on the skin. With the above precaution you need not be afraid of out-door air, night or day, as long as you are in motion sufficient to keep off a feeling of chilliness. Confinement to the regulated temperature of a room, in any latitude, is certain death, if persevered in. The great object is, useful, agreeable, profitable employment, in the open air, for several hours every day, rain or shine, hot or cold; and whoever has the determination and energy sufficient to accomplish this, will seldom fail to delight himself and his friends with speedy and permanent results. If working or walking causes actual fatigue, then horseback exercise is the best for both sexes."

ELECTRICITY, EAST WINDS, AND FIR TREES.

Mr. Willis was fond of his mountain home, where he was sheltered from the raw east winds of the coast, so unfavorable to some constitutions; he loved the mountainous hiding places of electricity with their peculiarly salutary and invigorating air. He writes: "I have passed a whole winter on this Highland terrace daily on horseback, and riding constantly over its ten mile surface, without once feeling any thing like the depressing and searching east wind so poisonously uncomfortable at Boston. An out-of-doors where there is no windy weather and no naked trees—a fir-glen, such as may be found, makes a home for an invalid, with 'the North' very materially softened. The eye needs its medicine. Surrounded by evergreen woods, we look out upon perpetual summer, as to foliage; and it is healing, even to the lungs, in December, to need reminding, half the time, that it is not June."

COMFORT FROM A TADPOLE'S TAIL.

With an ingenuity worthy of his genius, he extracted a grain of comfort for the invalid from sources where others would fail to discover any. "It is in the structure and physical development of the frog, by the way," he says, "that we have the most encouraging and interesting proof of progression as a law of Nature. No other animal has such wonderful changes in his actual body, and in a single stage of existence. It is hard not to be skeptical as to the disposal of a monkey's tail, for instance, if he is to become a man capable of salvation, or as to the changes that must take place in some men before they can be any way passible as angels—yet how much easier it is to conceive what improvements may take place in the worst and ugliest of us, when we read in Natural History that "the tail of the tadpole is gradually absorbed!" To the maimed, the deformed, the crippled, the amputated, the unlovely—this is surely an analogy with comfort in it. That which is unheavenly about us is to be 'gradually absorbed.'"

THERE is nothing upon earth more miserable than she that has a son and sees him err.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Diseases of the Kidneys.—The kidneys are classed among the excretory organs of the body, their function being to eliminate from the blood certain poisonous substances in the form of urine, which, if allowed to remain in the system, would be destructive to life; for if the action of the kidneys is entirely suppressed, death will take place in the course of three or four days.

The kidneys are the seat of some fifteen or twenty different diseases or disturbances, all of which seriously affect the general health, while some are exceedingly dangerous to life.

Among the most important of these diseases are congestion; nephritis, or inflammation of the structure of the kidneys; pyelitis, or inflammation of the pelvis of the kidney; perinephritis, hydronephrosis, acute albumenuria, Bright's disease, hydatids, calculus, polyuria, or diabetes insipidus; glucosuria or diabetes mellitus, abscess, renal tuberculosis, cancer, movable kidney, fatty, and waxy kidney, etc.

Before proceeding to a consideration of the causes, symptoms, and treatment of diseases in these important organs, it will be well to become somewhat familiar with their anatomical structure and physiological action.

The human body has been wisely and beautifully arranged, so that the two sides are very nearly duplicates of each other, almost all the organs of one side being mated by their fellow upon the opposite side; the principal object of such an arrangement is doubtless to provide against entire loss of action, for if from any cause one organ should be rendered useless, its mate would perform the function essential to the processes of life. This arrangement of the organs in pairs extends, with few exceptions, from the crown of the head to the soles of the feet. We have two brains, two eyes, two ears, two hands, two legs, two kidneys, etc.

The kidneys are placed in the back part of the abdominal cavity, behind the peritoneum, upon each side of the lumbar vertebræ, extending from the eleventh rib to the upper border of the pelvic bones; the right one is a little lower than the left, to give room for the liver above it, and on this account it is a little smaller.

By standing erect and placing the palms of the hands upon the back, so that the index finger will rest upon the crest of the pelvic bones, the fingers will cover the kidneys.

Each kidney, in the adult is about four inches in length, two in breadth, and one in thickness; the weight in man varies from four and a half to six ounces, and in woman from four to five and a half ounces—the left generally weighing about two drachms more than the right.

The anterior surface is convex, and the posterior flattened; the upper extremity is thick and rounded, and embraced by a small body called the supra-renal capsule; the lower extremity is small and somewhat flattened. The external border is convex and is directed outward; while the internal border directed toward the spine is concave, and presents a deep notch called the hilus of the kidney.

The vessels of the kidney make their entrance and exit at the hilus. These vessels are the renal artery which conveys the blood from which the urine is eliminated; the renal vein, which carries the blood away after the urine had been taken from it; the ureter, or excretory duct, through which the urine is conveyed to the bladder; the renal nerves, and the lymphatics.

The hilus leads into a hollow space called the sinus, which occupies the interior of the gland.

The kidney is enveloped by a firm fibro-elastic membrane, and if it is cut through from its convex to its concave border, it appears to consist of two different substances, an external or cortical, and an internal or medullary substance.

The cortical or external portion is composed of a mass of convoluted tubuli uriniferi, blood-vessels, lymphatics and nerves, connected together by a firm, transparent, granular substance, which contains granular cells; it is soft, reddish, easily lacerated, and contains numerous small red bodies, called Malpighian bodies, after the name of their discoverer.

The medullary portion consists of from eight to eighteen pale, reddish-colored, conical

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shaped masses, called the pyramids of Malpighi; the base of each pyramid is toward the outer surface of the kidney, while the apex points toward the sinus, and terminates in a smooth extremity called the papilla. Each of these pyramids is composed of a large number of minute tubes, the extremities of the uriniferous tubes, which are separated from each other by capillary vessels and an intermediate substance composed of cells.

The pelvis of the kidney is a simple expanded sac, with three calyces, one at the upper, one at the middle, and one at the lower portion. Into these calyces the papilla or apices of the pyramids point, and the terminating end of the tubuli uriniferi empty their contents. The pelvis terminates in the ureter, which conveys the urine to the bladder.

Thus we see that the renal artery, which is a branch of the aorta, conveys the blood through the hilus into the sinus, at the bottom of which it divides into four or five branches, which pass into the organ, between the pyramids of Malpighi, and, dividing and subdividing, they are at length looped upon themselves to form little tufts; these tufts, enveloped by a capsule, form the Malpighian bodies, the capsule being the commencement of the uriniferous tubes; these tubes are convoluted, so that, although they are of a considerable length, they occupy but little space; the artery, after having formed the tuft, passes on and ramifies around and among the convoluted tubes, and finally terminates in veins which conduct the blood back to the heart.

The fluid portion of the urine is excreted in the Malpighian body; exuding from the tuft into the capsule, while the solid part is secreted by the convoluted portion of the tube, being taken from the blood epithelial cells, which line the tubuli uriniferi, around which the arteries form a complete network. These tubes become straight as they approach the Malpighian pyramids, and unite with each other, thus becoming larger as they near the extremity; though, comparatively, they are still very minute, for the number which open at each papilla is about a thousand. The urine oozes from these little orifices into the pelvis of the kidney, and is conveyed thence by the ureters to the bladder.

The blood in the renal veins is unlike that in other veins of the body, for its impurities having been taken out, it is nearly as light as arterial blood.

A thorough chemical and microscopic analysis of the urine will furnish evidence as to the character of some of the diseases of the kidneys, and also of many diseases of the general system; being acquainted with the constituents of healthy urine, we can easily tell when there are variations, and what condition of the system those variations indicate.

Healthy urine has a specific gravity of about 1020, and is composed of water 956 parts, and solid matter 44 parts in 1000; one-third of this solid matter is urea, and the other two-thirds is composed of urates, phosphates, chlorides and sulphates, with mucus, creatine and coloring matter. These constituents vary somewhat, according to the kind and quantity of food and drink taken and the amount of exercise, sleep, etc., and by changes in the w
in a healthy condition, these variations are very slight; in certain diseased conditions we find some of these elements greatly in excess, and some substances are often found which are not obtained in a state of health.

In diabetes mellatus we have an excess of sugar; in Bright's disease, and some inflammatory conditions, an excess of albumen; in other conditions there is an excess of phosphates; in others still, of chlorides; all of which are readily indicated by a careful examination of this excretion.

Most acute inflammations of the body give rise to a congestion of the kidneys, when albuminous deposits are thrown off.

Nearly all the medicines taken internally are found excreted by the kidneys in the urine; these organs being nature's great safety-valve for removing the poisons from the system; medicines often produce great irritation in the kidneys, and lay the foundation of serious diseases.

Dr. Dalton says that in thirty minutes after the administration of half a drachm of iodide of iron, iodine appears in the urine, and continues for twenty-four hours. Quinine, ether, saline carthartics, opiates, calomel, and other drugs, have been detected in the urine. When the liver is so deranged that it does not eliminate that substance, the bile eliminated is often found in the urine also.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

Sunlight and Sunshade.—It would seem that the ladies have a particular dislike for sunlight, for they remain most of the time shut in from its influence, with curtains closed to keep it from fading the carpets, while for the want of it they themselves fade and become weak and sickly, like the plants which grow in the shade, and are never kissed, and colored, and strengthened by the life-giving rays of the sun. If perchance they venture out into the open air and sunlight, they dare not go without carrying a shade to keep the sun from tanning their "lily white" cheeks, just as though pale and sickly looking countenances were more beautiful and desirable than those which are ever blooming with the fresh, clear and sparkling hues of health. Ladies, if you wish to be strong and healthy, and desire to possess true beauty and not the sentimental shadow of it, seek the glorious, God-given sunlight, and bask in the smiles of "the light and life of the world;" let it enter freely into your dwellings, and occupy no room where it can not and does not enter; be out of doors all that you can every day, and especially when the sun shines, and fear not to look "Old King Sol" in the face, instead of cowardly skulking along under a parasol, as though ashamed to meet his keen and searching glance. Sunlight is one of the best tonics and beautifiers in the world, therefore, men, women and children, one and all, should seek it as one of the great natural agencies which help to form the "Elixir of Life."

Hygienic Treatment.—"What are the leading indications to be fulfilled in the treatment of disease according to the Hygienic system?"

To equalize the circulation throughout the entire system and to purify the blood.

Opium.—"Can a person who has been eating opium for many years dispense with it, and live? If so, how?"

They can. They should place themselves under the care of a competent physician, at a good Hygienic institution.

Torpid Liver.—"What is the cause of torpidity of the liver, and can you indicate some simple plan of treatment which I can pursue by myself at home?"

Any thing which tends to render the blood impure or to check the secretions and excretions of the body tends just in that degree to obstruct the action of the liver. An inactive skin, which causes the retention of a large amount of effete and refuse matter in the system, is one of the most prominent causes of this difficulty. Certain kinds of food, such as large quantities of milk, butter, sugar, animal oils and greasy food generally, specially tend to obstruct its action. There is another cause which, though seldom thought of, operates powerfully to produce this obstruction among women, especially the more fashionable portion of them, and that is the wearing of corsets and tight dresses, which crowd and compress this organ so that it has no room to act, and as a natural consequence does not act. To aid in restoring its impaired function, the causes which produce it must be removed; loose clothing about the waist must be worn; nothing but plain, simple food, as fruits, coarse bread and vegetables should be eaten, and those sparingly; a hand bath followed by thorough friction of the skin, together with active out-of-door exercise, should be taken daily. In addition to this, percussion with the palms of the hands over the liver, as hard as can be borne, will be found very useful in inciting it to action.

Plain, Wholesome Diet.—"A New Subscriber" asks what I would call a plain, wholesome diet, and if molasses is injurious as food. Molasses *is* injurious. There are as many different degrees of plainness and wholesomeness in food, as there are different kinds and different modes of preparing it. A diet composed of fruits, grains and vegetables, properly and simply prepared, without the admixture of spices, condiments, fats, and the like, eaten, a few kinds at a time, in proper quantities, at proper times and in a proper manner, I regard as a plain, healthy diet, and one which, if made the diet of the American people, would prevent a large share of the intemperance, sickness and crime, which is so common everywhere.

Catarrh.—For the proper treatment of catarrh in the head, see the January HERALD OF HEALTH, page 39. Total abstinence from rum and tobacco, in all their forms, is absolutely essential for its successful treatment.

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Constipation.—"I would like to know what you would recommend to use daily for injections in case of constipation. Simple water does not seem to be efficient."

In case of constipation, the diet should be carefully attended to, and should consist of cracked wheat, Graham bread, oatmeal, fruit, and the like. Thorough manipulation and percussion of the abdomen should be daily employed; and if these means, in connection with water enemas do not restore the bowels to a healthy condition, then the person should immediately seek some health institution, where the additional advantages of the Movement Cure and Electric Baths can be obtained. Constipation of the bowels is a diseased condition which should not long be allowed to exist, as it is the stepping-stone for the entrance of a host of other diseases. No other substance than water, pure and simple, should ever be used as an enema.

Cradles.—Cradles are a nuisance and should be abolished from every home; they are utterly needless, and more than that, they are injurious, the continual rocking producing a bad effect upon the health of the children. How would the mothers and nurses like to be put into a cradle correspondingly large for them, and be rocked vigorously to and fro for hours at a time! Methinks they would think it worse than "going to sea in a storm" and if they were not sea-sick, they might safely trust themselves upon the "briny deep" without fear of sea-sickness. "But," they will exclaim, "how shall we get the little one to sleep when he is restless?" If they are provided with the right kind of food at proper times, and in proper quantities, bathed as they should be, and correctly attended to in other respects, they will not need the cradle, nor any opiates, paragorics, or soothing syrups, to lull them to sleep.

Tobacco.—"Have you any prize essays on tobacco? If so please answer through THE HERALD, stating price."

The best book published upon this subject is, "Tobacco; Its Effects on Body and Mind." 268 pp. Price, $1. It consists of six essays, by eminent medical writers, bound together in paper.

Court Plaster.—"What effect has court plaster on a fresh sore? Does it aid its healing, or the reverse?"

It prevents the air, dust and other substances from coming in contact with the exposed surface, and for that purpose it is useful, and for no other.

Eating while Fatigued.—There are few habits more injurious to health than the common one of filling the stomach with food while the body is fatigued. Men will come from the fields, from their shops and counters, with their bodies or brains, or both, almost exhausted, sit down, and hurriedly eat a hearty meal, and then back to their labor again. If the brain, or any part or organ of the body becomes unduly fatigued, the whole system requires rest for awhile, so that the nervous influence and the circulation of the blood may become equalized throughout the body before another demand is made upon the vital energies. If the stomach is filled with food while the vital forces are powerfully directed to the brain or the muscles, digestion can not take place until an equilibrium has been established, and the blood and nervous power determined to the stomach, consequently the food remains undigested, ferments and becomes sour and irritates the stomach, causing derangement and disease of the digestive organs and, through them, of the whole system. If you have any care for your health and comfort never *sit* down to eat while either body or brain is fatigued from over-exertion.

Clothing the Neck.—"In what manner should the neck be clothed, so as to guard most effectually against taking cold, sore throat, etc?"

The clothing about the neck should be very moderate in quantity, and worn so loose as to prevent the slightest compression. The great errors frequently committed in clothing this part of the body consist in wearing such an amount as to overheat and weaken the throat, and thus render it easily susceptible to cold, and in wearing it so tight as to retard the circulation of the blood to and from the head. Great care should be exercised upon this point, as the arteries and veins leading from the heart to the brain are situated so near the surface in the neck that a slight compression there serves to check the flow of the blood. Many cases of congestion of the brain and headache are partially or wholly caused by too tight collars and cravats.

Mechanical Science.—"Which is the best journal published in the United States that treats upon Mechanical Science and Inventions?"

The "Scientific American," published by Munn & Co., 37 Park Row, New York, is unquestionably the best scientific paper in America.

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Healthy Spices and Condiments.

FRUIT-FUL HINT—Don't peach.

HY are persons born blind unfit to rpenters? Because they never saw.

OODS—Manhood, a hat; woman-, a bonnet!

HY is a convalescing dyspeptic like rieved criminal? Because he can't di-yet.

HY is electricity like the police when are wanted? Because it is an invisible

DRAIN LANDS.—Drink whisky, pend all your time at the village tavern. will drain you of all your lands in a short

How is your husband this afternoon, Squiggs?" "Why, the doctor says as how if es till morning, he shall have some hopes n; but if he don't, he must give him up."

TTLE three-year old Senie was play-ry roughly with her kitten—carrying it e tail. Her mother told her that she hurt pussy. "Why, no, I won't," said "I'm carrying her by the handle."

N IRISHMAN was summoned for re-to pay a doctor's bill, when he was asked e did not pay. "What for should I pay?" at; "sure he didn't give me any thing but emetics, and the niver a one could I kape stomach at all, at all."

Irish girl was ordered to hang the d clothes on the horse in the kitchen to Her mistress shortly after found a very family horse standing in the kitchen, etely covered with the articles washed day. Upon interrogating the girl, the was, "Och, to be shure, ye told me to the clothes on the horse in the kitchen, he beast is the kindest I ever saw."

LADY in Lafayette, Ind., recently ring a Sunday dinner, put some beans in to bake; in a hurry to get to church she ertently put her hymn-book in the pot rapped a piece of pork in her pocket-kerchief and took it to church with her. nortification was intense upon discovering mistake during service; so was her and's at the singularly pious composition s repast.

AVOID Flowers of Speech.

WOMEN—An essay on grace, in one volume, elegantly bound.

DR. ABERNETHY used to tell his pupils that all human diseases sprang from two causes—stuffing and fretting.

LORD CHESTERFIELD once remarked that even Adam, the first man, knew the value of politeness, and allowed Eve to have the first bite at the apple.

IF your husband chews, thank God that he doesn't smoke. If he chews and smokes, thank God that he doesn't take snuff. If he does all three, thank God that he'll not live long.

A BOY complained of his brother for taking half the bed. "And why not?" "Yes, ma," said the boy; "but how should you like to have him take all the soft for his half? He will have his half out of the middle, and I have to sleep on both sides of him."

LAW AND PHYSIC.—When Dr. H. and Sergeant A. were walking arm-in-arm, a wag said to a friend:

"These two are just equal to one highwayman."

"Why" was the response.

"Because it is a lawyer and a doctor—your money or your life."

A DIMINUTIVE Lawyer appearing as witness in one of the courts was asked by a gigantic counselor what profession he was of; and having replied that he was an attorney—

"You a lawyer!" said Brief; "why I could put you in my pocket."

"Very likely you may," rejoined the other; "and if you do, you will have more law in your pocket than ever you had in your head."

A GOOD joke took place in a court-room down East. A woman was testifying on behalf of her son, and swore that he had worked on a farm ever since he was born.

"You assert your son worked on a farm ever since he was born?"

"I do."

"What did he do the first year?"

"He milked."

The lawyer evaporated.

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Literary Notices.

THE AMERICAN HORTICULTURAL ANNUAL.

THE AMERICAN AGRICULTURAL ANNUAL. New York: Orange Judd & Co.—These two little volumes of about 150 pages each are elegantly printed, well illustrated and their contents prepared with care. Any thing furthering the interests of Agriculture and Horticulture, and having a tendency to elevate these branches of industry we hail with pleasure. They will do much good wherever received.

OUR MUTUAL FRIEND.—This is the second volume of the Diamond Edition of Dickens, bound uniformly with "Pickwick Papers," noticed last month. It is published by Ticknor & Fields, Boston. This style of publishing neat but cheap editions of books that are in large demand is new and destined to prove very popular. The volumes before us will be an ornament to any table or library.

SIX HUNDRED A YEAR, A WIFE'S EFFORTS AT LOW LIVING UNDER HIGH PRICES. Pp. 182. Boston: Ticknor & Fields.—To show what is intended by the author we quote a paragraph or two from the Preface of this work:

"Congress assumed that six hundred dollars a year would be sufficient for the maintenance of a family, and that all beyond that sum was practically a surplus which the receiver could well afford to have taxed. The people have assented to this view of the case, and have patiently borne the burden of the most obnoxious tax ever imposed upon them. I do not know whether any of the legislators who passed the law, have ever tried the experiment of living on so small a sum, as judging from the high salaries they receive, their extravagant allowance for milcage, and the great additional sums which they last winter voted into their pockets, I am disposed to think they never knew how hard it was to live, themselves, on the small allowance which they considered sufficient for us.

"But there were thousands who sought to make it enough. In doing so they practiced all those economic arts which, when the times become hard, so many of us are compelled to adopt. However we may neglect them in seasons of prosperity, it is still wonderful how readily we resume them in seasons of scarcity. This faculty of adapting one's self to circumstances seems to be peculiar to Americans. If quick and impulsive, they nevertheless display a flexibility of character peculiar to themselves."

In noticing this little work, we do not wish however to be considered as indorsing all it contains. There are many valuable hints given but the author has not made so good a book as she would have done had she been acquainted with the Hygienic methods of cooking. Many of her recipes are not only worthless but positively pernicious.

THE VOW AT THE BAR, AND THE SPIRIT THAT LED THE SHIP ASTRAY. By Rev. Wm M. Blackburn. New York: National Temperance Society and Publication House.—This is a pleasant little volume for children and even older people. It teaches lessons of temperance and virtue. The tale is of one John Hartley who by drink ruined both himself and his family but, afterward reformed and became a useful citizen. It is well told, and will be read with profit in this day of excessive drinking.

HOW TO GET RICH. New York Publishing Company.—In this age of money-making of course every body is anxious to get rich. This little work will not tell you how to sit down quietly in a corner and have money come pouring in to your coffers; nor how one can jump into wealth quickly and easily, but it furnishes plain hints on economy and industry, which if followed will in a majority of cases lend to competence and surety against want. We commend it to all.

THE ATLANTIC MONTHLY, for March, OUR YOUNG FOLKS, and EVERY SATURDAY, are all full, as usual, of varied and valuable matter.

NEWTON.—Great qualities of soul are often hidden in the frailest child. One Christmas day a premature posthumous son was born in England, of such an extremely diminutive size, and apparently of so perishable a frame, that two women who were sent to Lady Pakenham, at North Witham to bring some medicine to strengthen him, did not expect to find him alive on their return. He would inevitably have been consigned to the caverns of Taygetus if the two women had carried him to Spartan triers. As it was, the frail boy grew up into Newton, lived more than fourscore years, and revealed to mankind the laws of the universe. If he had perished, England would not have been what it is in the world.

BE temperate in diet. Our first parents ate themselves out of house and home.

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Publishers' Department.

This Number.—The present number of THE HERALD OF HEALTH presents several attractions which will be noticed by all our readers. The announcement in the March issue that we should commence a series of original papers on "The Physiological Anatomy and Physiology of Man," it will be seen, is being carried out. Prof. Browne's first paper appears in this number, illustrated, and we are sure it will attract the attention of all interested (and who is not?) in this subject.

As will be seen, we also commence a series of papers from our esteemed contributor, Moses Coit Tyler, entitled "Minutes of the Brawnville Athletic Club." These papers, we are confident, will have great popularity. They will convey much instruction, and many valuable hints on health topics, in a style as charming as any novel. Mr. Tyler will speak plainly upon many subjects, and we hope our readers will not only profit by it, but, as we are sure they will, enjoy the general pleasant style of our classic contributor. These sketches will continue through twelve numbers.

The contribution from Rev. Henry Ward Beecher to this number is his recent discourse preached by request before the "New York Medical Students' Christian Union." This paper should have an extensive circulation. Every physician, every medical student, and every thinking man should read it.

We also begin in this number a paper by Dr. Thornton, entitled "Revelations of a Retired Physician,' which will be full of pleasing and good things.

Beside these announcements, we also present Mrs. Gleason's "Letters to Ladies;" "A Case of Love Cured;" "Action and Reaction," by S. A. N.; "Weak Voices and Lungs," by Prof. Royce; Topics, Notes, Home Treatment, etc., making the April number one of the most attractive and brilliant yet published.

Those who wish to get the complete series should send in their subscriptions at once.

Life Insurance.—We would call the attention of such of our readers as desire to effect an insurance upon their lives to the advertisement of the American Popular Life Insurance Company. This Company offers much better inducements than any others, to persons who are intelligent upon health subjects, regular and temperate in their habits, and who have a healthy, long-lived ancestry. We have made arrangements with this Company by which our friends at a distance can affect an insurance by correspondence with us, just as well as though they were present in person. Address The Publishers.

Dio Lewis's Opinion of The Herald OF HEALTH.—BOSTON, *March* 16, 1867.—*My Dear Holbrook:* Your HERALD OF HEALTH delights us. The friends of Physiological Christianity, must make it in circulation, what you have made it in scope and spirit, cosmopolitan. I am deeply gratified with its broad, genial, catholic spirit. It is pleasant to find THE HERALD lying side by side with The Atlantic and other first-class magazines on our New England center-tables.

With warm esteem, DIO LEWIS.

Agents Wanted—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

PREMIUM LIST FOR 1867.

As will be seen by our Prospectus on the fourth page of the cover, our Premium List is more valuable than ever before. The following is an abstract of it:

For 30 *Subscribers and* $60,

We give a "Wheeler & Wilson Sewing-Machine," worth $55, or a Silver Watch of the same value and of American manufacture;

For 15 *Subscribers and* $30,

Webster's Pictorial Unabridged Dictionary," worth $12;

For 10 *Subscribers and* $20,

Each member of the Club will receive a copy of "Lincoln at Home." This Picture is 19x24 inches, and a very valuable one, being well engraved on steel;

For 6 *Subscribers and* $12,

One copy of the "Hydropathic Encyclopedia," worth $4 50.

For 4 *Subscribers and* $8,

A Gold Pen worth $3;

For 3 *Subscribers and* $6,

A copy of the "Hand-Book of Hygienic Practice," worth $2;

For 2 *Subscribers and* $4,

[One of whom shall be a new subscriber], one copy of "Lincoln at Home," worth $1.

These Premiums are all valuable ones, and priced at just what they sell for in market. Owing to our taking a large number, we are enabled to offer very great inducements to our patrons. We hope our friends everywhere will help to extend our circulation.

To the Reader.—Friends of the cause of human improvement who may see a copy of our magazine, are requested to lend a helping hand in extending its circulation, if only by their own names. Our aim is to do all the good we can in extending a knowledge of the laws of the body and brain. Many a person has cause to bless our labors, because he has better health from learning how to live, and better children from knowing how to rear them. Half the children born die before they arrive at five years of age. Why? Because of ignorance on the part of parents. Teach them the laws of life, and they would swell the lists of living men and women and bless the world.

Premiums.—Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

Write Plainly.—All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

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Friendly Letters.—"This is the third year that I have taken THE HERALD. I would state for your encouragement that its teachings have done me a great deal of good, besides saving me money which I used to pay out for medicine. Would that I could induce, as I try to do, more people to subscribe for it, but too many of them spend their money freely for tobacco, whisky and hog-meat, and begrudge money laid out to improve their health or morals. F. KEMP."

ANOTHER.

A friend writes:

"I have been a constant reader of THE HERALD OF HEALTH for sixteen years, but it never pleased me so well as now. Mr. Beecher's articles alone are worth the subscription price. While your monthly remains as good as now you may count me as a subscriber.

"J. V. BUSKIRK."

COULD'NT DO WITHOUT IT.

J. B. K. of Ohio, writes:

"Although in receipt of several publications, the exclusion of THE HERALD has reduced my intellectual fare to such an extent, that I am like a man put on half rations. So I am determined to again become a participant of the good things which are so well served up and spread before your many readers in every issue of the journal. Send along the monthly."

STILL ANOTHER.

"A few days ago, Dr. Allen of 22 Bond Street, gave me the January number of your journal. My family have become greatly interested in it. I do not see how any family can well get along without it. I inclose herewith $2, for subscription for 1867. I have other friends who will soon send you their names also. The articles of Dr. Allen and Mr. Beecher are alone worth many times the cost of a year's subscription. Respectfully.

"W. E. CALDWELL."

The Northwestern Farmer thus notices THE HERALD:

"HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.—We wish to invite the attention of our readers to the prospectus of this eminently valuable magazine. It occupies a field of inquiry and practical usefulness peculiarly its own, and most ably does it bear the standard of the Goddess Hygeia, calling upon the people, in most eloquent terms, to heed her laws and live. Its motto is: Vigorous minds in sound bodies. The HERALD OF HEALTH has, under its new management risen above the mission of a mere iconoclast, and now occupies the broad fields of Freedom, Charity and Truth. It is now one of the most interesting as well as able and useful publications in this country. Those who read it carefully and heed its advice need have little fear of disease, and will find their annual doctor's bill growing beautifully less."

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that for a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Back Numbers.—Those who wish to be sure of back numbers had better subscribe at once, as we will not agree to furnish them during the entire year. Our editions for the last six months of 1865 were large, but it was not so large as the demand, and several of the numbers are out of print.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Sewing Machines.—Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as New Years' Presents.

Books.—On sending in orders for THE HERALD OF HEALTH, our friends will find it convenient also to look over our book list on another page. We can also procure any work published in New York, and send the same at Publishers' prices.

Samples.—Those who receive THE HERALD as a sample are respectfully requested to send us their subscription for a year. It will be a constant help in every household where found.

October Number for 1866.—We will thank all those who have the October number of THE HERALD for 1866, and do not wish to keep it, to mail the same to us.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.

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Send for a Circular. We respond to calls or telegrams.
Address, HENRY McCALL, M. D.,
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Galesburgh, Ill. For Circular, address.
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N. B.—Calls from a distance promptly attended. ap-4t*

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THE OHIO FARMER,

Vol. XVI, for 1867.

S. D. HARRIS, ... EDITOR.

A. W. PARKER, . . PUBLISHER.

THE

GREAT WEEKLY

AGRICULTURAL AND FAMILY

PAPER,

PUBLISHED AT CLEVELAND, OHIO,

DEVOTED TO

RURAL AND HOUSEHOLD AFFAIRS,

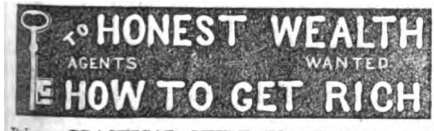
The Farm, the Garden, the Orchard, the Vineyard, and the Cultivation of the People.

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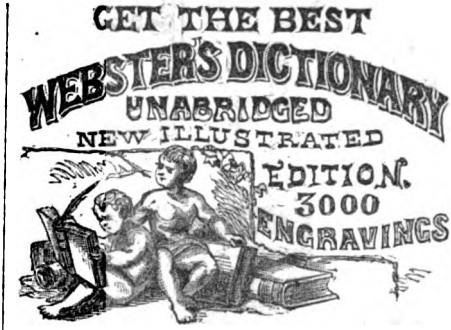
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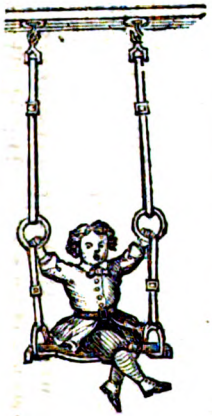
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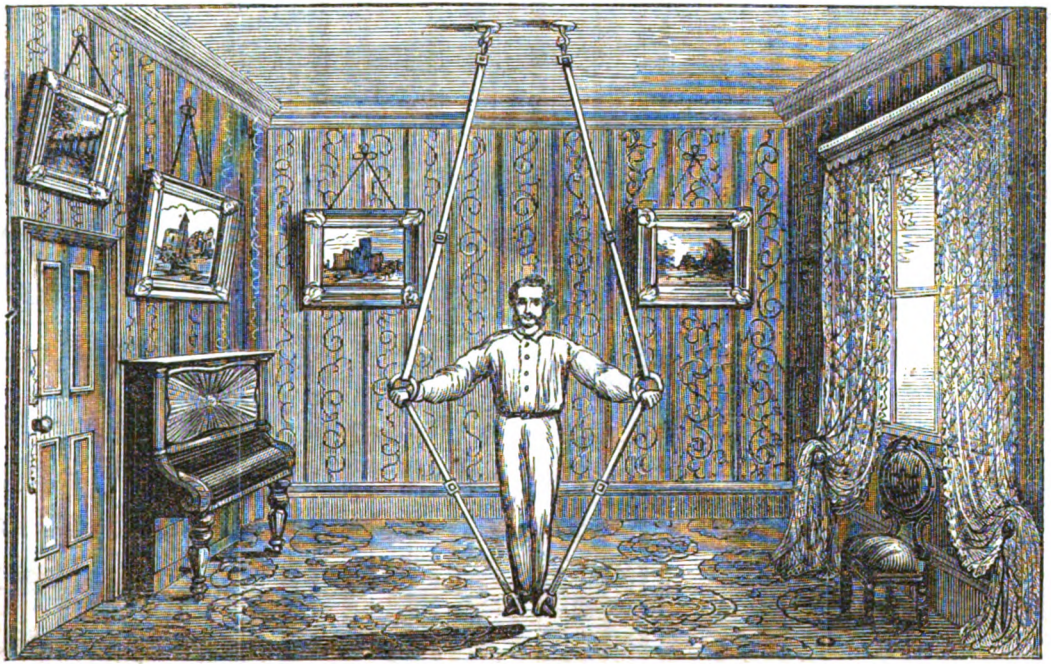
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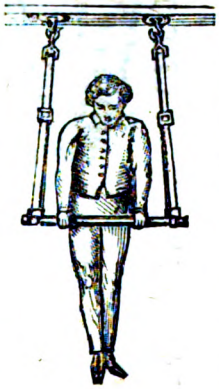
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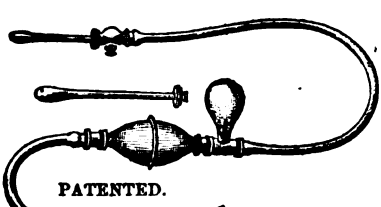
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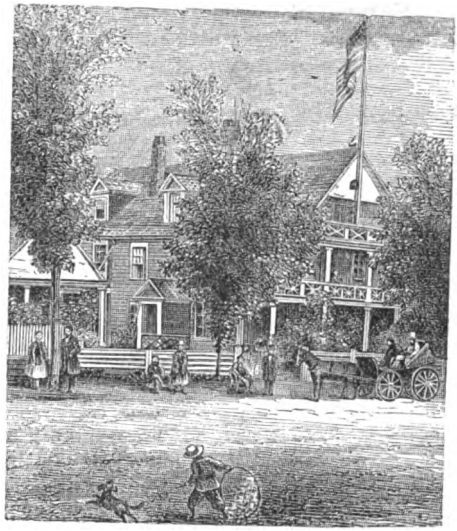
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MAY, 1867.

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General Articles—Hygienic and Miscellaneous.

MINUTES

OF THE

Brawnville Athletic Club.

EDITED BY MOSES COIT TYLER.

II.

HOW THE CLUB FIRST GOT TALKED ABOUT.

SATURDAY EVENING, *November* 13, 1865.

AT our last Powwow we got on in Plato as far as III, 403, of The Republic. In fact we read nearly a page farther into the following paragraph; for we wished to finish the account which Socrates was giving of Music. "Do you think, then, with me," said that grand Old Querist to Glaucon, "that our theory of music is now complete? At all events it has ended where it ought to end; for music, I imagine, ought to end in the love of the beautiful." "I agree with you," said Glaucon.

"And I think, gentlemen," said Judge Fairplay, who happened to be the reader of the evening; "I think, gentlemen, we shall be inclined to say ditto to Glaucon, and, in this harmonious frame, end our divine repast for to-night." "Hear! hear!" the rest of us shouted; whereupon the Judge closed the book with a great slam, tossed it over into the middle of the study table, and then rising and stretching his arms as a relief from his long sitting posture, he said, with a yawn so immense that his sentence nearly foundered in it, "I've been peeping ahead a little, gentlemen; and I see that the next subject this glorious Old Boy takes up is Gymnastics."

"And by-the-by, Henry," said Dr. Drugger, looking at me, "our next Powwow, you know, is to be at your den."

"All right, gentlemen; I shall be the wise virgin, and have my lamp trimmed and burning.'

So, to-night we have been having the Powwow here. There are not enough of us to make a very large reading circle; indeed, as we number just four members, we can scarcely consider ourselves a reading *circle* at all—only a reading *square*, one member being planted appropriately at each corner of that geometrical figure.

First comes the Judge, our intellectual autocrat—indeed, the intellectual autocrat of the whole village—who reigns here in Brawnville, unintentionally and in spite of himself, simply because we all recognize him as our natural monarch. Some people call Nature democratic; and, I confess, there are things in Nature to justify it. For example, cholera morbus is a rather democratic institution, the east wind disregards the rank of the man it blows upon; death is somewhat notorious for being no respecter of persons. Those who have crossed the Atlantic tell me that that respectable body of water is quite oblivious of conventional distinctions. "What care these roarers for the name of king!" Yet, on the other hand, I find this same Nature perpetually founding despotisms among us. I find her perpetually sending into

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the world some man on whose brow she has written in grand diamond letters the word KING; and ordinary men are swallowed up in this man's kingliness just as inevitably as the moon and the stars are swallowed up every morning in the golden flood-tide of that great planetary autocrat, the Sun. It always struck me that there was a side of truth to the old high-tory dogma of "the divine right of kings"—kings, however, not necessarily with crowns on their heads, but with brains inside of them. The Constitution of the United States, lays upon Congress the duty of securing to every community within our borders a republican form of government; but if Congress undertake to establish a republican form of government in Brawnville, it must first get Judge Fairplay out of it. While he stays, Brawnville is a monarchy.

Then comes Dr. Drugger, the principal physician of the place, a man at about the middle age of life, fastidious in his tastes, cold in manner, independent, fearless, somewhat given to crotchets, often sarcastic; in disposition decidedly tart, not to say sour. But with all his narrowness, and notwithstanding his saturnine temper, the Doctor is a kind-hearted man. His furtive deeds of benevolence, his stealthy acts of self-sacrifice—are they not written in those chronicles which God himself transcribes from the hearts of the poor?

The third Platonist is the pastor of the Second Church in the village, the Rev. Samuel Bland, a genial, wholesome, liberal nature—liberal, perhaps, rather from temperament, from the happy condition of the gastric and nervous juices, than from a deliberate intellectual achievement of liberalism. The creed under whose banner he suffers himself to be fighting is a harsh, vindictive, ferocious one; but Samuel Bland has a heart too strong and healthy to be embruted by any amount of theological Thuggism. When Samuel Bland passes along Main Street on any cloudy, dismal day, with the east wind blowing raw over the meadows, people hasten to the doors of their shops, and say, "There goes Sunshine!" and they warm and brighten themselves in the rays of his big loving nature. His wife says she "always tries to keep him at home between 4 and 5 o'clock in the afternoon; for then school is out, and if the boys and girls see Mr. Bland, they chase after him, or head him off, or come some sort of flank movement on him, and surround him six deep, and clamber up his huge body and perch on his shoulders like monkeys, and even squat on the top of his head; that with all her pains, she can't keep a whole coat on his back for one blessed week together; and that *if* she ever does let him get out of the house between 4 and 5, she always knows what sort of a job she has before her that evening, and that is, *darning coats!*" It seems hard to believe that such a man as Samuel Bland can have enemies. The mystery is cleared up, however, when we remember that the old race of Pharisees still breeds vigorously in the world. Our Brawnville Pharisees dislike Mr. Bland; and, on occasion, especially when there are no young men within ear shot, they speak against him. I may as well explain here, that this reserve on their part in the presence of the young men of the village, is not for any generous reason, but for an exceedingly prudential one. Two or three years ago, Deacon Snipp of the First Church was speaking very harshly of Mr. Bland in front of the Post-office, because Mr. Bland had assisted at a regatta the day before; and one of the young men in the crowd told Deacon Snipp that he "would be much obliged to him to shut up abusin' Mr. Bland," and rather plainly intimated in addition that if the Deacon "did'nt shut up, he'd *make* him." The Deacon continued his discourse, whereupon two of the young men laid hold of him and put him under the pump. To a certain extent, that little affair of the pump seemed to confirm Dr. Pusey's pleasant doctrine of "Baptismal Regeneration;" for, from that moment, Deacon Snipp and the other Pharisees of Brawnville have been so far regenerated, that whenever they feel like abusing Mr. Bland—which is quite often—they prudently look around and ascertain whether there be any body near, of the masculine gender, under forty years of age. The indictment against Mr. Bland has several counts. Some of these counts apply in the winter, and others in the summer. The principal winter count is that he skates; and not only so, but he skates as if it was "fun," and not done, as it ought to be, if done at all, merely from a sense of duty. Deacon Snipp says, "for his part, he does'nt think it becoming in a minister of the meek and lowly Jesus to skate; he does'nt remember that we have any record of Jesus having skated." When some one suggested to the Deacon that there does not seem to have been much ice in the part of the world where Jesus passed his life, the undaunted man replied: "That makes no difference, for if the Saviour had approved of such a thing as skating, he could easily have worked a miracle and made ice on the Sea of Galilee." But the sorrows of the Brawnville Pharisees do not cease with the end of the skating season. Nay, they seem then only just begun; and even the seasons appear to be in conspiracy against

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their virtuous peace. For when winter gathers up its snowy robes, and shatters in pieces its huge breast-plate of ice, and abdicates the earth in favor of the dynasty of green leaves, and flowers, and bird-songs, then this strange minister seems nearly beside himself with physical delight; he goes ranging over the hills, with a hammer in hand, lending a dangerous support to the infidel and ungodly science of Geology; he seduces the young men into all manner of athletic sports, boating on the river, ball-playing, and so forth. "What can be more scandalous," says Deacon Snipp, "than for a minister of the meek and lowly Jesus to be noted for being the best ball-player in the county? No wonder the Lord hides his face from his people!" In short, the head and front of Mr. Bland's offending is, that he is—a muscular Christian! He can out-walk, out-run, out-jump, out-skate, out-swim, out-fish, out-hunt, and out-preach any other man for twenty miles around; and from an event which occurred soon after he came to Brawnville, many people have an impression that he could be a very effective operator in another favorite pursuit of mankind, which is usually engaged in with the fists doubled. The event to which I refer is so characteristic that I may as well mention it now. It was on Monday morning, just after Mr. Bland's first Sunday in the village. As he came out of the Post-office, he saw a crowd of men and boys on the opposite side of the street; and being interested in all human excitements he walked across to see what was going on. As he is but a little gentleman, standing only six feet two in his stockings, it may be imagined just how long he was in comprehending by a glance over the heads of the crowd, the exact nature of the attraction. It was that noble Anglo-Saxon festival, a dog fight! Two great dogs, a mastiff and a Newfoundland, were being spirited on to a battle, and were already grappled in a clutch so furious and bloody, that only a very daring man would have tried to part them, and only a very strong man would have succeeded in it. As Mr. Bland reached the edge of the crowd and saw all this, he cried "Shame! shame! shame!" in a voice so deep and stentorian that the men and boys started as if a note of thunder had smitten them from the clear sky; and the crowd fell asunder abashed, and opened a broad aisle for the giant strides of the new minister, who, coming close to the noble brutes, and seizing each by the neck, tore them apart as easily as if they had been a pair of mice, flung one to the right and the other to the left; and then flashing his eyes indignantly around over the crowd, he sent them slinking in shame in all directions from his presence, by saying: "Go home! go home, you cowards! why should dogs tear themselves to pieces for the amusement of puppies?" Within the memory of the oldest inhabitant, there never was greater commotion in Brawnville, or, indeed, throughout the whole county, than followed that day's exploit. The story of it rushed abroad in every direction like the report of a great battle; and the next Sunday, the Second Church was crowded to suffocation. People came in their teams from miles around to see and hear the young clerical Samson, who tore the two dogs apart and sent the crowd of puppies home. Deacon Snipp, however, of the First Church decidedly disapproved of Mr. Bland's performance, especially after it brought such an immense congregation to the Second Church. He said that he "did'nt think such conduct was suited to a minister of the meek and lowly Jesus." But one old lady, who happened to witness the exploit from the steps of a store near by, said that "Mr. Bland's bearing that day cleared up for her one very mysterious passage in the Gospel narrative; and that she can now understand how noble was the rage of our Saviour, and how grand and awful he must have looked, when he made a whip, and scourged the money-changers out of the Temple." This remark of the old lady was reported to the Deacon by Abdiel Standish, a shrewd Yankee farmer who lives just out of the village. The Deacon seemed very much shocked at the profane comparison of Jesus scourging the money-changers to Parson Bland quelling a dog-fight; and he said to Abdiel:

"Well, I don't believe the meek and lowly Jesus ever called human beings puppies."

"Mebbe he did'nt," replied Abdiel; "but, Deac'n, one thing's sartin, Jesus Christ called some folks a wuss name 'n puppies."

"What name?"

"Why, he called 'em vipers—a generation of vipers; an' vipers, I guess, Deac'n, is critters a plaguey site wuss 'n puppies, any day—'bout like our mod'n Copperheads! eh, Deac'n? eh?"

This last thrust of Abdiel's was an extremely cruel one on Deacon Snipp, and caused that godly man to leave in double quick time; for, though a native son of Massachusetts, the Deacon is decidedly "coppery," and has been so throughout the war. He keeps a portrait of Vallandigham, so it is said, hanging in his bedroom. It is very certain that he frequently quotes from the letters and speeches of that renowned patriot. As the Deacon has a peculiar habit of speaking, on all occasions, in a style

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which some worldly-minded people call cant, of "the meek and lowly Jesus," and almost in the same breath of Mr. Vallandigham, his conversation, to many of us, often presents examples of an exceedingly mixed style. This peculiarity in the Deacon's talk was tolerably well hit off one day last summer by the remorseless Abdiel:

"Deac'n Snipp's tryin' t' make us b'lieve he's a follerin' Jesus Christ and Vallandigham 't the same time—'bout es tough a job, *I* guess, es 't would be fur a yoke o' steers to go 'gee' and 'haw' both to wunst!"

But I am getting a long way from Plato, and what we read in him this evening. I have described three of the members of our little reading party—Judge Fairplay, Dr. Drugger, and the Rev. Samuel Bland. The fourth, and last, and least, is myself, the village schoolmaster—a subject on which the less said the better, down to the point of saying nothing, which is best.

I prefer the best.

Well, as I have already mentioned, it was my turn to entertain the Powwow to night; and therefore, being host, I was, *ex-officio*, Grand Sachem, and had to read from the magnificent Platonic dialogue which we are spending our Saturday evenings in studying together.

So, beginning at the point where we left off last week, I read:

"*Socrates*—Gymnastics will hold the next place to music in the education of our young men.

"*Glaucon*—Certainly.

"*Socrates*—No doubt a careful training in gymnastics ought to begin with their childhood and go on through all their life. But the following is the true view of the case, in my opinion; see what you think of it: My belief is, not that a good body will by its own excellence make the soul good; but, on the contrary, that a good soul will by *its* excellence render the body as perfect as it can be; but what is your view?

Glaucon—"The same as yours, Socrates."

During the latter part of this speech of Socrates', Dr. Drugger, who cherishes a sort of philosophico-crotchety contempt for gymnastics, kept chuckling in grim fashion, and clapping his hands, and saying in undertone, "hear! hear!" But when I had read the assenting response of Glaucon, Judge Fairplay gave the signal for a pause, saying, with a mischievous glance at Dr. Drugger:

"Mr. Grand Sachem, I respectfully submit that this fellow Glaucon, here, says 'yes' a little too easily. At all events, I can not indorse his assent, if Socrates means what our Medicine-man seems to think he does."

"What can be plainer," replied the Doctor, "than the meaning of Socrates. 'A good soul will by *its* excellence render the body as perfect as it can be.' Bravo, Socrates! That quenches at one broad philosophical sweep all this new-fangled clatter here in America about gymnastics. Look after the soul, cultivate the intellect, regulate the spiritual nature, and the body will take care of itself, without the help of these gymnastic monkey-shines! I'm charmed to find old Socrates and his son Plato on my side."

"Not quite so fast, Doctor!" rejoined the Judge; "I am not so sure that you have Socrates and his son Plato on your side. I do not think you give the correct interpretation of the text, or that you draw a just inference from it. But even if you do, I must still dissent. For I hold that grand old legend: '*Amicus Plato, amicus Socrates, magis tamen amica Veritas!*'"

"Bravo, Judge! bravo! bravo!" shouted Parson Bland; and even the Doctor, carried away by the nobleness of the sentiment, and by the lofty fervor with which it was pronounced, smiled his admiration, and exclaimed:

"Well said, Judge! You lawyers are hard fellows to catch. But I still insist that I gave the obvious meaning of the text; and now the burden of proof is with you to show that, while Plato and Socrates and my illustrious self are on the one side, your very particular friend, Veritas, is really over upon the other side with you. Show that, and, of course, though you will be but two, you will be in the majority."

"Don't you see, Doctor," retorted the Judge, "if you have given the text correctly and have drawn a just inference from it, you reject not only gymnastics, but your own profession, too? I might turn upon you and say: 'Look after the soul, cultivate the intellect, regulate the spiritual nature, and the body will take care of itself, *without the help of pills!*'"

At this home-blow we all set up a laugh, the Doctor included, who, however, immediately rallied so far as to say:

"You lawyers never lose a chance for the *argumentum ad hominem!* Still, you know, Judge, that you have merely made a good hit. You may demolish my profession, but you haven't yet demolished my argument."

"Very well, Doctor; I am content to do one thing at a time. If, indeed, I have demolished

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your profession, I can not help thinking *that* glory enough for one day. I must feel that I have not lived in vain. But earnestly, Doctor [and here the Judge spoke with such an air of mock solemnity as gave an exquisitely comic turn to what he was saying], what you are kind enough to style a good hit *is* a good one simply because it is a legitimate one. I do not pretend that it settles the general question that you have stated; but it certainly carries out your own doctrine to its direct consequences. If you care more for your argument than you do for your profession, I honor you for your disinterestedness. But I urge home upon you that if your doctrine abolishes the gymnasts, why, it abolishes the doctors, too. If, then, you are really convinced of what you say, you are bound, as an honorable man, to go home, tear down your shingle, smash your drug-bottles, and go into some honest business."

"Change the subject! change the subject!" cried the Doctor. "For mercy's sake, Mr. Grand Sachem, move on!"

I resumed the reading.

* * * * * * * *

"*Socrates*—We have already said that the persons in question must refrain from drunkenness; for a guardian is the last person in the world, I should think, to be allowed to get drunk, and not to know where he is.

"*Glaucon*—Truly, it would be ridiculous for a guardian to require a guard."

Here the Doctor stopped me:

"Mr. Grand Sachem, being in a charitable mood at this particular moment, I do hope that no one of the company will have the cruelty to copy this passage and send it to our great 'guardian' at the White House. I fear that Andy would think Plato rather personal."

"Ho! ho!" broke in the Parson, "I'm sure Andy must have seen it already. There can be no doubt that he's a student of Plato."

"Why?" "why?" "why?" came from us all.

"'Why?' gentlemen, 'why?'" said the Parson, with a guilty, indeed almost a sheepish look, as if he were on the verge of some outrageous deed; "how unnecessary a question! Have you not read Andy's speeches? Are they not full of Pla-to-tudes?"

The Parson was saluted by one unanimous howl. "Bah! bah! Parson—and *you* to preach to-morrow?" yelled the Doctor.

"He deserves excommunication," shouted I.

"You say Andy Johnson's speeches are full of platitudes, do you?" roared the Judge.

"Well, Mr. Grand Sachem, this is the first time I ever heard lies, bad grammar, blackguardism and blasphemy called by that name. I move you, sir, that if the Parson ever repeats the ignominy of this night, he be put where the boys put Deacon Snipp—under the town pump!"

"Order! order!" said I, and returned to Plato.

* * * * * * * *

"*Socrates*—But where can you find a more signal proof that a low and vicious education prevails in a state, than in the fact that first-rate physicians . . . . are in request, not merely among base-born mechanics, but even among those who lay claim to the birth and breeding of gentlemen? . . . . And do you not hold it disgraceful to require medical aid, unless it be for a wound, or an attack of illness incidental to the time of year—to require it, I mean, owing to our laziness and the life we lead, and to get ourselves so stuffed with humors and wind, like quagmires, as to compel the clever sons of Æsculapius to call diseases by such names as flatulence and catarrh!

"*Glaucon*—To be sure, these are very strange and new-fangled names for disorders.

* * * * * * * *

"*Socrates*—Then will you not establish in your city the two faculties, of medicine and law, each having the character we have described, to bestow their services on those only of the citizens whose bodily and mental constitutions are sound and good, leaving those that are otherwise in body to die, and actually putting to death those who are naturally corrupt and incurable in soul?

"*Glaucon*—Yes, that has been proved to be the best course both for the patients themselves and for the State.

"*Socrates*—As for the young men, it is clear that they will be cautious how they incur any need of law, so long as they use that simple kind of music, which, as we stated, generates sobriety of soul.

"*Glaucon*—Undoubtedly.

"*Socrates*—If, then, the accomplished student of music follow this same track in the pursuit of gymnastics, may he not, if he pleases, so far succeed as to be independent of the medical art, except in extreme cases?

"*Glaucon*—I think he may.

"*Socrates*—Moreover, in the exercises and toils which he imposes upon himself, his object will be rather to stimulate the spirited element of his nature than to gain strength; and he will not, like athletes in general, take the prescribed

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food and exercise merely for the sake of muscular power.

"*Glaucon*—How so?

"*Socrates*—Do you not observe the characteristics which distinguish the minds of those who have been familiar with gymnastics all their lives, without any acquaintance with music? and again, of those whose condition is the reverse of this?

"*Glaucon*—To what do you allude?

"*Socrates*—To the roughness and hardness which mark the one, to the softness and gentleness which mark the other.

"*Glaucon*—Oh, yes. Those who devote themselves to gymnastics exclusively become ruder than they ought to be; while those who have devoted themselves exclusively to music are made softer than is good for them.

* * * * * * * *

"*Socrates*—Then whosoever can best blend gymnastics with music, and bring both to bear on the mind most judiciously, such a man we shall justly call perfect in music, and a master of true harmony, much rather than the artist who tunes the strings of the lyre.

"*Glaucon*—Yes, and with good reason.

"*Socrates*—Then will not some such overseer be always needed in our state, Glaucon, if our commonwealth is designed to endure?

"*Glaucon*—Yes, indeed, such an officer will be quite indispensable."

"There! gentlemen," said I, laying down the book, "that is the end of the colloquy on Gymnastics. I confess, I had no idea, until this moment, that Plato was such a prophet. In this imaginary 'overseer' in Plato's ideal commonwealth, what a remarkable and exact prediction of Dio Lewis, who, in our time and land, has with such ample success, married Music and Gymnastics at the altar of Education."

"Faugh!" replied Dr. Drugger with a sneering manner that was too natural to him, "Don't, for God's sake, don't throw Plato's mantle over that stupendous humbug! Do you know what sign every honest physician sees over Dr. Lewis's door in Essex Street?"

"No; what?"

"Why, that feathered animal which swims and quacks!"

"Ah!" said the Parson, "and is it because he is such a *duck* of a man?"

Here we all darkened our brows at the outrageous punster, and again reminded him of expulsion and the town pumps; but he looked utterly incorrigible.

I am myself an admirer, though not without careful discrimination, of Dr. Lewis. I believe him to be one of the true and great benefactors of this age, and of all mankind; and it seemed to me that Dr. Drugger, in his rather coarse attack on him, was thrusting upon us—a company of philosophical students—the warped and tainted verdict of a merely professional hostility. Accordingly I retorted upon the Doctor, perhaps somewhat too much in his own style:

"You said, Doctor, that you and your brethren always see the quacking bird over Dr. Lewis's door in Essex Street. Perhaps I can account for that. I found the other day in Thackeray's 'English Humorists' an old maxim, to this effect: 'We see, each of us, what we bring with us, the eyes to see!'"

"Oh! oh!" said the Doctor, moving his chair towards me deprecatingly; "that's positively savage! and for a disciple of the divine Plato, too!"

"Well, perhaps it was. I take it all back. But really, Doctor, you do injustice to Dio Lewis. But I affirm that if you will go back and read over again Plato's theory of gymnastics, you will find it a philosophical exposition of the spirit, the scope, almost the method, of the Dio Lewis Gymnastics."

"Come, come! gentlemen;" interposed the Judge, "do not let us get to cussing and dis-cussing Dio Lewis to-night. We can summon him to our bar at any time. But between ourselves, taking these pregnant and profound words of Plato for our text, I want to suggest to you one practical question: Is it not a disgrace to every man and woman in Brawnville, more especially those of us who are blessed with influence—and perhaps wealth—that we have no Gymnasium here?"

"I think," said the Doctor, with half a smile, "that the fact is greatly to the *credit* of Brawnville."

"Yes, and in doctor's bills greatly to its *debit*, too, no doubt you find! Eh, Doctor?" shouted the Parson.

"Now, gentlemen," joined in the Judge, "please to restrain your sparring propensities a moment, while I add this word further. I am deeply in earnest on this subject. I have been thinking of it a long time. I have something rather definite to propose to you. It is too late to go over the ground to-night; but come to tea with me next Monday evening, and we'll have the matter thoroughly canvassed. I shall solicit your counsel, your criticism and your personal co-operation. I hope that the next twelve months will see formed in this happy village a good Gymnasium, and not only that,

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but a Sanitary Society, or Athletic Club, or something of the sort, for the discussion of all topics relating to Health."

We all love and honor Judge Fairplay. So we parted to-night to meet again next Monday evening around his elegant tea-table.

[TO BE CONTINUED.]

Healthful Advantages of Out-door Labor.

THE CULTIVATION OF FLOWERS.

BY F. R. ELLIOT.

THOSE only who have lived in a crowded city, from year to year, can fully appreciate the longing that pervades every human breast to be in the country, where they can watch the opening buds, and the fresh-bursting into active life of all nature, on the first warm days of spring. The merchant-banker says to himself: "I will make only a few thousands more, and then I will go to the country, where I can have real enjoyment, and instead of coal-smoke, gas and dust, I can breathe the sweet perfume of flowers borne upon the fresh, pure air of nature." The mother, as she dresses her children for a walk under charge of the nurse or governess, often calls to mind her own happy days of early childhood in the country, and sighs for an opportunity to give her darlings a chance to ramble, free and unrestrained, over the fields, or, at least, wishes for room where they might have their little garden in which to patter and amuse themselves, flushing their cheeks with roses in place of the present lilies.

Such thoughts as these are common and frequently expressed, but the love of money or the desire for fashionable display too often prevents any thing more than mere expression, and life is shortened and its pure inspirations reduced or crushed out by the trammels of fashion, and the morbid love of that which panders to rather than improves the mind and body.

But, leaving the thickly-crowded lines of the city, let us look around the outskirts, and even into the country itself, and see where health and intellect might be benefited by a course different from that too often followed. In the immediate suburbs of our cities the dwellings have small yards, varying from twenty feet square to one-sixteenth of an acre, and, as a rule, these are left without care or attention, because the resident thinks it not of sufficient size or importance to engage his mind or labors, and, joining with his views, the good wife also thinks it can not be used other than as a little ground for the children to play upon. In the country, around farm-houses, too often do we meet with rough plats of weeds, with here and there an occasional hundred-leaved rose or a hollyhock, while perhaps their next neighbor has a pretty flower-garden, to which the children go almost daily, coming home delighted with the flowers there seen, and wishing they could have some; the parents, thinking only of bodily-food wants, neglect the cultivation and increase of the mind, originally given and endowed to man as the superior of all created things. Suppose we take this up practically, and carefully looking over the premises, see what we can do with these neglected and unsightly spots of ground, not only for enjoyment, but for actual improvement of both body and mind. Let us first purchase a spade and hoe of ordinary size, together with a little hoe, spade and rake for the children, and in the suburban homes, where the residents' occupations are generally in-doors, let the father occupy but fifteen minutes of a morning digging the ground. The first morning it will be hard work: the next, if he work before breakfast, he will find his food relish better than ever before—his appetite will be as that of a boy who always plays before breakfast, and from this time onward the digging, or otherwise working, in the flower-garden, will be one of enjoyment rather than a task of labor. Before, however, progressing far with the digging, it will be well to hold consultation with all the family as to the form and dimensions of the to-be garden. But first send to James Vick, Rochester, N. Y., for a copy of his "Seed Catalogue," as it is in itself a book of great value, and, as a seedsman's catalogue, surpasses any thing ever before published in this or the old country. With this in hand, call together wife and children and trace out a plan, forming separate beds, one of which shall be mother's, one Harry's, one Julia's, and so on, father having a general charge over the whole, and permission to do any of the real hard work that may be connected with the improvement. The plan, of course, must be arranged to give each an appropriate space, and at the same time, to suit the form of ground in which it is to be prepared. But supposing there are four children, and the space an oblong square, then the following illustration would represent one easy of construction, and if the plants be selected and placed judiciously, in regard to their heights and colors, would present a beautiful appearance. Let the center bed be for mother, and plant in it one or two cannas, stately in their growth, and with broad, distinct foliage; then around it some celosia or

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cockscomb plants that in their foliage contrast, yet harmonize, with the canna, and in their brilliant, showy, scarlet spikes, or clusters of blossoms, create a rich and happy effect. Add



to these two or three plants of ricinus, and then complete the bed with the double-flowered zinnias, and you have a back-ground for each of the outside beds. If there is room, other tall-

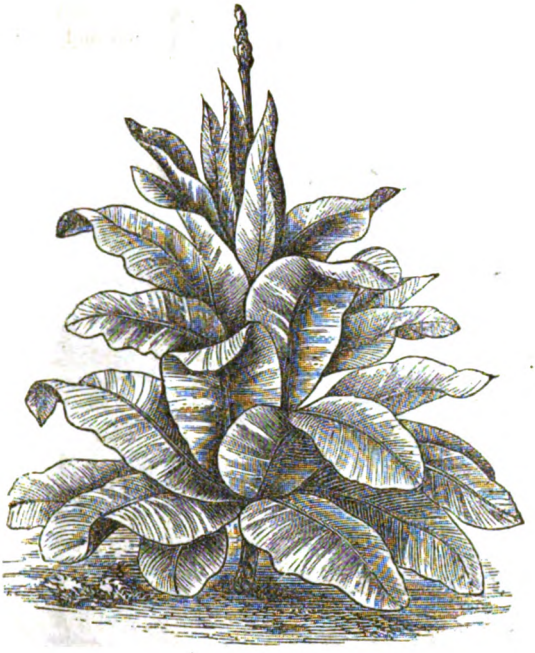


ROSE ASTER, ONE-EIGHTH NATURAL SIZE.

A new and magnificent class, about two feet in height, very robust, with large flowers and double to the center, the outer petals finely imbricated and of great substance. A plant in flower is shown in the engraving.

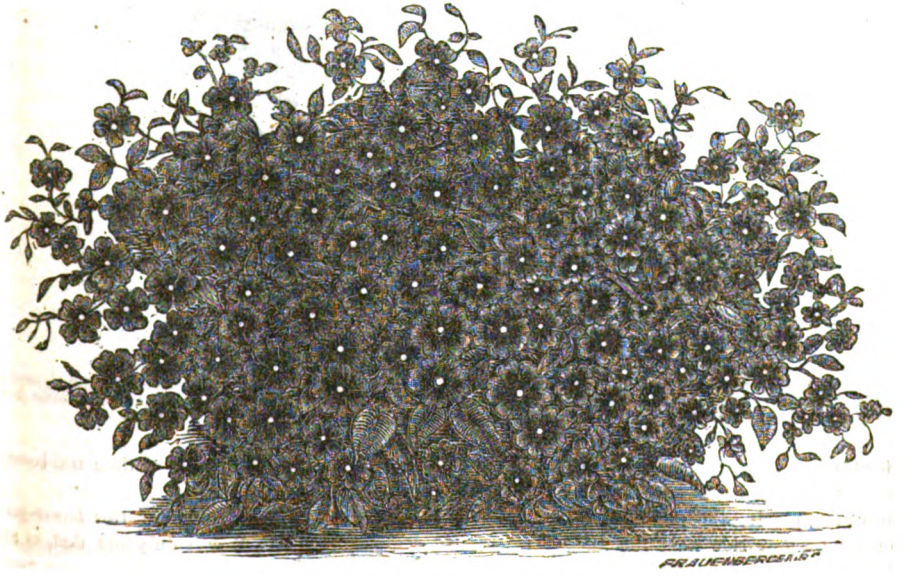
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growing plants or those with singular and conspicuous foliage, such as the Japanese maize, the wigandia, etc., may be planted, but remember all the time that this center bed is the



CANNA.

The foliage is very beautiful; flowers mostly scarlet. Should be planted in beds or groups, and nothing makes a richer bed on the lawn. Unless the plants are strong when set out, they will not produce much effect the first year.

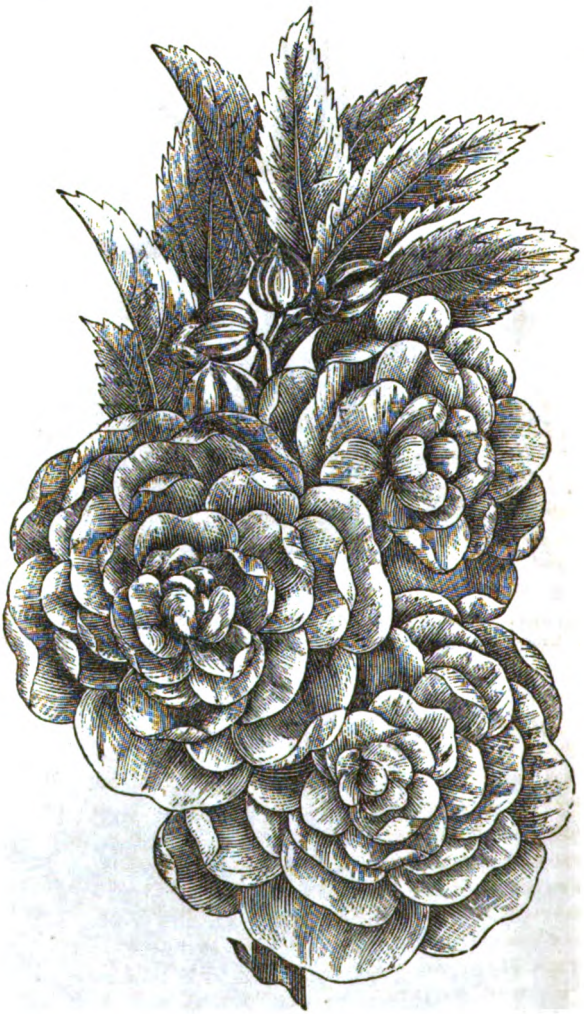


SILENE PENDULA RUBBERIMA.

A low, branching plant, covering as much ground as a strong Verbena; branches brownish red, and the leaves and calyx partaking of the same color, giving the plant a very striking aspect; flowers bright carmine-rose, in great profusion. A novelty. The appearance of a plant in flower is shown in the engraving.

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mother, against which all the children rest, and around which they cluster, and therefore no small-foliaged plants or low-growing ones should be introduced. In planting the children's beds an association of plants, colors of flowers, etc., may be made to harmonize, as it were, with the constitutions and characters of the children, and the bed belonging to one of a strong will or wild, impulsive habit be filled with flowers of vigorous habits and brilliant colorings; while



DOUBLE BALSAM.

One of the most popular and the most beautiful of our half-hardy annuals, but a rich soil and good culture is needed to bring it to perfection. With good care, very few flowers will afford more satisfaction. The Dwarf Balsams grow only about six inches in height, while the tall varieties will often reach nearly three feet in a rich soil.

for the modest, sensitive girl select those of delicate foliage and soft shades in coloring, in each, however, placing the plants of tallest growths on the back or side next the mother or center bed. We have not space here, nor is it necessary, to depict or name the many varieties which may be used, as they are all in Mr. Vick's catalogue; but we can not help reproducing several of his illustrations, because of their real beauty and adaptation.

Having now portrayed how this flower-garden may be made, I will only add that, as all the growths and creations of Nature are pure, and as the mind is impressed with whatever it is associated, there needs no argument to prove that man is better for the association with the

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creations ordered by a beneficent and supreme Power, than with the artificial gloss and display created by man. An association with purity and virtue inculcates purity and virtue, enlarges and expands the mind, as it takes in the pure and beautiful of nature spread abroad over the whole earth, while, at the same time, it creates a feeling of repulsiveness toward that which is artificial, and of value only as it ministers to the vanity or gross appetites of animal life. In association with nature there is more or less of spiritual feeling, and the mind is constantly studying the source of coloring, or the structure of a beautiful flower or leaf, and is therefore constantly reaching nearer and nearer to that divine Power which is its Author.

Letters to Ladies.

BY MRS. R. B. GLEASON, M. D.

LADIES—Some of you who read my last letter are wondering why so many are worn out with housework, since it is a healthful employment. To be blessed in body or spirit by domestic duty, or any duty, it must be done cheerfully. Work performed under protest, like an oath taken with a mental reservation, lacks its true life force. If we would find the crown which lies beneath any cross, it must be shouldered and bravely carried, not shirked for half the time and dragged the other half.

Now, if the good Father had not known that labor was the best discipline for his sinning children, he would not have sent them forth from Eden to earn their bread by toil. Those parents who try to grow up their children in a garden without thorns or thistles, with every thing at hand, so that there is no need of self-denying effort on their part, will find in their own offspring the worst of rank weeds and thorny shrubs, in the shape of sensuality, selfishness, sickness, morbid sentimentalism, and a host of Satanic elements which would have been cast out or kept out by energetic and persevering industry. The increased educational advantages given our girls, together with strong foreign hands to perform domestic drudgery, as it is called, has left them too much at liberty to follow their own pleasure. Solomon says, "A child left to himself bringeth his mother to shame," and I am very sure they soon bring themselves to sickness, if to no worse sin. Many young misses come to us suffering from indigestion, headache, dimness of vision, and a host of other ills, simply because they have been allowed to read at will, at all times of day or night. I have now in mind many who have come near blindless before twenty, not from study, but from story reading; who, after many months of medical care and little use of their eyes for years, have even now to guard against gas-light, snow-light, or much reading. Others from the same cause are visited with strange nervous affections; such as twitching of the muscles of the face and other parts of the body; chorea or St. Vitus's dance, where the motions seem more Satanic than saint-like. Besides these, a host of hysterical affections which doctors out of respect to the sensibilities of the patient, often designate as some anomalous nervous disease. The brain and nervous system play strange pranks with those who take insufficient bodily exercise. This is needed as a ballast. Part of the nervous force generated by the brain should be exhausted or used by the muscular systems. This one cause of many nervous affections suggests also one method of cure. The delicate nerves which run from the brain and spinal cords to every part of the body are so numerous and so minute that the finest needle will pierce one of them at whatever point it may touch. This complex net-work forms a nervous body which seems to symbolize the spiritual one. Now if we have overtasked this, our nerve body, giving it too little rest while our muscular system has had too little exercise, the first means to bring up the balance of power is to work the brain less and the body more.

So those who have been made sick by too intense, mental or emotional life get well sooner by moderate manual labor than by any other means, that is, if they take an interest in it.

A case in point: A young wife of active mind and ready wits who had lost her babe, and lost her health and cheer, was a patient of ours. Her excitability, her times of deep depression, gave her friends great anxiety. Before me lies a letter just received from her, in which she says, "We are keeping house, and have had no domestic; my health and cheer are excellent; have been too much occupied to get low spirited; have not had a single tantrum since my return; dish-water is splendid to wash out spells and the like."

She is one possessing much energy and dispatch, and so found diversion and comfort in housekeeping. Had she done it with reluctance and discontent, the magic power would have been lost.

When a quack was asked as to his system of practice, he replied, "It was to restore the distribution of the animal heat and the circulation, and thus sustain the equilibrium of all the forces

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of the body." Well, that is what seems to be wanted in many cases. The amount of circulation in the muscles is too little, while the nerve centers are oppressed and engorged, rendering the subject irritable and over-sensitive. So then by medical treatment, or by manual labor, we should direct the life-force to the muscles, to the extremities, to the surface; thus restoring equilibrium and equanimity in mind and body. Hot foot baths with cool head baths are beneficial, or warm half baths in which the patient can sit erect; with limbs extended, with cold compresses to the head, are excellent; cool shallow baths, with friction, are also good, if the invalid have sufficient reactive powers; but best of all, to work out one's physical salvation, as far as possible.

An excellent physician, a friend of ours, told an over-indulgent mother, to "have her invalid daughter take a hand bath after each meal, for one-half hour in the dish-pan," every day for three months. An excellent prescription, but poorly followed.

Of the many I have seen who have impaired their eye-sight and induced a tendency of blood to the head, by books, by painting or by fancy stitching, all have improved most rapidly, who, after some simple remedial means, have turned not complainingly but cheerfully to hand labor.

The mind, occupied with productive industry, is in itself a curative agent, quite as much as the bodily exercise. When an old painter was asked what he mixed his paints with by a young artist, he replied, "With brains, sir." This mixture not only makes good pictures, but it is an important ingredient in all the duties of life.

My husband says, "One can not make good bread unless brains are put into it."

And I am sure every soul dwindles that does work into which they put no spirit. Energy infused into all the common duties of life gives strength and courage to meet and conquer the sterner realities that must at times be met and overcome.

We may seem to be mingling mind and matter, body and spirit, and so we are, for we can not avoid it, since in this world the twain are one, and hence help us hinder each other.

Every nerve should be an inlet of strength, intelligence and pleasure, instead of restiveness and discontent. A lady who came to me for consultation, began by saying "that she was troubled with her nerves." Well thought I, if it was a tooth, we could take it out; if a tumor, it might be taken off. But if your nerves trouble you, you are in a dilemma. Just then the entire nervous system, interpenetrating the whole body, came before me as a picture. To take out the troublesome nerves was impossible; to apply any emolient which would soothe them all, was also impossible. It is by far better to maintain intact the nerve forces so that they will not trouble their owners; for nerves exhausted, petted and indulged, are very clamorous, like children who have come up unrestrained. All forms of nervous disease are on the increase from fidgets to cramps; from ticdoloreux to sciatica; from partial to entire paralysis.

Surely, we must conclude there is something wrong in the habits of this generation. Or else, why this supersensitiveness of the nervous system?

Our children live on food too stimulating. Tea and coffee, whatever may be said of them for the aged, when taken early in life excite and exhaust prematurely. Our growing children get too little sleep. When our girls should be maturing in nerve and muscle, between school life and social life they are over-stimulated, and so come on to the womanly stage with a delicate and sensitive organization.

Eyes which should rejoice in light are pained thereby; sounds which should be enjoyed or endured, become sources of discomfort or of actual suffering. So all the inlets of pleasure—the five senses—are likely to become so oversensitive as to bring pains. Beside the multitude of neuralgic diseases, more severe than any other bodily agony, there are a host of ideal infirmities which are worse to cure than the real.

Little aches, well nursed, soon grow to be big pains. Of some nervous invalids we can truly say:

> "Their griefs are great,
> Because they are so small;
> And would be greater,
> Were they none at all."

There is nothing which expands so much by thought as our own infirmities. Talking about them helps them to grow wonderfully. Added to these, affectionate attention and constant solicitude on the part of an attendant or friends, and we have a sure recipe for making a confirmed chronic invalid.

Such are like a client who wept in court while on trial, and when asked why he was so overcome, replied that he did not know he had been so misused, till he heard his lawyer plead his case. Some invalids have so many able advocates of their case about them that they have continually a realizing sense of all they suffer, and some that they do not. Unwelcome and

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uncherished aches and pains, like neglected guests, often take their leave.

But people who pet their nerves find that they become very sensitive and troublesome, like those of a young lady who came to us complaining of "ulceration of the entire nervous system," and said she had "had it cauterized with electricity." Now "ulceration of the nervous system," and "cauterization" of the same, were disease and doctoring to deep for us.

Any one believing that to be their condition "must be sick," surely. Not long since a lady told me, that she still suffered from the effects of a fever she had after going to Vermont, and that the journey there caused this fit of sickness. As she dwelt at length upon the case, I began to grow curious as to what there was about that journey which could have made her sick. The mountains to which she went on those glorious autumn days were surely healthful. And as she had no children to care for, and had for an escort a husband who had been for years a railroad conductor, he must be able, when off duty, to look after his wife and their baggage. So at last I said, "What was there in that journey that could have made you sick?" "Why," she replied, "you remember that I took my dog with me, and the care of him was too much for my nervous system. You know he would run around at the stations and I was afraid I should lose him; and so had to look after him so closely that I got overdone."

Now a woman who gets sick by any sensible work, I feel quite sure can be cured. But this, to me, was a hopeless case. Poor woman! Poor dog!

ELMIRA, N. Y., *April*, 1867.

AN inexperienced young bride, being asked by her cook to choose her dinners during the honey-moon, was anxious that her ignorance should not peep out. She called to mind ONE dish, and one dish only, that she knew by name; it was a safe one, and substantial too—"a leg of mutton." So, several days the leg of mutton came, obedient to the mistress's order. Perhaps the cook was weary of it; at last she ventured to inquire, "Should you not like some other thing to-day, ma'am?" "Yes, let us have a leg of beef for change!"

AN ENAMORED WRITING MASTER TO A YOUNG LADY PUPIL—"I can teach you nothing; your hand is already a very desirable one, and your I's (eyes) are certainly the most beautiful I ever saw."

Children's Ethical Nature.

BY F. B. PERKINS.

KING SOLOMON says, in the terse antithetical style so often used by Hebrew philosophers, "A wise son maketh a glad father; but a foolish son is the heaviness of his mother." One might make various comments here; as, for instance, whether the "heavy mother" may be supposed to feel bad because her boy (being foolish) don't know who his father is? Or again, and with more significance, one might observe that daughters are not mentioned at all, which is according to the Oriental practice of despising women, treating them as misfortunes or necessary evils, and not even mentioning them where it can be avoided.

But I do not delay over those merely curious inquiries. I want to discuss a single instance of Solomon's general principle, which is, the solicitude of parents for their children. That particular instance is, the anxiety of parents about the delinquencies of their children; an anxiety which often distresses parents, and distresses the noblest most, and has many times led them, with the best intentions, to abuse the poor little rogues after a manner that stunts and distorts their minds for years and years, and perhaps for all their lives.

Children steal and lie and quarrel and tattle and shirk work. They steal, usually, things good to eat. They lie to avoid punishment or some other kind of trouble. They quarrel to have their own way. They tattle out of revenge, or out of that universal instinct which demands stricter justice for others than for ourselves; and they shirk work because they don't like it. In short, they do pretty much as grown-up people do.

The sad thing about all these childish naughtinesses is, not so much the faults themselves as the moral insensibility with which they are perpetrated. Mothers lament over their little thief or liar, because "I could not make him feel that he had done what was shameful and wicked." Fathers lecture and whip and whip and lecture their sons (not so much now, though, as forty years ago, thank God!), until they absolutely force a false acknowledgment of contrition and shame, when the only real feelings in the little fellows' bosoms are (beside the overpowering physical pain that makes them say whatever is required) a horrible anger at being so beaten, and a furious and utterly unscrupulous resolve to avenge the transaction by doing the very next wrong thing they can with the least chance of safety.

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Beside these actual faults or vices, as they may be called, children frequently indulge in the performance of what are usually termed "tricks" or "mischief." The deeds which constitute this chapter of childhood are often the most fantastic and unforeseen possible, and sometimes they produce very uncomfortable results. For instance: a young gentleman and lady nearly related to the writer once made a tour of discovery into an adjoining garden, where they found a large bed of onions just set out, and the two mischief-makers went straight to work and pulled up every one of them, with an immense quantity of chatter and giggle. The deed was not discovered until the onions—a rare and choice variety—were all dead. The youthful offspring of a certain friend of the same writer, not long ago, poured a goodly quantity of kerosene down into the well; in consequence of which the well had to be emptied of water, and, as one may say, scoured with soap and sand, with a great expenditure of time, labor, inconvenience and vexation; while the youngsters, no doubt, felt very proud to think how much influence they had in the family!

This sort of mischief, under proper training, is left off sooner than the vices of children, and the reason is found in the natural development of the young human being. An understanding of the natural order of this development will make the peccadilloes of the little folks very intelligible, and may, I hope, do something to cure the fright of over-solicitous parents on the subject, and to prevent the improper treatment of the delinquents, while it shall neither excuse the faults themselves nor prevent proper measures for their eradication.

There are a few exceptions to these naughty tendencies in children. "Good children" they are called, and fortunately most of them die young, and have a little Sunday-school book written about them. A child with the virtues of an adult is as unnatural as a little boy with a strong beard, a bass voice, and other manly endowments. A child should have a child's qualities, and then we may hope to make a man—or a woman—of it. If a child has already the qualities of an adult, it will either become decrepit, and die when others would be in youth, or else it will live its life wrong end foremost, and be childish as an adult, to make up for having been adultish as a child. "Soon ripe, soon rotten." Precociousness is a most undesirable gift, and moral precociousness is no better than physical or mental. There is an account in the books of a young monster who was a deeply learned man at 10, and who died of extreme old age at 17 years of age. There is another account, to me even more disagreeable, of a youthful prodigy who never did any thing wrong, and who "at the age of 6 years had made up his mind on all the great questions of the day." I'm thankful the little prig died, for what an insufferable nuisance he would have been!

Omitting, then, "good children," and other unnatural and monstrous phenomena, I want to show that children have not moral faculties in an adult development, but only the capacity for them—the promise of them in future—the power of having those faculties come out into activity hereafter.

The order of development of the faculties of a child is:

First. The sense of pain and the power of testifying to it. The Rev. Thomas Boston once observed with Puritan gravity—summing up all human life with as blue a color as the old "vanity-of-vanities" man before him—"Man is born crying, lives complaining, and dies disappointed." It is sadly near the truth; but crying is the best thing the poor little baby can do; for how else is it to be known that he is hungry, or that his stomach aches, or that a pin pricks him?

Second. Affection and anger. Very soon the little soft thing will kiss its mother in return for her kisses, and crow and kick and grin to come to the arms that she holds out to it. It is impossible not to feel that there is affection in the satisfied clinging of the little soft hand upon the mother's bosom, and the funny nestling of the little face into the same soft nest or close into her neck. The gestures are as plain as the caress of the mother's arms, or the quiet bending of her head over her baby, or her own heartfelt smile.

Third, and third only, come the first activities of the intellect. These are perceptive, and they form a training of the organs of sense; an adjustment and bringing into working order of the eye, the ear and the hand; and the perceptive faculties of the mind open and come into operation along with the organs. The early part of this training is conducted among the playthings, and the furniture and fixtures of home, and is strictly a course of "object teaching." Commonly it happens that a considerable number of "objects" are fractured and otherwise expended in the study; but nobody grudges a wooden horse, or a doll, or even a tea-cup and saucer, if their destruction helps along the small immortal soul in its struggle to come into relation with the universe.

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With these perceptive activities begins that period of sensitive and retentive memory which is a prerogative of childhood, and which should then be used to the judicious uttermost. It almost always departs, in great measure, in proportion as the reflective powers and adult mental characteristics appear. This period of perceptive activities and of absolute, arbitrary memory is the school and college, or the school and clerkship, or school and apprenticeship age.

Fourth. Pretty soon after the awakening of the perceptives, and within the above-described period of education, there follow the powers of reasoning, the sense of right and wrong (which very often has a curiously visible struggle with selfishness, and is for a long time confined to a delicate sense of what is "fair" *to* the child), and the noble instinct of kindness for others for the sake of kindness. It is easy to see that these instincts (especially if the affections be diligently cultivated, too, and the power of controlling anger be carefully developed as much as possible) furnish very important handles for managing the young person.

Fifth. At no one fixed age, but usually later than the other faculties, come into activity those of loftiest essence and purpose. The others, before enumerated, relate us to the material world and to our fellows. It is these last, those of the moral and religious nature, which bring us into conscious relations with eternal principles, with the full apprehension of what our own personal dignity and honor demand, with the idea of God.

I have no intention of getting into theology, so I must stop specifying. But, up to this point, I think the majority of observant parents and teachers will agree with me. And it must be remembered that, in placing latest the dominion of the loftiest motives, I do not fix any absolute time, but only an order of succession. And, further, this theory permits each successive grade of development to be treated by the appropriate influence all the time, in entire harmony with the more elevated influences subsequently to be used. Therefore—to return to the stealing and lying and tattling and quarreling and laziness with which I set out—children steal because they want something pretty, but oftenest because they want something good to eat. Their appetites are keen and strong, and while they have an indistinct notion that they ought not to steal, they have not a competent notion on the point, and they have not self-control. For similar reasons they do those other things. Now, the parent need not expect to make an instant cure now; that should not be the rule. The rule is to treat the present childish defect in the way best calculated to make a good man or woman thirty years ahead. Except, perhaps, in extraordinary cases, do not whip. *Never* avenge. Do not even threaten and terrify. What is wanted is the constant influence of a good moral atmosphere, the steady pressure of a daily training into good habits, and a kindly but a regular showing, experimentally, that these childish faults bring inconvenience. Adult thieves are locked up, and deprived of freedom and franchise; and childish thieves may be locked up or deprived of privileges, or may for a time be distrusted. Adult liars are disbelieved; and some disbelief and distrust (under cautious limitations) may be shown to childish liars. But confidence should ever be ready for returning truthfulness. Adult tattlers are despised and avoided; and childish tattlers should be peremptorily sent about their business, with such a dose of contempt as is proper for a child. Adult brawlers are shut up, if necessary for the quiet of society; and so may childish brawlers be. Lazy adults are poor; and lazy children may be pauperized by the abridgment of privileges.

Such a course of treatment as this keeps up a constant pressure of natural law upon the child, who finds a reaction from his evil doings, that results evidently from the deeds themselves, instead of being a violent vengeance from somewhere outside of his sphere. Just as fast as any higher motives become visible they should be appealed to. If a child will try to cure its faults for love of its mother, it is far better than to do it for fear of being shut up on account of a possible further loss of currant jelly; and as soon as the child can practice an intelligent self-control because it is right and noble to do so, that is the best of all motives, and should be set in operation—not to the exclusion of the rest, but to the inclusion and reinforcement of them.

Don't be frightened at the children's naughty actions. Prevent them; cure the bad habits as far as you can; put in good ones instead; keep the little people busy and happy in harmless occupations, and remember, when stitches are let down in the tedious work, that they are children, and that their faults are part of childhood, to be outgrown with it; not excrescences to be cut and cauterized by bloody knife and hot iron. Your baby's skull will grow hard and firm over the little throbbing *fontanel*, if you keep the little thing alive and well long enough; you need not cut the head off as a defective one, nor put on astringents to harden the place, nor blisters to stimulate it.

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Health.

Health, golden health!
Health of the silver dew,
Health of the morning chime,
Health of "ye olden time,"
Health of the russet hue.

Health, blithesome health!
Health of the singing lark,
Health of the mighty sun,
Health of the tidal run,
Health of the day and dark.

Health, blessed health!
Health of the coming years,
Health of the promised day,
Health of the climes away,
Health of the starry spheres.

Health, fairest health!
Health of the scarlet rose,
Health of the tulip red,
Health of the marriage bed,
Health of the drifted snows.

Health, dearest health!
Health of the crimson blood,
Health of the loving eye,
Health of the gentle sigh,
Health of the choicest food.

Health, richest health!
Richer than yellow gold,
Richer than rarest gems,
Richer than diadems,
Richer than new or old.

Health, freest health!
Free as the mountain breeze,
Free as the ocean swell,
Free as the babbling dell,
Free as the swaying trees.

Health, golden health!
Take it as Nature's boon,
Spread it afar and far,
Haste thy chariot car,
Wish it a harvest soon.

TILDEN.

Some Health-truths for Students.

BY REV. J. L. CORNING.

A clergyman of high standing addressing a class of theological students not long ago, said, "The fact is, my young brethren, we ministers are all of us a sickly set—ricketty machines that spend at least half our time in getting repairs!" This gentleman had just returned from a year's travel in Europe and the Holy Land in search of health, his rich congregation furnishing the cash. Lucky man! But I think he would have been more lucky not to have got sick, and his church would have been the gainer, had a year of his previous theological course been devoted to the study of physical hygiene. If any man wants to find a mystery of Providence, let him look at the fact that, somehow, events for the last thousand years, more or less, have been so ordered that preachers have to get on the brink of desuetude or death with dyspepsia before they discover the rudiments of the science of personal hygiene. I have often wondered why some supernatural revelation of these great truths was not vouchsafed to those people who have so important a mission in advancing the intellectual and moral welfare of society. But I long ago abandoned all hope of any such divine dispensation. We preachers, like all common folks, must travel the old rugged path of experience. Throat-ails must teach us how to take care of our throats, indigestions must teach us how to take care of our stomachs, palpitations and neuralgias must teach us how to take care of our nerves. And so with the rest of the pathological series. Oh, dear! what aches, and cramps, and fevers, and chills, and debilities have made up the lore of this dog's-eared school-book of experience! Now, just as they happen to occur to me, and without seeking any scientific method, I will write down a few lessons which, as a student, I have learned under the inspiration of the rattan.

Some years ago I wrote an article for The Independent, upon the Divine Qualities of Fasting for Students. I got a notion that the irritability of brain induced by fasting was synonymous with vitality and power. I got a notion that a pair of bellows would supply the place of a hod of anthracite coal or an armful of hickory. The editors were foolish enough to publish my advice, and I never heard how many clergymen, as a consequence, allowed their gastric juice to gnaw away the linings of their stomachs for the sake of cerebral inspiration. As for myself, I learned the folly of my creed just in time to save me from fatal brain disease. Many a time did I go to my study early Sunday morning without a mouthful of breakfast and write for three hours, and then preach for another hour, relying wholly on the bellows. If I had been as great a bigot in theology as I was in this pet theory of starvation, I never should have got out of the region of the Dark Ages. But after awhile I noticed that this method of procedure was connected with an increasing soreness in the lining of the stomach. And now I will soberly say, that when a

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man has a sore stomach there is no telling what ridiculous thing he may do. He may shoot his mother, or jump out of a four-story window, or hang himself. Before a forenoon of heavy brain-work a man wants to eat a little, not much, mind you—just enough to keep the gastric juice out of mischief. "Satan finds some mischief still for idle juice to do!" Thus much for blunder number one. Now for another. A good many years ago, I was powerfully stirred in conscience on the subject of early rising. I read that saintly John Wesley rose simultaneously with his chickens, and that Napoleon, the Uncle, issued a quasi-imperial edict that five hours sleep out of the twenty-four were enough for a civilized man. Immediately I got up with the chickens, dug my eyes open with my knuckles and went to my books. Month after month I pursued this saintly habit, yawning two hours before breakfast over theology and exigesis. The result was that the whole day was a yawn, and the brain, defrauded of its rights, refused to work with brisk and ready pace.

One day a certain lank phrenologist called to feel of my bumps, and, among some things not very comforting to personal vanity, said this thing, which was a comfort to my nerves: "Young man, you need a world of sleep; can't take too much; eight or even ten hours out of the twenty-four will not be laziness for you." Now, the idea of dismissing John Wesley as the keeper of my conscience, and installing in his place an itinerant phrenologist, seemed kindred to blasphemy. But of the two, on this special question, give me the bump-man rather than the pious Armenian. Given a man whose business is brain-work and who constitutionally is a bundle of quivering nerves, and you perceive that to be awake, for him, means something more than it does for a phlegmatic individual whose pulse is fifty and who pegs shoes. The question how much sleep a man wants is the question how wide awake he is when his eyes are open. My good friend Mr. Beecher makes it a rule to have his daily snooze. I have seen him in one of those vulgar spells, looking for all the world like an oyster. But when he gets on his great fat legs in Plymouth pulpit his people get the impression that he is wide awake. The Lord bless him in his snooze and let no irreverent visitor dare interrupt him in this religious duty.

Now, I will not do a particle of brain-work before breakfast, or on Monday mornings. And if Mr. Wesley, or any other saint, wants to know why I do not get up with the chickens, all I have to say is that I am not a chicken. These two lessons shall suffice for this time.

The Physiological Anatomy, Physiology and Pathology of Man.

BY RUFUS KING BROWNE, M. D.,

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Number II.

From these little masses, then, all the tissues are built up, and a mass of any tissue at every age may be divided into elementary parts, each one of which contains a portion of this transparent matter within it. Each one of these portions may be termed a "cell." Various forms of these masses or cells are represented in Figs. 1, 2, 3, 4 and 5, of Plate III.

The "cell" is even now considered to be a body consisting of certain essential, definite and constant parts (cell "wall," cell "contents," and "neucleus"), to each of which a special office has been assigned; and the power of actuating growth in the formation of tissues has been attributed, in turn, to each one of these.

But at first, in the growth of every organism, there are no such three parts of a cell at all. There are simply small masses of germinal matter, the middle part or "neucleus" of which are separated by a little other soft matter which surrounds each of them (see Figs.). New or other masses of precisely similar character are produced by the division and multiplication of those existing before, in the manner represented in Fig. 2; and, by the same process, the soft matter accumulates in the intervals between the neuclei, immediately inclosing them.

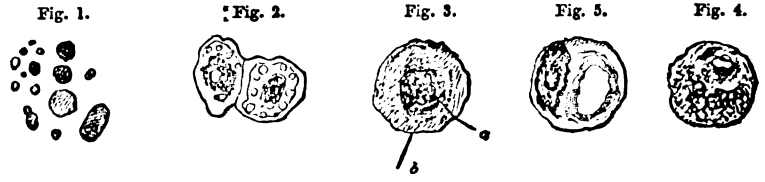
As they multiply and change position, the former is extended by that process, as the comparatively extraneous or most external matter of each center. This outside matter is, in fact, the matter of each germinal mass which it has projected or extended by its formative power, and differs from the center in being its product. Whatever changes thereafter occur in this intervening material, thus formed or projected in variable quantity for each center corresponding to its formative power, is due entirely to the latter. This material differs, in different cases, from nearly fluid to great hardness. We may therefore, consider each germinal mass as consisting of material in two different states or stages of existence—first, of the middle germinal mass, still active; and second, of the formed material which envelops it. The simplest and

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most minute germinal particle, as well as the largest, capable of growth or multiplication, consists of matter in these two states, of which the relative proportions vary greatly at different periods and under different conditions.

An epithelial cell, from the surface of the human tongue, is represented in Fig. 3. At first there is a thin layer of formed material upon the surface of the germinal matter (*b*). The latter, if growing, may divide, and each of the masses resulting would be invested with a quantity of this "formed" material. Thus the

PLATE 3.



ILLUSTRATING CELLS OF VARIOUS CHARACTERS.

Fig. 1.—Minute particles of GERMINAL MATTER of ordinary mildew, visible under the one-fiftieth of an inch. The smallest is smaller than the one hundred-thousandth part of an inch.

Fig. 2.—Two conjoined starch-holding cells of potato, showing *germinal matter* with small starch granules precipitated among it.

Fig. 3.—*Epithelial* cell, as upon surface of tongue and cuticle; *a*, active (*germinal*) matter; *b*, formed or converted germinal matter.

Fig. 5.—Liver cell, showing two states matter of growth, as in Fig. 3. Formed material soft, and among it minute fat-vesicles and granules.

Fig. 4.—"Fat cells," showing seat of formation of fat by change in formed material.

former increase in number. Each increases in size in consequence of its absorption of pabulum, which passes through the layer of formed material into the central germinal mass. Thus the latter increases. Simultaneously a portion of the latter is undergoing conversion into the formed material which accumulates; and as each new layer is formed upon the surface of the germinal mass, the layers of "formed" material are stretched, and more or less incorporated with that last developed. For a time the germinal matter increases, while new-formed material is produced. The entire mass increases in amount up to a certain period of its life. New "cells" continue to be produced beneath, removing the older ones from near the vascular (or blood) surface. In very old cells the small portion of germinal matter still unconverted into formed material dies, and the cell, having by this time arrived at the surface of the tongue, is cast off, a mass of non-germinal formed material.

A liver cell is represented in Fig. 4. These are surrounded with a thick layer of soft formed material, the outer part of which is gradually becoming dissolved and disintegrated. In this case there is also a formation of new cells and a casting off of old ones, proceeding in the same definite direction as in the case of the epithelium of the surface, but each cell probably living a longer time.

Now, in the foregoing, we have pointed out the decided physiological distinction between the central or germinal mass and the matter proceeding from it, which surrounds and has been formed by the first, and these two are in entirely different states; for upon a distinct observance of this difference will depend an apprehension of the formation of the tissues hereafter to be described. The one is matter in its formative (or dynamic) state, the other is formed. The matter, in the first state, is truly germinal, and is that upon which all growth, multiplication and conversion depends; while in the second or outer condition the matter may exhibit very peculiar properties, and be of most complex chemical composition; it may increase, by new matter being added to it, but it neither multiplies, converts nor forms. Hence, from the very moment formation of the tissues of an organism begins, up to its latest stage, we find that the organism does not consist of matter in the same dynamic state in every part, but that the germinal or central masses, the nuclear part is the site of a peculiar formative or living power, which we never recognize the outer part to exert. Each central mass or mass of germinal matter, with a proportion of formed material around it, we may call a "cell," and all living cells consist of matter in these two or different states.

The one is an active condition—vital; the other is in a static condition, and manifests in itself no form of activity; and though the latter was once in the first or living state, yet the form or shape it takes, and the anatomical character it may assume as intermediate in forming and formed tissues, is due entirely to the matter which exists in the germinal or living state. The one is builded into the tissues as so much

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connective substance, the other builds the tissues by its own formative power.

Thus, one mass of living, germinal matter may divide into several, and thus all multiplication occurs. And in the formation of the tissues by extension, elongation, changes of shape, or increase of number by multiplication of anatomical elements, all alike are due, not to a growing in of the "cell" wall, but entirely to changes in the germinal matter or central mass. At an early period of growth the tissue consists of germinal masses only, closely adjoined. As development advances, the formed material increases, filling widening intervals between the masses of germinal matter from one another. In many larger masses of germinal matter a smaller mass of nearly spherical shape, appearing as a mere dot, is observed, and frequently this divides before the division of the parent mass. But this division also takes place in cases in which no such spherical body is observed, and the latter may appear after a portion of the parent mass has been separated. In such instances these little bodies are new centers of living matter.

Within these a second series is sometimes produced. The first are called nucleï, and the second nucleoli; and magical formative powers have been attributed to them, as the sole agents in the process of multiplication. But, in reality, these are but new living centers appearing in pre-existing centers, and they mark another series of changes in the matter in which they appeared. Sometimes a visible line marks the boundaries of the orders of changes. Under certain conditions the nucleus may increase in size, and exhibit all the properties of ordinary germinal matter—other nuclei may be developed within it, and other nucleoli within them—so that the eccentric germinal matter becomes formed or connective material, its nucleus growing larger and taking for the time being the central place. The original nucleolus then becomes the nucleus, and nucleoli make their appearance in what was the original nucleolus.

The germinal or living process of growth consists of evolution from centers, and the arising of new centers within pre-existing centers.

But the germinal masses or matter is not unfrequently without nucleï, where they subsequently make their appearance, if the mass becomes bathed with nutrient matter; while sometimes several small nucleï make their appearance at once in various parts of the germinal matter. But the nucleï always make their appearance in the substance of a pre-existing mass of living germinal matter. The nucleï and its nucleus (nucleolus) are not composed of special matter differing at first from the germinal mass, nor do they perform any special operation, but are simply the latest center of activity of that mass, as more or less of it is being converted into formed material. They simply consist of living germinal matter.

In order to understand how the tissues grow or are formed, we must learn how these germinal masses increase and multiply, for without this requisite we can not understand how they build themselves into the tissue of the organism.

In all cases the germinal matter divides. The process of division may take place: 1. The parent germinal mass may partly divide, and each part move from the other, leaving a narrow, undivided neck between the two masses. This neck may permanently remain as a mutual extension of the two, or it may part and the two become separate living masses. 2. The parent mass may divide into three, four or more equal parts. 3. From every part of the parent mass protrusions, buds or offsets may proceed, and, however small these may be, each one, when detached, soon absorbs nutrient matter, and grows until it attains the same size as its parent. In this process the formed material intervening is also produced by the conversion of some part of the germinal and the dividing mass.

If it is of soft consistency, it forms a common or undivided surrounding for the whole colony of masses into which the parent single mass has divided; but it does not "grow" or "move in" and form a partition, as has been stated. When such a partition exists, it results, not from "growing in," but is always simply produced by a portion of the germinal matter which has undergone conversion into the formed material. In all cases of the growth and formation of tissues, the germinal material is the matter concerned in the various changes constituting growth.

If these preliminary facts be borne in mind, the differences observed in the arrangement of fully formed tissues will be readily understood.

[TO BE CONTINUED.]

ORAL SPELLING AT A PREMIUM.—A country superintendent in Iowa found a teacher drilling his pupils on "Pro-ban-to-ban-time-tam-tym-lyre-mack-field-north-hill-row-dong-whack," having them pronounce each syllable and then all before it with the syllable each im e.

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Revelations of a Retired Physician.

BY THEODORE THORNTON, M. D.

III.

THE FATAL BLEEDING—A CONFESSION.

One of the first things that must have attracted the attention of readers of the common run of books on the practice of medicine, is the utter contradictoriness which is exhibited by their authors—not merely as to their theories of the origin and progress of most diseases, but also as to their treatment.

I well recollect how "confusion worse confounded" was begotten in my mind when I myself first opened such works as Dr. Eberlie's, who was the leading authority in my student-days, and read his chapters on some of the more acute and inflammatory diseases, and noticed the great variance of views quoted by him from still earlier or cotemporaneous writers.

Every fresh paragraph was calculated to more and more unsettle my faith in "the bright and shining lights of the profession," as well as to unsettle such opinions as I may have been inclined to adopt, after reading "Cullen's Practice," an old edition of which, unconfused by editor's notes, was the first book on that branch that my venerable preceptor put into my hands.

On no question was there more disputation, among the authors cited by Eberlie, than precisely when to employ the lancet in the class of diseases referred to. But the faculty generally were not in doubt as to the utility of blood-letting at their commencement; for there was only one writer of any considerable reputation on either side of the Atlantic, at that day, who dared to discard the lancet altogether in inflammatory diseases, and that was Broussais. He had, as yet, very few followers—the great mass of the profession believing that blood-letting was the "sheet-anchor" of medicine. And well do I remember how, thirty years ago, his "leech-pots and gum-water" treatment, as it was sneeringly called, was ridiculed by the professor of practice in my Alma Mater, alluded to in a former sketch.

In view of such circumstances of my early student-life as already described, the reader will not be surprised to learn that, notwithstanding the staggering experience of my first attempt at phlebotomy, I found plenty of sanctions for my course in the case of O'Flaherty, so disapproved of by my preceptor.

As the use of the lancet was then "all the fashion"—for there are fashions even in the healing art—and my teacher was himself a great advocate of bleeding in many diseases, it will not surprise my readers to be informed that I early became a great bleeder myself. I never seemed so happy as when watching the life-current flowing in a "beautiful stream." In fact, bleeding became a perfect hobby with me; or, as would be now said of me, I had the "lancet on the brain."

It was not long before I had an opportunity to use my new lancet—a silver-cased spring-lancet, which was to me as the sword to the cavalier—on one of the old doctor's patients.

In the village where I was pursuing my studies, there was at least the usual share of inebriates. There were many of them Americans. This class of drinkers was much more apt to have delirium tremens than the foreigners, whom I have already described as being very numerous thereabouts, on account of the progress of "Frank Thomas's big ditch," as the Chesapeake and Ohio Canal was then called by the enemies of that gentleman, who favored its prosecution. The Irish generally were saved from more dangerous maladies by their grog-blossoms, because of the steadiness of their "unsteady habit"—said grog-blossoms being, in fact, issues set up by Nature for the relief of the brain and the various viscera endangered by the use of alcoholic drinks.

One of the Americans referred to was attacked by mania-a-potu, and the old doctor was sent for. He paid him one visit only—he being a loafer of no account—and then turned the case over to me.

The patient had already been several days and nights without sleep. The spectral illusions, so characteristic of the drunkard's madness, which were innocent and rather amusing at first, had become more annoying—such as rats running across the floor, and bugs crawling up and down the wall—thus adding, by the aid of the diseased imagination, to not a few realities in that line, found, I am bound to say, in that drunkard's home, as in those of his class most generally!

From these the hallucinations changed to serpents crawling and hissing around the room; and finally came the devils with their pitch-forks, threatening to pitch the poor victim of rum into "the flames of hell," as he himself expressed it!

I had tried other remedies for some time without effect—for the more I gave of them the more my patient raved. I had read of bleeding as a remedy that some writers had mentioned as beneficial in mania-a-potu, where there was "plethora in the patient and congestion about

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the brain, with decided febrile symptoms," etc. Nothing should be less surprising than that I, a first-year student, who had never heard a lecture delivered, and had read all the muddling contradictions above referred to, should have become rather confused in my view of conditions—in other words, should have failed in my diagnosis. This I did, as I subsequently came to see, when too late, and therefore I had my raving patient lashed to his bed while I took a "full bleeding," *i. e.*, 16 ounces of blood from his arm.

The effect seemed decidedly favorable, and I was delighted. The patient was not so restive for a time, and dosed a little at intervals. As sleep was spoken of in the books as the condition on which the life of the patient in delirium tremens absolutely depends, and the slightest inclination to sleep was said to be encouraging, and sleep had followed my first bleeding, I resolved to repeat the remedy, and I bled him 12 ounces more.

He now became more quiet, and seemed to doze more than before, and then to fall into a gentle sleep. I was now extatic over the *quietude* of my so lately raving and devils-seeing patient.

I pronounced him better, and left him for an hour or two, expecting, and so declaring, that when I returned to him I should find him asleep and safely over his attack.

Before the time appointed for my return had arrived I was sent for in post-haste, and told that my patient was dying! Surprised, but unbelieving, I hurried to his side, only to find him, sure enough, dying!

That was a bleeding of which I did *not* inform the old doctor. On reviewing the case, book in hand, I came to the conclusion that I had actually killed my patient by bleeding him contrary to rule; for you see, reader, *there* was my fault—as practitioners who are still slaves to the tyrant, Authority, would determine the question. For, had I killed the poor fellow according to rule—*secundum artem*—there would have been nothing for me to regret. Thousands had been so killed by full-fledged doctors, without more than a momentary twinge of conscience, if any at all.

The reader will be ready to ask: "Were you not dampened in your enthusiasm about the lancet by that fatal mistake?"

I answer: "No—not I." On the contrary, I became more and more of a believer in it—enamored of it, I may say—until my enthusiasm could no longer find sufficient vent in prose, and I had to invoke the muses, as the following apostrophe to my spring-lancet, written no less than six years afterward (1840), will show:

TO MY SPRING-LANCET.

Years have sped since first we met,
Pliant and ever-faithful slave,
But still thou standest by me yet,
Watchful as ever and as brave!

Oh, were the power of speech but thine,
To tell what thou hast seen and done,
The curious would their ears incline,
As thou our exploits dwelt upon!

I love thee, faithful, blood-stained friend!
As warrior loves his sword or shield;
For how on thee did I depend
When foes to life were in the field!

Those blood-spots on thy visage tell
That thou through fearful scenes hast past,
While serving me so long and well,
And I shall love thee to the last!

A thousand mem'ries cluster round me,
In all their freshness, and they speak
Of friends now absent, friends who found thee
Aye with thy master, prompt to wreak

Vengeance on foes that strove to kill
With blows well aimed at heart or head—
Thieves who, with vampire heart and will,
On many a vital current fed!

Strong men have blessed thee for thy aid,
As grateful eyes thy presence hailed;
Thou many a bosom glad hast made,
Which timely of thy aid availed!

Now, when with strangers is our sphere,
Thou art the dearer to my heart,
As would proclaim the woe-wrung tear,
Were we compelled, at last, to part!

Now, in contrast with what I am about to confess presently, as to the change that has taken place in my view respecting the lancet, the readers of THE HERALD OF HEALTH will very likely come to the conclusion that the foregoing lines had been prepared for this occasion. But I assure them that they were really written twenty-six years ago, and they expressed my feelings *then* fairly, albeit in the allegorical language of poesy.

There is one curiously significant fact connected with their history which I will mention here. They were most unmercifully criticized by some "secret enemy," as I was inclined to regard him then, for their faults of rythm and rhyme, and their palpable defects in other respects—for which I am duly thankful now,

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when I can afford to smile at my own foolhardiness in rushing into print with them; but not a word of complaint was made of the philosophy which furnished their inspiration, their false philosophy, as I now view the question—the critic being much more concerned about their want of rhyme than their want of reason! But he was not blamable for this, after all, because I was known to be "orthodox" as a doctor, and that was enough for him, and therefore it was not of my philosophy which he was disposed to complain, but of my attempt to teach it in rhyme, for which he was satisfied I had no talent, instead of plain prose, which, he had reason to know, I could write at least passably.

Were I to attempt now to give my impressions of the lancet in the light of the experience which a quarter of a century has shed upon its use, I should deal in plain prose, because more to my present taste, and apostrophize somewhat in this strain, in remembrance of the "fatal bleeding," and other crimes against physiological laws, which my "slave" was made to commit:

O blood-stained lancet! slave to my will, myriad are the crimes against Mother Nature which thou hast committed! When she, in her loving kindness to her disobedient children—so often playing the part of ungrateful rebels in the sight of heaven—has lifted the chilling pall which the Demon of Disease has wrapped around the heart, and sent the "life-current" bounding in joy along each arterial conduit to the motors of the frame, so impatiently awaiting their return, thou hast, with the so often fatal stroke of thy malignant blade, severed that conduit and turned that vital current from its strength-imparting course! And thus thou, O lancet! hast aided the fell demons that lurk in the vitiated air we too commonly and willingly breathe, the poisonous food and still more poisonous drinks and fumes in which the thoughtless of the earth indulge to their hurt, but to the seeming joy of thee and thine, to send their victims to early graves!

But, thank Heaven! the wizard-like spell of thy fame, as the "sheet-anchor" of the elder craft, has been broken, never, let us hope, to bind anew the minds of those claiming to be classed as scientific men! The sooner thy very name is buried beneath the waves of oblivion's sea, with the other empirical *debris* of the past, the better will it be for the true science of life, which thy false philosophy of cure so constantly and mischievously ignores!

[TO BE CONTINUED.]

MEDICAL ETHICS—Horace Greeley, being invited to speak at the Commencement of the Eclectic Medical College, spoke briefly and sensibly on Medical Etiquette, substantially as follows:

"I do not appear as the advocate of any particular school of medicine, nor the champion of any special medical system or theory. I look upon the establishment of an Eclectic Medical College in this city as a protest against abuses and as an evidence of reform. It is a palpable expression of a desire for free thought. Resistance to orthodoxy, I think, is doing good in the world. The school that stands up in opposition to the action of 2,000 years is an argument based on purpose and conviction. Such a school might meet opposition, persecution perhaps, certainly intolerance. The men who were stoned to death in their day, and the stones used afterward to build their monuments, were the men who initiated radical changes, instituted great good. I would ask the new Eclectic School to consider the matter of medical etiquette. I see no reason why I should not call on my neighbors or friends of the Allopathic, Homœopathic or Eclectic Schools to advise for my child when it is sick. Yet the intolerance of existing professional rules is such that I can not do so without risking a wrathful refusal. I sincerely hope the new Eclectic School will not countenance any such Middle-Age folly, but that it will adopt sensible, kindly and manly rules of tolerance and professional good fellowship in all such cases, no matter what school of practice may be followed.

"This spirit of Christian conciliation especially becomes one whose profession is to heal the sick and to prolong life. I think that the practitioners of different schools may consult together with much profit to each other. I hope that the graduates of the Eclectic Medical College of the City of New York will be animated with this kindly and charitable feeling toward all others practicing their profession.

"I see no reason why forty or fifty rich or lucky physicians should take the cream of practice, and all of the influential positions, and all of the prominence, under arbitrary rules made by themselves, which exclude the great body of their professional co-laborers from all opportunity of competing with them on equal terms. I see no reason why hundreds of good physicians should not announce themselves in

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a modest card in the newspapers in the various specialties of medicine or surgery in which they may believe themselves to excel. This would be a sensible thing to do certainly in any other business, and why not in medicine? Yet the intolerance of the rule-makers of old schools of medicine is such that they would crush or ostracise any of their humble followers were they to do so, notwithstanding they themselves are advertised in the most effective way in connection with their official and public positions."

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

AGAIN, assuming that "Force" is a term that needs no explanation, I will proceed to give directions for cultivating the voice, to use different degrees of force at will. But first let me say, that while most people know and can explain the difference between *force* and *pitch*, practically, we very often confound the two. The mother tells her child to speak "*louder*," which should be understood to mean, "speak with more force;" and the child speaks on a higher key, either with or without increasing the force. The mother accepts this *effort* to obey, and the child supposes that the mother has been obeyed. At school, the same thing occurs daily, with this addition, that the teacher constantly sets the example of using a high key, without making any effort to use a proper degree of force. Thus, a high key is so generally used where force should be applied, that, notwithstanding our correct theories, we have little correct practice.

When this article is laid before the reader, it is to be hoped that the weather will be so pleasant that the fields, groves and forests will be drawing us, irresistibly, to taste their delights; or that those of us who are pent up in cities, and *must* resist the attractions of the country, will be drawn to parks, or out upon the water, for it is in such places that I must now ask my readers to practice. If this also is impracticable, a *very large* room is desirable. Hoping that most of you can go into "God's first temple" for practice, we will attempt to suggest the mode of practice.

Ask a friend to accompany you to some place, out of doors, suitable for practice, each taking a copy of an interesting book. If you can keep up a conversation you will not, at first, need the books.

Let us first suppose that a conversation can be kept up. Having reached the spot selected, commence a conversation on the middle key. Immediately begin to recede from each other, until you are at as great a distance as you can be and make yourselves heard with ease on that key. Now continue to increase the distance between yourselves; but be sure not to elevate the pitch of the voice. This will compel you to increase your *force*. Continue this, increasing the distance as you are able, until there is some fatigue; when it will be well to adjourn.

The next day you should be able to converse, on the same key, at a slightly greater distance; and thus, day by day, the distance may be increased, until great force can be given on the middle key.

If subjects for conversation do not offer, resort can be had to the books; in which case it will be well to alternate in reading. The criticisms that may be made, will furnish topics for conversation at intervals; thus giving variety to the exercises.

When this is accomplished, take a key below, and then one above the middle key, and practice in the same manner.

At times, it is desirable to do this where the land is level; at other times, where it is undulating, or hilly. On hilly land, at one time, let one of the parties be at the foot of a hill; and the other as far up the hill as practicable. At other times, places may be taken so that there will be a valley between the speakers. At times, a stream of water may be between the two; at other times, one of the persons may be on the water, and the other on the shore, and again both may be in boats on the water.

In short, vary the relative situation of the two speakers, as much as may be consistent.

Do not overdo this matter, and yet do not leave any means untried to increase the power of the voice. But, that this power may be effective, there must be also an ability to use soft tones as well as loud ones. For this purpose, while thus increasing the power of the voice, there should be practice upon the tones that are, or should be, used in the room where there are sick persons; not those semi-whispers that are always so annoying to the sick and the well, but *pure tone* in its softest utterance.

If the reader resides in a seaport town, let him observe the manner in which officers of vessels issue their commands to men aloft, and the manner in which the responses are uttered, and, especially, the manner in which men are addressed, who are on board another vessel, or, at a distance, in a boat.

In such cases, we will not only hear a due

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degree of force, without hearing an offensively high key; but we will, if observant, notice that their words seem to be thrown far away from them, while ours often seem to drop at our feet.

Having secured the ability to use force as above, apply it to the elementary sounds.

Never give up, until "Low and Soft" can be changed into "Low and Loud;" and "High and Loud," into "High and Soft," and *vice versa*.

"Field Preaching."

BY PHŒBE CARY.

I HAVE been out all day in field and wood,
Listening to praises sweet and counsel good;
Such as a little child had understood,
That, in its tender youth,
Discerns the simple eloquence of truth.

The modest blossoms, crowding all the way,
Though they had nothing great or grand to say,
Gave out their fragrance to the wind all day;
Because his loving breath,
With soft persistence, won them back from death.

And the right royal lily, putting on
Her robes, more rich than those of Solomon,
Opened her gorgeous missal in the sun,
And thanked Him, soft and low,
Whose gracious, liberal hand had clothed her so.

When wearied, on the meadow-grass I sank;
From a cool rill that was so small I drank—
An infant might have stepped from bank to bank;
And the tall rushes near,
Lapping together, hid its waters clear.

Yet to the ocean joyously it went;
And rippling, as in fullness of content,
Watered the pretty flowers that o'er it leant;
For all the banks were spread
With delicate flowers that on its bounty fed.

The stately maize, a fair and goodly sight,
With all his spear-points bristling sharp and bright,
Shook out his yellow tresses, for delight,
To all their tawny length,
Like Samson, glorying in his lusty strength.

And every little bird upon the tree,
Ruffling his plumage bright, for ecstacy,
Sang in the wild insanity of glee;
And seemed, in the same lays,
Calling his mate and uttering songs of praise.

The golden grasshopper did chirp and sing;
The plain bee, busy with her housekeeping,
Kept humming cheerfully upon the wing,
As if she understood
That labor, with contentment, was a good.

I saw each creature, in his own best place,
To the Creator lift a smiling face,
Praising continually his wondrous grace;
As if the best of all
Life's countless blessings was to live at all!

So with a book of sermons, good and true,
Hid in my heart, where I might turn them through,
I went home softly, through the falling dew,
Still listening, rapt and calm,
To Nature giving out her evening psalm.

While, far along the west, mine eyes discerned,
Where, lit by God, the fires, the fires of sunset burned,
The tree-tops, unconsumed, to flame were turned;
And I, in that great hush,
Talked with his angels in each burning bush!

HUMAN STRENGTH COMPARED WITH THE STRENGTH OF A BEETLE.—This insect has just astonished me by its vast strength of body. Every one who has taken the common beetle in his hand knows that his limbs, if not remarkable for agility, are very powerful; but I was not prepared for so Samsonian a feat as that I have just witnessed. When the insect was brought to me, having no box immediately at hand, I was at a loss where to put it till I could kill it; but a quart bottle full of milk being on the table, I placed the beetle for the present under that, the hollow at the bottom allowing him room to stand upright. Presently, to my surprise, the bottle began to move slowly and glide along the smooth table, propelled by the muscular power of the imprisoned insect, and continued for some time to perambulate the surface, to the astonishment of all who witnessed it. The weight of the bottle and its contents could not have been less than three pounds and a half, while that of the beetle was about half an ounce, so that it really moved a weight 112 times its own. A better notion than figures can convey, will be obtained of this fact by supposing a lad of fifteen to be imprisoned under the great bell of St. Paul's, which weighs 12,000 pounds, and to move it to and fro upon a smooth pavement by pushing within.—*Professor Goss.*

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What Men will Do for Money.

BY REV. HENRY WARD BEECHER.

When the welfare of men, their virtue, their intelligence and their happiness is weighed in the scales against money, avarice is the stronger. It is true, regarding the whole enlightened community, and political economy, that the interests of property are identical with the interests of virtue, and that whatever promotes virtue is a good investment, and whatever destroys virtue in the end injures property. Comprehensively, in a large view, intelligence and religion are good for the lowest interests in a community, as well as for the highest. They are not alone beneficial to men in their family relations and in their higher social connections and future estate; though they are prominently beneficial in these. It would be to the interest of every man, even if he looked only at his pecuniary advantage, that there should be integrity, purity, disinterestedness, elevation of piety, true godliness. Vice is a corruption, not of morals simply, but of property as much. It is not only a burden to its victims, but it is destructive to the whole community as well. It is a tax-gatherer and oppressor. It wrongs the poor, it wrongs those who are next to the poor, it wrongs those who are next to them, it wrongs you, it wrongs me, it wrongs every body. Every single moral influence that is put forth in the community, doing good to the actor, does good more or less to the whole community; and every single evil influence that is exerted in the community, doing harm to the actor and victim, also does harm to the whole community. We are so bound together, our social connections and sympathies and liabilities are such, that reflectively the good of one is the good of all, and the evil of any part afflicts the whole. Such is the moral constitution of this world, that Godliness is profitable in all things. But to those classes of men who do not understand or care for any good except immediate good, and physical good at that, it does not seem so. The profitableness of virtue, in a remote way, incidentally, is nothing to men who have no faith of to-morrow or of next year, who live by their senses for the immediate moment, and to whom living means some pleasure in the nerve and some gratification of the muscle. They do not hesitate, therefore, to make money at the expense of human purity, and human happiness, and life itself.

It will not do, then, for us to be sentimental, and exclaim against such degrading views of human nature. There is nothing more potent and nothing more melancholy, than that a man will make money out of his fellow man—literally out of his blood and bones—if he can. There is no measure of cruelty, there is no depth of wickedness, there is no degree of meanness, that men will not come to practice for the sake of getting money. I hope at first with scruples and reluctances; but at last without sensation or delicacy. There is nothing gigantic in fraud; there is nothing base and treacherous and heartless, that man will not do for the sake of realizing pelf.

If you should take the treatment of the emigrants that land on our shores; if you should take the deliberate deceptions, the fleecing, the overwhelming ruin brought upon families, their beggary, and, what is worse, their compulsory degradations; if you should cull from mute lips histories now suppressed and unknown, of unutterable anguish suffered by those who can not speak the tongue of the land to which they have come; if you should know that these things were reduced to a business, and that heartless fleecings were carried on by men that cared neither for tears nor anguish, nor separation, nor the deep damnation that they heaped on the victim's head, you would not doubt that men would do any thing for the sake of money.

Strangers that sojourn in our midst find themselves watched for, as men watch for game in the woods. The trapper does not more cunningly spread his snares and traps than do gamblers and soul-destroyers set their traps for men; and with no thought or desire except their destruction, and out of that destruction no end except to make their temporary gain.

The testimony in respect to the treatment of sailors; in respect to the lairs and dens into which they are enticed; in respect to the outrages which they suffer; in respect to the utter abominations of inhumanity that, from year to year, for a long time, have remained unexplored and untouched; this is one of the prolific chapters of bottomless lust and avarice.

You know very well how all the power of the Government, and all the interposition of beneficent organized citizens, in the late war, were not able to save the soldier from the most audacious robberies. How many of them, after having gone through summer and winter in the camp and on the battle-field, and faced death and sickness, and endeared themselves to the imagination and the heart of every true man, have drawn their bounties and hard earnings, and started for home, and on their way thither been robbed of their little pittance, and rendered bankrupt, and that by those who had the shape

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of men, and would deny it if we said that they were monsters!

It strikes the imagination, when it is one who wears the uniform of the soldier; but this villainy is carried on under circumstances more trying still, where it is a woman instead of a man. A man, if he is stripped of his possessions, can repair the damage again. If he is thrown down to-day, he is on his feet again to-morrow. There are endless resources open to him. But a woman, what can she do? There are thousands and tens of thousands in these cities who are dependent on one or two sources of support; and they often fall into the hands of men the most unprincipled and avaricious. There are thousands of sewing and laboring women who are driven down to a point of poverty, beyond which one single step is starvation—oh! starvation is the door of heaven in comparison—*damnation!* And into that, with utter indifference and remorseless greed they are thrust, as sheep are thrust into the shambles for butchery. You know it. We all know it. It is no time, therefore, to be sentimental, and say, "Men can not commit such wickednesses." It is no time to say that men can not, in civilized society, be guilty of cannibalism. I tell you, there are more cannibals in New York than in the isles of the Pacific! And if you were to take away this night the support that comes from eating men, there would be thousands and thousands of empty maws to-morrow in that city!

Now vast sums, millions and millions, are invested in a way which directly and obviously result in the utter destruction of men. All the forces of huge capitals are invested in ways so notoriously dependent upon the morbid tastes of men, and classes, that every step you take to correct those ways is understood to be an attack on capital.

There are haunts of thieves throughout the cities without which robbery would almost be paralyzed. They are known; vigilant eyes have watched them; there is no doubt in respect to their character; and yet the robberies go on because these places are often all secretly maintained in the interest of capitalists.

There are dens of orgies. Nothing this side of hell can equal multitudes of these places. We do not need to go to Vesuvius to see volcanoes. We have them all around us, in spite of the police, and the common sense of the community; and it is only because capitalists have an interest in them. They may not be known. You can not tell by the way a tree looks where its roots are sucking sap from. There is many a man that wears clean linen, and has good associations, and appears regularly at the house of God, and sits down at the communion table, and munches the bread, and drinks the wine, and seems to be a Christian man, who, if you follow down his roots, you will find to be sucking sap out of the common sewers. And these dens are kept open and are sustained in spite of law and public sentiment, because capital is interested in them and is at the bottom of them.

Palaces of pleasure there are where death is double-edged. Hundreds and thousands are traveling in ways which are called *ways of pleasure*, but which are ways of damnation; and there is great capital invested therein. These haunts of miscalled pleasure are winked at and encouraged by thousands and thousands besides those who are known to be directly responsible for them. If it were not for what may be called *respectable hypocritical capitalists* they could not exist as they do.

Saloons and gambling dens, which are never far apart, are scattered in wondrous profusion all over the cities. Why, if there were such means for moral culture; if shools were as thick; if provision for refinement, or solace, or succor, or relief, were as great, men would marvel. They would raise the cry of *prodigality*. Not flies in summer are thicker than these saloons for depravities.

Look at the way men seek their living, by adulterations in food. We who are in comfortable circumstances may by vigilance save ourselves from the evils of this practice of adulterating food; but the poor, that must buy what they can get—what abominable food do they have put upon them! Ten thousand wretched hearts have sighed, and sorrowed, and prayed to God, saying, "Lord, why has my babe died?" It was killed by foul milk, drawn from the foul udder of foul animals, that were fed to disease, fever and rottenness! And there are men that go on furnishing the community with such milk, just because there is a good deal of money made by it. Suppose it does slay five hundred children in a year, what are five hundred children compared with money in the pocket? To such an extent, in every civilized land is it carried that governments are obliged to interfere and make inquisition by means of mechanical tests and in other ways, into the frauds that are practiced in this direction. And it is found that men learn how to cheat faster than their cheating can be detected. Men tell me that they never think of patenting an invention in cotton machines; that when they discover an improved process they put it in use and use it all they can, before others can get it; that by the time

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others get it they have another ready; and that they depend on keeping ahead in that way. It is certainly so in knavery. You never come up with one method of cheating before men have another fresh coined and ready.

As if it were not enough to destroy human life by the adulteration of the supports of life, flour and meat, and all articles of luxury, medicine itself, that should restore us to some degree of health, when sickness has thus been brought upon us, is adulterated to such an extent that doctors hardly dare prescribe, unless they know the brand and are certain of its genuineness. Doubtless thousands of lives are lost at critical stages of disease, because the potion failed to produce the desired effect, on account of its having been adulterated. And do you suppose that these men, who are adulterating food and medicine, and corrupting the stay and staff of life, do not know that they are spreading sorrow and trouble and mischief? They know it perfectly well; but they do not care. They are making money; and that is the main thing to their minds. And all human comfort, and life itself, put in one scale, with money in the other, does not weigh a particle, so far as they are concerned.

Trouble in the Connecticut Valley.

BY GEORGE TRASK.

EDITOR HERALD OF HEALTH—*Dear Sir:* I have just returned from the Connecticut Valley, and the sorry plight of many tobacco-raisers in that charming region is rather admonitory to gentlemen, far and near, who make haste to be rich by the culture of that loathsome crop.

There is trouble in the valley. Barns and sheds are stuffed full of tobacco that now find no outlet in a market glutted to repletion. Bank notes are dishonored, taxes are unpaid, and many a farmer is fatting an ox on Illinois corn at $1 45 a bushel, who has tons on tons of tobacco as an eye-sore and curse on his premises.

In my jaunts I met a jovial and frank fellow, who had been made a dupe by the "paying crop," who told me his whole story, and as his story resembles that of multitudes along the bank of that splendid river, I will give it, in substance.

"Twelve years ago," he said, "I was a quiet and happy farmer; I raised noble fields of corn, potatoes and various grains, and as these wholesome productions waved in the breeze I viewed them with pride, and blessed God that I could feed my family by the 'sweat of my brow,' and could furnish them with the comforts of life, if not its luxuries. I raised beef and poultry, and felt independent, relying upon my own granaries, and scorning the idea of being a slave to the South or West for the staff of life.

"It is true, I did not heap up money in frightful piles, as some of my tobacco-raising neighbors pretended to do, but I held my own; in fact, I lodged a hundred dollars year by year in the savings bank, against wintry storms or a rainy day.

"But as Satan entered Eden, so the mania for raising tobacco entered our glorious old valley and a change came over my whole prospect. The fever raged among my neighbors at a fearful rate. Doctors tell us that but one fever can rage at a time, and I deliberately aver that one fever has possessed the Connecticut Valley for a dozen years or more. This, like Aaron's rod, like a mighty sponge, has swallowed up pretty much all the rest. In going to church or returning from church, in rising up or sitting down, we heard of the 'paying crop,' and this become the talisman of the valley. The fires of cupidity kindled on this altar. The passion for money burnt with a fiercer flame than the fires of patriotism in the height of the Rebellion, or of devotion on the altars of God in church or family!

"I stood up against this epidemic some time. My conscience was right. I knew tobacco was a poison, sapping the health, strength and manliness of our race. I knew that for all medical purposes one acre would supply the globe, and that its chief use was to kill tick on sheep and lice on calves. I never used it myself, and I once threatened to positively disinherit my boys if they used it. I had a severe struggle; my wife and daughter, like other dear creatures of the sort, liked to make 'a fair show in the flesh,' and were determined that I should raise it. They wished for fine dresses, and to move in finer circles than their less genteel neighbors.

"My boys, to do them justice, recoiled from the business; they maintained that if it is wrong to use it, it is wrong to raise it, and denounced it as a nuisance to any man's farm. They spurned the idea of picking, morning after morning, large, fat, loathsome worms from the leaves. They maintained that our neighbors, who were dabbling in this culture, were doing a dirty business, and that they looked like Hottentots and woodchucks as they came from their fields.

"In my dilemma, I knew not what to do. I consulted Dr. Humphrey and Dr. Hitchcock,

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glorious men! They told me that my conscientious scruples were right; that to raise, sell and use tobacco was, in point of morality, the same as to manufacture, sell and use rum, and that a future day would make this manifest beyond a question.

"I was troubled by conflicting influences. My conscience and these college divines drew me one way, and my wife and daughters, together with my tobacco-raising neighbors, Deacon S. and Deacon B., drew the other way, and as Paul says, 'I was in a strait, 'twixt two.'

"At length, to end the matter, we concluded to take counsel of Deacon S., and abide his advice.

"The Deacon was called in; and he listened to my conscientious scruples and my wife's ingenious arguments with 'the patience of the saints.'

"He admitted that tobacco was a poison; that he had himself been injured by its use; rendered a pale, haggard and melancholy man; and that the act of dropping it, he regarded as an important era in his life. But he justified raising the crop on the score that tobacco had been used for centuries, used the world over, and would be till the millenium. That it was a paying crop beyond all others; that our lands seemed to be exactly adapted to produce a broad, smooth and silky leaf for wrappers to high priced 'havannas;' that somebody would raise it and make money, and we might as well raise it as other folks.

"'I have made more money,' said the Deacon, 'from even that little tobacco-patch back of my barn, than from all other crops on my whole place. I have doubled my subscriptions to Foreign and Home Missions; I have sent John to East Hampton School and Sarah to Mount Holyoke, and cheered the heart of our good minister with a little present now and then.'

"I told the Deacon, that I thought our minister disapproved of raising tobacco, and considered it immoral. He assured me that there was a difference among ministers about it, some approved and some disapproved, and one certainly had gone so far as to say that he 'did not care how much tobacco his people raised, if they would raise his salary.'

"Much more was said concerning ministers, taxes, salaries and all that sort of thing that I need not repeat; my wife plead, my daughters plead, and the Deacon was so plausible and so pious, that I was obliged to knuckle and cast in my lot among the tobacco-raisers who were all about me.

"Having surrendered, I went into the business 'pell-mell,' and inquired about seeds, soils, manures and markets with as much zest as the best of them. My potato crop and my corn crop I pretty much neglected, and concentrated my capital and all my energies upon the 'paying crop,' dreaming day and night that I should soon become a rich man by the change. My outlays for special help, seeds, guano, and the like, were great; I had to use my ready money and finally all my bank funds, so that I was cramped for awhile; but I was soon relieved, my crops did well; the demand for them was great, and the prices high; my pockets became flushed with money. And I at once gratified my wife and my girls with new gowns, new bonnets, new carriage, and a more fashionable pew in church. And here I may say, that all would have gone on swimmingly if the War had gone on; but soon after the close of the War, the Western and Southern culture, together with the fabulous number of growers in our valley, made a complete glut in the markets and purchasers began to spurn our crops at any price. The fact is, I am a poorer man to-day than when I began. I have nearly three years crops on hand. My notes in the bank and my taxes are unpaid; I have violated my conscientious scruples; I have injured all my choice lands; and I should have been far better off had I stuck to my old crops—potato, corn and broomcorn. How proudly I used to look upon my eight-acre lot of broomcorn stretching upward toward heaven!—The broom, the emblem of cleanliness! How different from the tobacco crop which daubs and defiles creation—a nuisance!"

My honest friend on parting with me, said, with considerable emotion, "I feel as though I had been in mean business; I have been poisoning my fellow men. Use the statement I have made as you please; I have done injury enough; I hope a confession of my folly and sin may do good."

The rage for the tobacco crop, Mr. Editor, "on the banks of the Connecticut, constitutes an epoch in that fair region." The Petroleum fever and the Gold fever presented characteristics but little more distinctive and impressive.

It has been attended with immense mischief. It has tended to pour the blight of death upon all things "lovely and of good report" there. It has tended to enslave the pulpits, impede the Temperance cause, and in some locations to repel precious revivals of religion. While some clergymen have observed a cautious, silent policy, others, thank God! have been out-spoken, manly and free.

Said one in a large audience, "I had as lief the Indian with his scalping-knife and war-

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whoop were here again as these tobacco-raisers!" Said another, "I had as lief see coffles of slaves delving on these banks, as to see these deacons and church members in the tobacco fields!"

In the statement of our friend, he says, "I have injured my lands." This has much significance. I understand that this nauseous and poisonous crop not only injures the soil in relation to all useful productions, but that in the run of time, it becomes so emasculated as to be incapable of producing even the tobacco-plant in its original strength and vaunted excellence "Tobacco," says Gen. J. H. Cooke of Virginia, "exhausts the land beyond all other crops." As proof of this, every homestead from the Atlantic border to the head of tide-water is a mournful monument. It has been the besom of destruction which has swept over the whole of this once fertile region! A traveler observes, "The old tobacco lands of Maryland and Virginia are an eye-sore—odious, barren—looking as though blasted by some genius of evil!"

The landscape of the Connecticut Valley, which has charmed the eye of millions, has been shockingly defaced by the tobacco crop! Amherst College and Mount Holyoke Seminary have done something to make the world better, but has not the good been more than counterbalanced by a crop diffused through the world which has poisoned millions, and is still poisoning millions? What does Satan care for our colleges, male or female, if he can have our pet valleys to poison nations and poison the race? Let him have the tobacco crop and the distilleries, at command, and in scorn he will throw this his mighty sword into the scale of battle, and laugh at all our efforts to convert the world for centuries to come.

FITCHBURGH, Mass., *March*, 1867.

A QUIET family in the country were electrified the other day by the receipt of a telegram from a daughter who was teaching in a neighboring city. The dispatch was passed round and greatly admired. The dashing boldness of the chirography came in for its share of praise. The old lady shook her head with an air of gratified pride as she said slowly: "Ann Maria always did write like a man; guess she's been takin' writin' lessons; this beats her last letter all holler."

MUSIC in the household is something more than luxury. It refines, elevates and soothes, while affording unexceptionable pleasure. A growing taste for it is an encouraging indication of good, healthy growth in civilization.

Medical Reminiscences of N. P. Willis.

NO. II.

BY J. B. F. WALKER, M. D.

THE importance of physical training for each individual, whatever their condition or occupation, can not be too strongly urged; as men value life and all that makes it dear to them, so should they carefully examine their physical conditions, striving to improve upon them until a comparative state of perfection is reached. The stout, robust, healthy man and woman need to exercise a continuously careful watchfulness over themselves lest they go astray in some particular, violating day after day a physiological law until in the end an organic disease is fastened upon them, which will only cease its ravages with the grave. If the individual is already an invalid, or has a predisposition in that direction, there is not a moment to be lost; he must be up and doing at once. The house is on fire and the alarm should be sounded. Obtain the pure air, swing the dumb-bells, regulate the diet, get the necessary sleep, make a judicious use of water, be temperate in all things, and live! Medical writers and practitioners have a duty to perform in this direction, a great work to do, and however they may deplore the inefficiency of the medical science as taught in the books of the regular schools, it is nevertheless enjoined upon them to keep educating the public up to a higher and better standard of health, and consequent morality. There is already something being done in this direction, but not half which there should be. Here and there we have a Beecher, a Chapin, or a Frothingham, in the theological profession, who lift up their voices to the multitudes, teaching them as well as they may; now and then a poet or a man of letters, like our late Mr. Willis, interests himself in the subject, putting upon record many valuable health suggestions, and occasionally a doctor of position and influence discovers the error of his ways and commences to preach the truth.

UNIVERSITY MEDICAL COLLEGE PROFESSORS.

The subject of physical training *is* gradually growing in importance with the American people, and we are glad to make a note of its progress. In the University of New York Medical College two of the professors are in the constant practice of using the dumb-bells for exercise, Prof. Loomis has been fighting consumption, and a general invalidism for twenty years, and to-day he has a very good chest development, and is able to attend to a vast amount of business.

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This has been done, not by taking doses of drug medicines, cod-liver oil and stimulants, but by a long-continued and vigorous use of dumb-bell and other exercises. Prof. Aylett, although blind, spends several hours a day with his dumb-bells, and is constantly seeking to improve his physical condition by hygienic means. From my window I have been watching him for the last hour in his back-yard, where he has been standing in his shirt-sleeves, beneath the sunlight of heaven, bare-headed, exercising with his ten or fifteen pound iron dumb-bells. Such men, although holding professorships in one of the first Allopathic Medical Colleges in the United States, in their own cases, at least, fall back upon the simple laws of nature, throwing physic to the dogs!

PHYSICAL CULTURE AT DARTMOUTH COLLEGE.

A few weeks since I attended a meeting of the resident alumni of Dartmouth College, held at the Bancroft House in New York City. Among the gentlemen present were Rev. Dr. Asa Smith, President of the College, and Prof. Alpheus Crosby, M. D., of the Medical Department. Both of these gentlemen spoke in the highest terms of the good effects already produced by the new gymnasium and bowling saloons which, through the munificence of a generous donor, have just been opened at Hanover, N. H. Dr. Smith himself is in the habit of bowling with the students, and can knock down the pins, much to the improvement of his health, as fast as the young men. Prof. Crosby was enthusiastic on the subject, and declared that in all points the students had been greatly benefited since the opening of the gymnasium; many diseases had disappeared, the general health of the whole college was greatly improved, and the young men now compared favorably with the military cadets at the Norwich University in Vermont.

MR. WILLIS AND HORSEBACK EXERCISE.

One of the favorite methods of exercise of the late Mr. Willis was "horseback exercise in all weathers." He believed that the unceasing jolt of exercise in the saddle is preventive of any chill to the lungs, from cold or wet, while they profit by the change of air, the spirits being at the same time enlivened by rapid motion and the perspiration started and kept up without effort or fatigue. He also discovered that a fast trot of ten or twelve miles will soothe and refresh the lungs, when the ascent up a flight of stairs might irritate and set them to bleeding. This unfatiguing nature of saddle exercise is a point of some importance. If you suffer from cold feet while on horseback, you should hang them out of the stirrups for a few minutes, the removal of the pressure from the sole letting the blood flow into the extremities more freely. "A fast and even trot," says Mr. Willis, "is the best pace for keeping the whole body warm; while it both wakes up the lazy liver and lulls to rest the cough-weary lungs." Mr. Willis was in the habit of riding two or three hours in the night time, and found it to be very agreeable, as well as healthy. Upon this point he offers the following highly sensible remarks:

"The prisoners to the desk, to the study, to the school-room—too busy all *day* to exercise, and afraid of *night*-air upon the lungs—will see a ray of bright comfort in this, I am very sure. It is the channel between their Scylla and Charybdis. And there is an incidental advantage and luxury in 'air and exercise' the last thing before sleeping, it stretches the limbs and quiets the nerves, and cools the brain, and so performs that invisible and inward undressing for sleep, of which the outward undressing is often such a weary incompleteness. There are those, too, who are fatigued through the day with the sight of people, and who need utter solitude with their exercise. Night will be balm to the soul, taken in with health for the body."

In his invalid "Letters from Idlewild," for a copy of which we are under obligations to Mr. Charles Scribner, Mr. Willis's publisher, he writes in the following enthusiastic strain of his favorite exercise: "I fear I can not sufficiently convey to you my sense of the importance of a horse to an invalid. In my well-weighed opinion, ten miles a day in the saddle would cure more desperate cases (particularly of consumption), than all the changes of climate and all the medicines in the world. It is vigorous exercise without fatigue. The peculiar motion effectually prevents all irritation of cold air to the lungs on the wintriest day. The torpid liver and other internal organs are more shaken up and vivified by the trot of a mile than by a week of feeble walking. The horse (and you should own and love him) is company enough, and not too much. Your spirits are irresistibly enlivened by the change of movement and the control of the animal. Your sense of strength and activity [in which lies half the self-confidence as to getting well, which the doctors think so important] is *plus* one horse, with the difference from walking. As to pulling upon the forces of the spine and consequently upon the brain, it is recommended by the best English physicians as much the preferable exercise for men of intellectual pursuits.

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As the horse and the doctor are seldom necessities of one and the same man, you may rather find it an economy—apothecary and all."

TAKING TOO MUCH FOR GRANTED.

If a man is suffering from a torpid liver, it is the practice of the Allopathic school to "touch it up" with an alterative dose of blue pill; if the bowels are constipated, the regular M. D. will give a cathartic; if the kidneys do not secrete properly, then a diuretic is poured down the throat; the doctor attempts to cure what he considers the specific ailment without ever attempting to regulate the general condition of the system, and thus remove the cause of the trouble. The distressed ship hangs out its flag and the doctor cuts it down; therefore, the ship is out of danger! This is taking a little too much for granted, it presupposes that in every other particular the system is in proper condition. On this point, Mr. Willis aptly remarks:

"Our friends, the physicians, are better geographers than we, as to where the healing is wanted—though they strangely confine themselves to the specific ailment, taking it for granted that the patient keeps the rest of his body in proper training for recovery. It is medical etiquette, I believe, to refrain from any very particular inquiry into this. But, few sick men are wise or firm-minded enough to be safely trusted with their own general condition; and I for one, came very near dying; not of my disease, but of what my doctors took for granted."

GRAVE-YARD POLITENESS.

"There are so few invalids," writes Mr. Willis, "who are invariably and conscientiously untemptible by those deadly domestic enemies, sweetmeats, pastry and gravies, that the usual civilities at a meal are very like being politely assisted to the grave. The care and nurture of the skin is a matter worth some study; for it is capable not only of being negatively healthy, but positively luxurious in its action and sensations, as every well-groomed horse knows better than most men. The American liver has a hard struggle against the greasy cookery of our happy country. The impoverished blood of the invalid calls for something to give it life and strength. Just sleep enough and just clothing enough are important adjustments, requiring more thought and care than are usually given to them. For a little philosophy in your habitual posture, as you sit in your chair, your lungs would be very much obliged to you. An analysis of the air we live and sleep in would be well worth looking into occasionally."

MR. WILLIS IN THE DOCTOR'S HANDS.

"Invalids are apt to clutch," says Mr. Willis, "at a remedy, without first making certain that it is suited to their form of disease." In 1854 he was induced to apply to a skillful Boston physician for the cure of his night-coughs and hemorrhages. The doctor wrote to him that in cases like his the skin did not perform its office, that the system was overflowing with acidity. To correct this acidity he was to take a warm alkaline bath twice a week, and night and day surround the chest with a soap-jacket, using at the same time a pure alkali internally to neutralize the acidity already there. Mr. Willis thus graphically describes the effects of this wonderful treatment:

"It was the latter part of May, and the very warm weather was already commencing, when I entered upon the alkaline treatment. The 'soap-jacket,' of course, could not be worn without a second flannel shirt over it to keep in its paste and moisture, and here was my first trouble. So excessive was the perspiration, night and day, with the impermeable closeness of the covering, that I was sensibly weakened and distressed for breath, while exercise was nearly impossible, and every puff of air seemed to give me a cold. My voice weakened by the third day, so that I could scarcely articulate; my head seemed crammed with an hourly increasing catarrh; I felt the return of some old rheumatic symptoms; the muscles of my face and eyes showed rapid exhaustion, and my family, much alarmed, insisted on a stoppage of the treatment. I thought it best to make a fair trial of it, however, and strictly followed the directions till the eighth day, when the 'internal alkali' had so completely deadened the coats of my stomach and destroyed its tone, that I feared I should be unable to take the nourishment necessary for life. I had the sensation of being tanned inwardly to sole leather, scarce able to taste the differences in foods and drinks, and palpably burdening nature with every morsel I swallowed. My hemorrhages meantime, grew more profuse, and, as I persisted in my rides, the least motion of the horse beyond a walk brought the blood to my mouth abundantly."

HE GIVES UP THE ALKALIES.

With the giving up of the alkalies on the eighth day, he found himself more ill than he had ever previously been. There was no sign that the antagonist acids had been encountered, or that any thing but poor weakened Nature herself had received the deadly ammunition of the alkalies. With the resuming of his former *un*-med-

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ical system, however, he begun to rally again. The vigorous use of flesh-brush and crash-towels before and after cold baths in the morning, a more generous diet, and horseback exercise, brought him gradually up, and in seven weeks he found himself where the alkalies began with him.

DOCTORS AT A DISCOUNT.

Mr. Willis used to think that a physician, as an intimate friend, is invaluable, provided he will make an untiring enthusiasm of your cure. But the doctor who gives you ten minutes and one or two looks, and touches, and a little uninterested listening, at a professional hour, is a *risk*, to say the least. "Fortunately," he writes, "nine out of ten of the medicines for every disease are prescribed by Nature—fresh air, exercise, control of habits and appetite, etc. etc.—but it is not too much to add, that nine points out of ten of medical advice, also, are given by Nature. The utter faith with which the sick receive and follow the hasty opinions of a doctor, and the utter inattention to the complainings and promptings of their own pain-taught and truth-telling nerves, organs and senses, is a giving up of the whole business to a tenth committee-man, who, by rights, should only be one in a consultation. It has surprised me more than any thing else to find how many different opinions I have received in regard to the seat of my disease, from physicians of high standing. In fact, the five-minute omniscience that is expected of doctors is expecting too much."

LAWYERS BETTER THAN DOCTORS.

"It would be much wiser," says Mr. Willis, "to go first to a careful lawyer, who will sit down and cross-examine you, put your symptoms into condensed and comprehensible language, reconcile your contradictions, lift off your reluctancies and superfluities, and take the side evidence of your friends and attendants; and from this prepare a digest of what you yourself know of your case, which the physician can read while he looks at you and feels your pulse for the professional corroborations."

"The politicians teach us how to treat a disease. I think they do not try to convert the opposite party. They are content if they can keep it in the minority; sure that it will tire, in time, of its want of power, change sides or disappear. The patient who troubles himself least about his disease, but who perseveringly outvotes it by the high condition of the other parts of his system, is the likeliest to recover."

GOOD GENERAL ADVICE.

During his life-time Mr. Willis wrote and said a thousand good things about health, and the best means of preserving it. A few of these gems we place before our readers, assured that they will consider them both beautiful and profitable. He says: "You should banish from your mind, if you ever entertained it, all notion of specifics for your malady; such do not exist for consumption, nor for any disease. The most that drugs can do is to palliate till Nature can relieve. The cure is to be sought in other influences; such especially as promote the functions of digestion, assimilation and absorption. If the appetite and digestion continue good, however, there is always strong encouragement that the disease may be overcome. Sustain the appetite and digestion by out-door exercise, friction, cold baths, etc., and hope confidently for restoration.

"Persons like ourselves can only become healthy by feeling the greatest disgust at illness, and placing implicit reliance in the axiom that health is most lovely and loveable.

"I would add, that there is as much scientific truth as poetic beauty in the words which say of a 'cup of water,' that

> "'Its draught
> Of cool refreshment, drained by fevered lips,
> Will give a shock of pleasure to the frame,
> More exquisite than when nectarean juice
> Renews the life of joy in happiest hours.'

"Certainly, the happiest of dogs is a water-dog, as the happiest of elements seems to be water. And the prevailing temper of humanity, which chemistry thus shows to be hydropathic, is, I am sure, of the same natural sparkle and brightness."

We close this article with the following:

"With careful regimen, and the system purified and disciplined, life, what there is of it, is in the most exhilarating balance of its varied proportions. Death is not dreaded where there is thus such a conscious breaking through of the wings of another life, freer and higher."

NOTHING teaches patience like a garden. You may go around and watch the opening bud from day to day, but it takes its own time, and you can not urge it on faster than it will. If forced, it is only torn in pieces. All the best results of a garden, like those of life, are slowly but regularly progressive, affording great pleasure to those who take pride in it.

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General Topics of the Month.



NEW YORK, MAY, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

BY M. L. HOLBROOK, M. D.

RELIGION AND HEALTH.—It is said in Holy Writ that "the wicked do not live out half their days." Before the study of physiology had been prosecuted to its present state of development, there was always more or less mystery as to what could be meant by this text, but now its meaning is more certain. The wicked are not only those who violate moral law, but also those who violate the physical law. But not to discuss the subject in the light of physiological science, Does not moral and religious culture promote longevity? Does not peace of mind, the calm, trustful, hopeful spirit of truly religious persons, place them in frames of mind which prevent the angry clashing of the passions, and that waste of life which results from the fretful state so common among those whose higher nature does not govern and control the lower? There can be no doubt of it. The key to longevity is not entirely in good physiological, but in good moral and religious habits. We have before us a number of letters from aged persons which prove this to be true. The first that we shall quote is from the Rev. Charles Cleveland of Boston, now 96 years of age, and at last accounts still laboring in the Home Missionary field, to which his life has mainly been devoted. The letter is in reply to one requesting a brief account of his habits of life. It will be seen that his habits are, in the main, excellent, though not entirely free from criticism. We trust our readers can see where they might have been improved. We give the letter as written:

"MY DEAR SIR—In answer to your request for information of my habits of life, you will please accept the following remarks, which are given with much pleasure:

"1. My time of retirement is at an early hour, not beyond 10 o'clock, and of rising as soon as awake, and before the sun, *throughout the year*.

"2. At meals my food is simple and nourishing, avoiding whatever may be regarded as luxuries.

"3. My drink at the table is 'Golden Ale.'

"4. I taste no spirituous liquors.

"5. Tobacco I abhor in all its forms as I would poison, persuaded that its use hath been as an harbinger to 'strong drink,' which has slain its thousands and tens of thousands.

"Thus, dear philanthropists, I have given you my 'habits of living,' and would just add that, preserving a conscience void of offense toward God and man, my sleep in its season is undisturbed and refreshing.

"Wishing your HERALD OF HEALTH all the circulation it so richly merits, I am

"Respectfully yours,
"CHARLES CLEVELAND."

Much as might have been expected from his generally regular habits of life, it is plain enough that he attributes much of his health and strength to "a conscience void of offense," and we believe he is justified in so doing.

The next letter is from Deacon Joshua Converse, now 100 years old. Mr. Converse lives in Woburn, Mass. The letter was written August 22, 1866. It is in answer to inquiries regarding his habits of life:

"DEAR SIR—I received a letter from you on Monday last, the day on which I lacked but five months of being 100 years old. In answer, I will state that I have always been a farmer and lived on the place where I was born, and on which my father always lived; have had good water, good air, ate farmer's fare—brown bread, beef, beans, vegetables, etc.;

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have generally been busy about something, and have endeavored to be temperate in all things.

"I was the middle one of seven sons. My oldest brother was at the taking of Burgoyne in the Revolutionary War. My next brother was a sailor on board Captain Williams's vessel, which took a British vessel of equal size and number of guns. My next oldest brother was two years older than I, and died aged ninety-nine years and five months. I am now ninety-nine years and seven months old, having been born January 20, 1767. I now eat, drink and sleep about as well as I ever did; have no pains, and never had the headache. I still work some, thinking it better to do so. I have come to the conclusion that temperance, industry *and a clear conscience* are the best things to prolong life. I have never been in public life except once, serving my town in the Legislature.

"Most respectfully yours,

"JOSHUA CONVERSE."

Our readers will here see that a "clear conscience" is considered a very important aid to health and length of days.

We have other letters from persons more than 100 years old, in all of which the spirit of religion prevails, but we have at present no space for them.

However, before bringing the subject to a close, we present an extract from a letter received from an active business man, which will be read with interest, as still further showing the truth of what it is the object of this article to elucidate:

"DEAR SIR—I fear that I am such a *rara avis* that my experience would be of little value to your readers. My story would be one of simple *endurance* under abuses which would have ruined the health of a dozen ordinary men, and sent them to the lunatic asylum, if not to their 'long homes.' Neither can I suggest much that is new in relation to the effects of 'quiet ways and good business habits on health and success,' because, for twenty-five years of my life—from 1832 to 1857—both inclination and necessity compelled me to labor most assiduously and unremittingly, regardless of time, food or sleep. I loved to work, and was never so well or happy as when my every faculty and power were taxed to their utmost. I could do nothing 'by halves' or 'take things easy,' so long as I could find any thing to do. During all that time 'good business habits' meant simply work, *work*, WORK, with all my mind and strength; and then sleep, *sleep*, SLEEP, very soundly, until I awoke with a bound to resume my task. I never had either time or desire to eat or drink enough to overload my stomach or clog my digestive organs. I ate only when I was faint or hungry, and slept only when I was tired out—and I do so even now. Whatever 'quiet ways' I had were simply the effect of 'the religious element' of my nature; and to that, more than any thing else, I believe I owe, under God, every thing I am or hope to be. When you know who and what *my parents* were, I fear you will not be disposed to give me much credit for any thing, but will wonder that I have not risen higher in the scale of being and success in life; neither will you be faithless when I tell you that, although my existence has been one of ceaseless activity, it has been uninterrupted by serious illness of any kind, except cholera, which was superinduced by over-exertion and anxiety under stimulus, instead of food and sleep. One single fact in my history has always excited my wonder and gratitude, and that is, that although I have shaved *myself daily* for thirty years, my nerves are yet as steady as a geometrical lathe. And another is, that although I have toiled so steadily during six days of the week, *all* my seventh-days have been spent in 'the house of the Lord,' from morning till night, since I can remember any thing of myself—singing, talking, teaching or working most of the time. This has been all the recreation I seemed to require, or that I cared to indulge in, and has supplied me with all the resiliency I needed. Every thing which I have undertaken in life has been forecast and prosecuted with prayer, and it has ever proved a universal catholicon for all my troubles, anxieties and cares. Casting myself and them upon an ever-present God, in child-like confidence and trust, I have been enabled thereby to surmount difficulties and escape perils unknown to most men, and have often been amazed at the vitality and energy infused into my weary frame by the simple act of worship.

"J. A. G."

In conclusion we will only say, that while physiological law is pre-eminently important in its relation to length of days, yet the influence of the higher faculties is also important and should not be neglected.

HOW TO KEEP A WIFE.—In the February HERALD was published an article, written by our contributor "F. G.," advising our fair readers "How to Keep a Husband." A lady writes us in reference to it as follows:

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"MR. EDITOR—Having for some time past been an interested reader of your invaluable magazine, and seeing in a late number an article headed, 'How to Keep a Husband,' I beg leave to ask you to inform your *male* readers, in some future number of your magazine, 'How to Keep a Wife,' as the inclosed notice, as well as a multitude of other newspaper paragraphs, indicate that for some reason they are not always kept.

"Very respectfully, M. M. H."

The following is one of the notices referred to, and is a sample of the others:

"NOTICE.

"*Whereas* my wife, Catharine C. D——, has left my bed and board, this is to forbid all persons harboring or trusting her on my account, as I have made ample provision for her support, and shall pay no debts of her contracting after this date.

"J—— D——, JR."

We are much obliged to our friend for her suggestion. Undoubtedly, the same rule holds good in keeping a wife as in keeping a husband. Change the heading of the article referred to, so that it shall read, "How to Keep a Wife," and then read as if it was written for husbands instead of wives, and you have the other side of the case, at least so far as our correspondent intended to discuss it.

While on the subject it may be well to remark, that getting and keeping a husband or wife are not the only things worth looking after. Wives should be kept healthy and strong. To know how to do it requires a knowledge of physiology. A wife's health is of prime importance. She should neither be placed where she is overtasked nor where she has nothing to do. Both overwork and idleness are the bane of civilized life, and one or the other is very apt to be the condition of most women. Of the two, idleness is the most perilous. That a wife may, with her husband, become intelligent, and that she may retain and perfect all her powers, requires that she should be treated in all respects as an equal, not as an inferior as is usual in uncivilized countries, nor as a gaudy butterfly or beautiful "angel," as is sometimes done in enlightened circles. Woman is neither slave nor angel. Let husbands simply treat her as woman, as an equal, as having a right to health, to employment, to culture, to leisure, to all that makes life complete, and there will be little occasion for such notices as our correspondent sends us.

MARRIED OR SINGLE.—As the world becomes wiser, the fact is continually being proved to us that only which is natural and true is good. One of the latest results of statistical information comes to us from Scotland, in the form of a paper upon the "Influence of Marriage on the Death-rate," by Dr. James Stark of Edinburgh. The result of these statistics is only what might have been predicted by any careful student of natural phenomena, to wit: that that is best for the race which is natural. By carefully recorded statistics it is shown that at every age from 20 to 85 years the death-rate of married men is much less than that of the unmarried men. Thus of every 100,000 unmarried men between the ages of 20 and 25 years, 1174 died during the year; but of a like number of married men, between the same ages only 597 died, or about half the number.

Between the ages of 25 and 30 years, of every 100,000 bachelors 1369 died during the year, but of an equal number of married men only 865 died.

From 30 to 35 years of age, of every 100,000 bachelors 1475 died, while of an equal number of married men only 907 died.

So we might go on to the age of 85, and in every period we should show, from figures, that there is a marked difference in favor of the married man as far as relates to his chances of longevity.

A summing up of the results also shows a very interesting fact, for it tells us that the mean age at death of married men, counting only those over 20 years of age is 59.07 years, while of the unmarried it is only 40 years, giving 19.07 years, on an average, in favor of the former; or, reckoning only those over 25 years of age at which period the number of married and unmarried is nearly equal, and the former attain an average of 62 years at death, while the latter attain only 47 years.

So again, bachelors who live in towns do not live so long as those who live in the country, and the average age of soldiers who are generally single men, is, notwithstanding the efforts made to surround them by wise hygienic conditions, less than married men. The same results are corroborated by the experience of insurance companies.

These results are of exceeding interest and value, showing as they do that an enormous amount of life would be saved if all the men of Scotland over 20 years of age were to marry, for it would add to their lives nearly 20 years.

Whether the figures, if we had them, of other countries would show the same results, of cours

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we can not tell, but it is altogether probable that there would be but little difference. The same law would hold good in all countries.

Of course, we have no estimate of the greater value, the improved effectiveness of a married life, over that of a single one, but might we not expect that its worth in productive industry, in scientific and literary attainments, would be heightened by marriage, as well as length of days attained? It is hardly theorizing to say that whatever lengthens life to its normal standard also makes it more efficient. There is little doubt that, with rare exceptions, the married laboring man will earn more, be more devoted to business, trade or pursuit, than the bachelor; his habits will be more regular; the wants of a family will spur him to greater effort, the enjoyments of a home and children will give him more happiness.

Will it not yet be demonstrated to be true, by figures, that the plan Nature has provided for human beings to walk in can not be deviated from, in any respect, without a loss of life, happiness and power? If we neglect marriage, twenty years of our lives are lost. If we neglect education, religion, morality, we do something which produces, in a degree, the same results. The whole subject is rich with suggestions, and presents a wide field for statisticians. Let them go on with their work.

SICKNESS THE "PLAN OF CREATION."—A writer of note has recently put forth a book arguing that disease is a part of the plan of creation, and, consequently, it is useless to endeavor to avert it. Suppose it is true that disease is a part of the plan of creation, it does not follow that his conclusions are correct. It is undoubtedly a provision of nature that if a man drinks poison he will be injured; if he throws himself from the steeple of a church, he will be dashed to pieces; if he violates the laws of his body, he will be sick. It is Nature's provision for punishing violated law. So again, it is a part of the plan of the Creator that the ignorant suffer; and men will be ignorant if they do not seek to inform themselves, but yet it does not follow, that men should not seek to avert ignorance. Mankind must *seek out* and obey the laws of the body to secure health. Health is not thrust upon us whether we will have it or not. It comes from a temperate, well-regulated life. It is curious to observe that this theory is in part founded on the fact that sickness is not confined to man alone; that the animal creation also suffer from disease. Well, why not? Is it impossible for animals to violate the laws of their being? True, they may do so to a less extent than man, and thus may not be culpable for it. If the bee or the butterfly dies prematurely; if herds of buffalo starve to death; if squirrels have decayed teeth, and the elephant becomes sick, though they may have placed themselves in wrong relations to nature and become thus injured, yet they can not be morally accountable for their sufferings. They have no moral nature to which they must render account. They have little or no intellect by which to become acquainted with the causes of suffering and how to avoid them. Instinct and perception, with less power to violate law alone preserves them and these are not always sufficient. To insist, as our writer does, that sickness is a part of the plan of creation and that it is useless to avert it because animals can not avert it, is reasoning from wrong data, for we can not reason from animals to man in this way. Each suffers when it departs from natural law, but man sins when he so departs, because his intelligence should teach him better.

BRUTALITY.—"A young girl of but 10 years of age was most brutally beaten in Chicago last week by her father, one William Backhaus. From the effect of her punishment, administered because she, as alleged, 'would not take, while suffering from a severe brain disease, her medicine,' death ensued on Sunday last."

Is it any wonder that the human breast recoils at the thought of the corporal punishment of children, and that the best minds of the times are throwing their great influence against it? Scarcely a month passes but there is recorded the death of some child from whipping. Could all the wrong done poor child-nature be pictured to view, the hardest heart would shudder and recoil from it. But when the case is aggravated by punishing, not because the child had done a wrong deed, but because it refused to do what its unperverted instincts revolted against, the case becomes too sad, too revolting, to contemplate. Of course, children do not love medicine. Their delicate organism were never made for bitter potions. Then why should they be compelled, or even expected, to take them? We entreat parents who read the above to do all they can to help on the day when a healing art that requires no bitter poisons to effect a cure, shall become well understood by all—one that is in accordance with Nature's laws, simple, beautiful, natural. Let every parent become so well acquainted with it themselves that they can, to a great extent, keep their children well.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Diseases of the Kidneys.—Those who have studied carefully the description of the kidneys in the previous article upon this subject, will be somewhat prepared to understand the location, causes, symptoms, and rationale of treatment of the diseases of these important organs.

CONGESTION OF THE KIDNEYS

Is not generally recognized as an independent disease, it being the primary stage of inflammation of the organs. When it occurs without being followed by inflammation it is usually caused by some drug or irritating substance, or it may be attributable to the poison of alcohol, to fevers, small pox, or some eruptive disease. It differs from inflammation by affecting both kidneys alike, the pain being only slight, and there is but little disturbance of the urinary function.

It is best treated by the full tepid bath, the cool hip bath, and wet compresses to the parts.

NEPHRITIS.

This is what we usually call acute inflammation of the substance of the kidney. It is a rare disease except when occasioned by external injuries or by the presence of foreign substances. It is most common in old persons and among residents of damp climates.

Nephritis oftenest occurs in the cortical substance of the kidney, yet it is apt to extend into the medullary portion. When the uriniferous tubes become inflamed, it is called acute desquamative nephritis, or acute Bright's disease. Nephritis is generally associated with pyelitis, or inflammation of the pelvis of the kidney, and the symptoms and treatment of the two are so nearly identical that we shall consider them in conjunction. Pyelitis may occur without nephritis, but the latter is seldom found unassociated with the former. This may be accounted for by the fact that the exciting cause of nephritis may be conveyed by the urine to the pelvis of the organ and cause inflammation there, whereas an inflammatory process beginning in the pelvis, although it may extend to other parts, yet the urine passing in an opposite direction can not prove a means of conveyance for the exciting cause.

CAUSES.—Among the principal causes of these difficulties are exposure to cold and dampness; the use of alcoholic stimulants; gluttony, wounds, contusions, or other injuries; medicines, such as nitrate of potash, cantharides, oil of turpentine and other "remedies" given to "act upon the kidneys;" tumors or morbid growths in the ureters, which obstruct the flow of urine; hydatids and entozoa; stricture of the urethra, enlargement of prostate gland, or paralysis of the bladder, may cause such an accumulation of urine in the bladder as to prevent the escape of more urine from the kidneys, and give rise to such disturbance of the pelvis of these organs as to occasion pyelitis. Inflammation of the bladder may also extend along the ureters to the kidneys causing an inflammation of the latter. Acute rheumatism or any blood poison may be the exciting cause of nephritis. Gravel and calculi are among the most frequent causes of pyelitis.

Nephritis and pyelitis are usually confined to one kidney, yet sometimes both are alike affected.

SYMPTOMS.—Nephritis commonly commences with a chill, which is soon followed by fever; the skin is dry, pulse hard, frequent and full; pain in the region of one or both kidneys, increased by pressure or exercise; this pain is sometimes dull and heavy, and again sharp and lancinating; it is not always confined to the kidneys, but may extend upward to the spleen, liver and diaphragm, or along the ureters to the bladder. It may be associated with numbness of the thighs; there is often nausea and vomiting; sometimes diarrhea and sometimes constipation with distension of the bowels. There is a frequent and urgent desire to empty the bladder, the urine is high colored and passed in small quantities or by drops; it is often mixed with blood, and if the pyelitis is severe there is generally pus and mucus in the urine.

Cases in which the urine is entirely suppressed soon terminate in uræmic poisoning, convulsions, coma and death; this is much more liable to occur when both kidneys are involved. Nephritis is an exceedingly dangerous disease, and even when recovery takes place the foundation for future troubles has most commonly

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been laid. In favorable cases it terminates either in resolution or in the formation of pus which is carried off in the urine. In fatal cases there is either suppression of urine, and uræmic poisoning of the blood, or abscesses are formed in the substance of the kidneys which lead to ulceration, perforation of the capsule, renal fistula, and purulent discharges. Sometimes the entire body of the kidney is destroyed by the disorganizing process. The pus may make its escape by opening a passage through the integument to the surface, or into the cavity of the abdomen causing fatal peritonitis, or into the intestines or stomach; or it may pierce the diaphragm and enter the cavity of the chest.

As before stated, the cortical portion of the kidney is the part generally affected in nephritis, while in pyelitis the mucous membrane of the pelvis and calyces of the organ is the structure involved.

TREATMENT.—Prompt means must be resorted to in order to subdue these grave difficulties, or they will lead to evils that can not be overcome. Tepid or hot hip baths; fomentations over the kidneys; if there is much heat, cool or cold compresses, changed frequently, will be of great service; sponging the entire surface when the fever is general. The hot-air, or vapor bath, or packing with hot bottles, to induce perspiration, will tend to lessen the danger of uræmic poisoning.

Alternations of cold and hot applications will sometimes relieve the pain when neither will accomplish it alone. The nausea may be relieved by sips of hot water or by bits of ice.

The bowels should be kept free by means of injections; the feet and hands warm, the head cool, the air pure, the diet very simple and spare with but little liquid; boiled rice, dry toast, or something of the kind may be given, when any food is required. The patient should be kept as quiet as possible, and should see "no company."

If the difficulties are occasioned by retention of urine arising from stricture of the urethra—or passage from the bladder—or from paralysis of the bladder, these conditions will be indicated by the great distention of the bladder, and should be relieved by means of the catheter.

Diuretics of every form should be avoided; for the kidneys, disabled by their condition, are compelled to work the harder in order to eliminate them. All medicines taken internally are liable to do harm, for they must by some means be taken out of the system, and the kidneys, being excretory organs, must of necessity be affected by them.

The latest Allopathic works are recommending hygienic measures very largely in the treatment of this disease. Flint, in his "Practice of Medicine," a new American work, advises "fomentations, rest, restricted diet, hot-air baths, with counter irritation and local depletion."

Tanner, the latest English author, recommends "hot hip-baths, vapor or hot-air baths, fomentations, rest in bed, low diet, with milk, tea, ice, and simple diluents." He also advises diaphoretics, blisters, stimulants and tonics.

The principal Homœopathic remedies are aconite, arnica, belladonna, cannabis, cantharides, cocculus, colchicum, hepar sulphur, mercurius, nux vomica and pulsatilla; and the higher the dilution, the more infinitessimal the dose, the better for the patient we should say, for cantharides is spoken of in all the medical works as a cause of nephritis.

PERINEPHRITIS

Is caused by the inflammation of the kidney, extending to the peritoneum with which the kidneys lie in contact; it requires no special treatment different from that administered for the original disease.

HYDRO-NEPHROSIS

Is a simple retention of the urine in the pelvis and calyces of the kidney, in consequence of some obstruction in the ureters, without inflammation.

Treatment is to remove the obstruction by frictions, percussions, sitz baths and compresses.

BRIGHT'S DISEASE

Is so called from its discoverer, Dr. Bright, who first called attention to the peculiarities of this disease. The name is indiscriminately applied to every form of disease that is accompanied by albuminous urine and dropsy. The consideration of the two principal forms, the acute and chronic, will be the subject of discussion for a subsequent article.

ERRATA.—In my article in the April number of THE HERALD, I was made to say the solid portions of the urine are "taken from the blood epithelial cells," it should have been, are "taken from the blood *by* epithelial cells." The last sentence of the last paragraph also should read "When the liver does not eliminate the bile, that substance is often found in the urine."

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

Children and Parents Sleeping Together.—"Please answer if it is injurious for children to sleep with their parents or older persons? If so, why?"

It is unhealthful for two persons of the same age to sleep together, but much more so for a child to sleep with an elderly person. Where two persons occupy the same bed the air which is taken into the lungs is much more impure than it would otherwise be, each person being compelled to re-breathe a portion of the poisoned air which has been exhaled by the other. Then again, the poisonous exhalations from the body of one come in contact with and are absorbed by the skin of the other. Children are more susceptible to such influences than grown people and their health is more readily impaired. The belief that elderly, sickly people gain strength and vitality by sleeping with the young and strong is a fallacious one. It injures both, but the younger person suffers most.

Hard Water.—"I live in a section of the country where the water is hard. I know that hard water is injurious to me, but what shall I do? Please inform me if you can."

There are several ways by which you can avoid drinking hard water, the best of which is to eat largely of fruits and avoid the use of salt, spices, condiments and stimulating food and drink of every kind. By living thus you will not need to drink at all. The second best way is to filter rain water. The third best way is to boil the hard water and let it cool. By boiling the water is rendered softer, the elements which impart the quality of hardness being precipitated by the process.

Cold Bathing.—"Is it beneficial to bathe in cold water every morning in all sorts of weather, especially when it is cold enough to freeze the water during the night?"

As a general thing, a cold bath should be taken in a warm room. Hundreds of persons have fatally injured themselves by excessive cold bathing in cold weather, exhausting their vitality in vain efforts to secure a reaction after the bath. Failing to establish a reaction to the surface, congestion of some one or more of the internal organs ensues, the vital machinery is thrown out of gear and if the practice is continued, disease, exhaustion and death follow in rapid succession. A daily morning bath is beneficial to most persons, provided it is properly taken. This rule should always be observed in bathing, viz.: always take a bath in such a manner as to secure a prompt and complete reaction.

Feather Pillows.—"Is it best to use pillows for the head? If so, what is the best material? Are feathers injurious?"

If a person sleeps upon the back, no pillow is needed. If one sleeps upon the side, a pillow should be used thick enough to support the head in a direct line with the body. No more. Curled hair is one of the best materials for pillows. Feathers should never be allowed about a bed in *any* form. For pillows they are especially injurious, as they partially surround the head and keep it over-heated, which weakens the scalp and produces a tendency to falling out of the hair, congestion of the head and headache. Then again, the effete emanations which are always being thrown off from feathers are taken directly into the lungs with the inspired air.

Hygienic Agents.—"What are the Hygienic agents, and when do they become remedial? How should they be employed in the treatment of disease?"

All the elements of development and nutrition are embraced in the list of hygienic agents. These are air, food, drink, bathing, temperature, light, exercise, rest, sleep, bodily position, clothing, mental and passional influences, electricity and magnetism. Hygienic agents become remedial agents when adapted to the circumstances and conditions of diseased action. In the treatment of disease they should be used to regulate, control and direct the disordered action with the least possible expenditure of vitality.

Heart Disease.—"In heart disease, does one have pain or sense of fullness over the entire left portion of the chest, or simply in the immediate vicinity of the heart?"

In some forms of disease of the heart, the pain is confined to the region of the heart, and in others, it extends over the whole left portion of the chest and even down the left arm, while in others still, there is no pain at all. The cause, symptoms and mode of treatment will be given in some future number of THE HERALD.

Best Bread.—The unleavened Graham bread, in the form of "gems," is the sweetest, best, and healthiest bread ever eaten. For full directions for making it, see the "New Hygienic Cook Book"; price, 30 cents.

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Drinking while Eating.—"What is the best drink to take while eating? Which are best, warm or cold drinks?"

It is best not to drink at all while eating. Nature never intended us to put food into our mouths and wash it down like so much rubbish, to be disposed of as easily and quickly as possible, but placed teeth in our mouths to grind it, and gave us salivary glands to secrete from the blood a fluid specially adapted to mix with and moisten the comminuted food, and prepare it for the next process of digestion in the stomach. If the food is not masticated and properly mixed with the saliva, the stomach, in addition to its own work, has to perform that which the mouth has neglected to do, and the result is over-exertion, and, ultimately, indigestion. Drinking every few minutes while eating prevents the usual flow of saliva, dilutes the gastric fluid in the stomach, and weakens its digestive power. Upon this subject man is the most ignorant of all created beings. Who ever saw a horse take alternately a mouthful of oats and a drink of water, or any other animal wash down his food with any other fluid than that which God caused to be manufactured for that purpose? Other things being equal, cold drinks are more injurious than warm, from the fact that they lower the temperature of the stomach, and digestion will not take place when the temperature of the stomach is much below 100 degrees.

Curvature of the Spine.—"I have a friend, a miss of 14 years, who has curvature of the spine. Her right shoulder protrudes over the left. We think she is scrofulous. What treatment is best for her?"

She needs the immediate, special and thorough treatment of the Movement Cure to restore the spine to its normal position. No time should be lost, as the longer it is deferred the more difficult it will be to cure. If she is scrofulous, she needs plenty of sunlight and pure air, a plain, simple diet and bathing specially adapted to her needs.

Diet for Biliousness.—"What kind of diet is proper for a person inclined to biliousness?"

A diet composed of fruit, unleavened Graham bread, oat-meal cakes or pudding, cracked wheat, etc., is the best. No milk or sugar should be eaten on any account.

Frequency of Bathing.—"Is a daily bath better than bathing twice a week?"

For most persons it is, provided the bath is properly taken. See the series of articles entitled "How to Bathe."

Hemorrhage from the Lungs.—"Why is it that salt is recommended in hemorrhage from the lungs, and why does it stop the spitting of blood?"

It is used upon the principle of "counter irritation," the same as a blister; that is, there is a strong determination of blood to the lungs, and the salt is given to irritate the mucous membrane of the mouth, pharynx, œsophagus and stomach, so as to produce a determination of blood to those parts and thus relieve the pressure upon the lungs. But there is a much better and more effectual way of accomplishing this object without the injury which must always result from the use of salt or like remedies. The patient should be kept as quiet as possible, cold, wet clothes should be applied to the chest and changed often, sips of the coldest water or bits of ice should be frequently swallowed, the feet should be placed in water as hot as can be borne and the extremities rubbed briskly with the hand or a coarse towel.

Grubs in the Nose.—"On pressing my nose, little grubs or moths will come out. What is the cause and remedy?"

The supposed "little grubs or moths" are simply little bodies of oil that have been secreted by the oil sacs which contain them, and, being retained in these sacs by their mouths having been kept closed by little specs of dirt or otherwise, have become hardened, and, when squeezed out, appear like little white grubs. The remedy consists in keeping the skin in a healthy condition and the mouths of the oil sacs free from obstruction. Cleanliness secures these conditions.

Quantity of Food.—"How much food—bread and fruit—is required for a laboring man per day?"

The quantity varies with different individuals. Some require a much larger amount than others, therefore no definite rule can be given. Each person can soon determine for himself, by a course of careful observation and experiment, about the quantity of food which he requires.

Cream and Milk.—"Is cream any more easily digested than milk, and are either of them improved by cooking, as in toast?"

It is not. Oily food of any kind is difficult of digestion. Their digestibility is somewhat improved by cooking.

Best Emetic.—"Which is the best and safest emetic?"

Warm water. It should be drank quite freely. It is sometimes necessary, in addition, to tickle the throat with a feather or the finger.

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Healthy Spices and Condiments.

Words without deeds are like husks without seeds.

The man who was driven to distraction has had to walk back.

What is that which is always invisible and never out of sight? The letter I.

To Remove Stains from the Character.—Get rich.

The man who lately caught cold has allowed it to escape from his grasp.

"I never was ruined but twice," said Voltaire, "once when I lost a lawsuit and once when I gained one."

Men are born with two eyes, but with one tongue, in order that they should see twice as much as they say. The same is also applicable to women and boys.

A lady being asked to waltz, gave the following sensible and appropriate answer: "No, I thank you, sir; I have hugging enough at home."

"Ma, is the portrait of father torn?" asked a little cherub of three summers. "No child, why do you ask?" "Why, this morning he said, "Darn my picture!"

A man being awakened by the captain of a passenger boat with the announcement that he must not occupy his berth with his boots on, very considerately replied, "Oh, it won't hurt 'em; they're an old pair."

On some railroads it is customary to have a lock on the stove, to prevent a passenger from meddling with the fire. A wag being asked why they locked the stove, coolly replied that "it was to prevent the fire from going out."

"I was never so mortified in all my life," said a mother, "as when I once overhead one of my girls, a make-believe mother, scolding a doll, word for word, as I was scolding Thomas the day before. It was certainly not a pleasing reflection."

Mr. Justice Page was renowned for his ferocity upon the bench. While going the circuit, a facetious lawyer named Crowe was asked if "the Judge was not just behind?" "I don't know," said Crowe, "but if he is, I am sure he was never just before."

A scared individual, who was dodging an infuriated bull behind a tree, exclaimed, "You ungrateful beast, you wouldn't toss a vegetarian, who never ate beef in his life, would you? Is that the return you make?"

A famous judge came late to court, one day in busy season; whereat his clerk, in great surprise, inquired of him the reason. "A child was born," his Honor said, "and I'm the happy sire." "An infant judge," "Oh no," he said, "as yet he's only crier."

A paper gives the following reasons for not publishing a poetic effusion: "The rhythm sounds like pumpkins rolling over a barn floor, while some lines appear to have been measured with a yard stick, and others with a ten foot pole."

A cobbler in Essex thus announced his calling: "Surgery performed here upon old boots or shoes, by adding of the feet, making good the legs, binding the broken, healing the wounded, mending the constitution, and supporting the body with new soles. Advice gratis."

A young lady asked a gentleman the meaning of the word "Surrogate," and he explained it to her as "A gate through which parties go to get married." "Then I imagine," said the lady, "that it is a corruption of the word sorrow-gate." "You are right," said he, "as woman is an abbreviation of woe to man."

To him that goes to law, nine things are requisite. First, a good deal of money; second, a good deal of patience; third, a good cause; fourth, a good attorney; fifth, a good counsel; sixth, good evidence; seventh, a good jury; eighth, a good judge; ninth, good luck. Even with all these, a wise man would hesitate before going to law.

Dr. Gross, the justly celebrated surgeon, was once dangerously ill. Shortly after his recovery, he met one of his lady patients—they are not always patient ladies—who remarked to him: "Oh, Doctor! I rejoice to see that you are out again; had we lost you our good people would have died by the dozen?" "Thank you, madam," replied the affable doctor, "but now, I fear they will die by the *Gross!*"

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Literary Notices.

BACKBONE; Photographed from The Scalpel. By Edward H. Dixon, M. D. New York: Robert M. DeWitt.

This is a substantial volume of 400 pages, composed of selections from The Scalpel, that most caustic of medical journals, and contains many valuable truths clothed in the author's peculiar and forcible language. It is a book well worth buying, reading and re-reading. We give a short extract upon the subject of "Curing Disease":

"Putting medicine into the mouth to 'cure' disease is an absurdity; you can 'cure' a man or a pig only when dead. If you were to attempt to cure either of them while living, Nature would treat your salt as she generally treats your medicine—she would throw it from the stomach by vomiting or purging. She would treat it as you would a filthy fellow who intrudes into your parlor. You may perturb the functions of the body, but you can not compel any one of them to do your bidding; they choose to work harmoniously and in their own way—not in yours and according to your theory.

"When a foolish man, with a theory of his own, attempts to 'cure' disease by medicine, he shows his stupidity, vanity or dishonesty. The sole business of a conscientious medical man is to instruct his patients how to keep well, and how to regulate the natural agents—food, warmth, rest and sleep—so as to resist disease till the natural forces can overcome it; that is all—all else is experiment."

A NEW AND PRACTICAL SYSTEM OF THE CULTURE OF THE VOICE AND ACTION, with a complete Analysis of the Human Passions. By Prof. J. E. Frobisher. Ivison, Phinney & Co., Publishers.

This is the latest work that has appeared upon the subject of the cultivation of the voice. Its author is a professional teacher of vocal culture and a successful one. His book is the result of his own experience and practice, as well as of extensive reading. He acknowledges much indebtedness to Dr. Rush, whose treatise on the voice has hardly been surpassed. We welcome this production as an important aid to vocal culture, a subject too much neglected. Weak voices are so common that, except among sea captains, backwoodsmen and country boys, we hardly find any with full, round, healthy powers of the vocal organs. This book will help to remedy the defect. Price, by mail, $1 75.

LETTERS ON TOBACCO FOR COUNTRY LADS; or, Uncle Toby's Anti-Tobacco Advice to his Nephew, Billy Bruce. Fitchburgh, Mass.: George Trask.

Mr. Trask, almost single-handed and alone, is engaged in the holy war against tobacco, and, like a sensible man, he is commencing the work among boys. This work is a series of little tracts bound together, well illustrated, and making a book of some one hundred and fifty pages. We are sure it will help any parent to fortify his son against the use of this disgusting habit by placing this book in his hands. Send 75 cents to Mr. Trask for it, or buy a dozen or a hundred copies, and do good in your neighborhood by circulating them among the rising generation of boys and older tobacco-users.

DAVID COPPERFIELD.—This is the third volume of the "Diamond Dickens." It is in the same style as "Our Mutual Friend" and "Pickwick Papers," and, like these, will, of course, meet a ready sale. Price, $1 50. Boston: Ticknor & Fields.

Publishers' Department.

This Number.—We give this month the second paper of our esteemed contributor, Rufus King Browne, on the "Physiological Anatomy, Physiology and Pathology of Man," with illustrations. We would call special attention to these truly scientific papers, and hope our readers will peruse them carefully. We have long believed that Physiology, in the present illy developed condition of education, is the most important study that can engage the attention of mankind. There are few who are so thoroughly master of this subject, from experimental study and original investigation, as Dr. Browne. These papers are not merely a re-arrangement of the ideas of other writers, but results of his own investigations with the microscope.

The second paper of Mr. Tyler also commends itself to our readers. Many have already expressed great gratification on reading the first of these papers in the April number, and we are sure the present one will fulfill the expectations raised by the perusal of that paper.

The contributions from Rev. Henry Ward Beecher, Mrs. Gleason, Prof. Royce, Dr. J. B. F. Walker, Dr. Thornton, etc., are all valuable.

We have the pleasure of giving this month a poem by Phœbe Cary—one, too, breathing lessons of goodness and truth from the fields, the brooks and the flowers. It is a gem.

We hope the article from Mr. Elliot on out-door life and gardening will be acted upon as soon as the warm days of summer will permit. The illustrations are kindly furnished us by Mr. Vick of Rochester, who is doing much to cultivate the love of flowers among the American people. His Catalogue is a very rich one, and furnished for 15 cents.

The article from Rev. J. L. Corning can not fail to be read by all with pleasure and delight, for it is not only rich and racy, but full of wisdom.

Mr. F. B. Perkins's paper on the "Ethical Nature of Children," gives a new and interesting view of child-nature, and conveys a volume of instruction.

In our Topics, Department for the Home Treatment of Disease, and Answers to Correspondents, we think, will be found much of practical value and interest.

Premiums.—Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

To Querists.—We only answer letters in our Notes to Correspondents which are of general interest to all our readers. Persons wishing prescriptions made out for home treatment must, in all cases, send a stamp and $5 for consultation fee. Address DRS. MILLER, WOOD & Co.

Clubs.—To those who are forming Clubs for 1867 we would say, Hurry them up! Back numbers are fast disappearing. We have not had in any year so many new subscribers and so very many encouraging words.

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Notes from Readers.—Moses Coit Tyler writes us his appreciation of our labors thus: "Many thanks for the copies of the April HERALD sent here. Every body to whom I have shown them, of late, expresses astonishment and delight. People say: 'Why, it's a grand magazine—racy, practical, liberal, strong, and full, too, of all kinds of most important information!' Then they wonder that so able a journal never fell under their notice before. I am sure, Doctor, that you are bound to make it, in its department, as great a success as The Atlantic is in its.

"How can I express to you the emotions with which I read Mr. Beecher's noble Sermon to Medical Students? It is the grandest thing of the kind I ever saw! It alone would make fame for an ordinary man.

"Prof. Browne's opening paragraph in his April paper is a gem of clear, compact, logical statement. It is a scientific crystal! I admire his paper."

From Prof. C. S. Royce we have this paragraph: "I like your HERALD better and better. It is rare that I take up a magazine that has all its articles so good as yours." And so we might go on quoting from letters received, but our pages tell their own story.

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that for a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $20 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

To the Reader.—Friends of the cause of human improvement who may see a copy of our magazine, are requested to lend a helping hand in extending its circulation, if only by their own names. Our aim is to do all the good we can in extending a knowledge of the laws of the body and brain. Many a person has cause to bless our labors, because he has better health from learning how to live, and better children from knowing how to rear them. Half the children born die before they arrive at five years of age. Why? Because of ignorance on the part of parents. Teach them the laws of life, and they would swell the lists of living men and women and bless the world.

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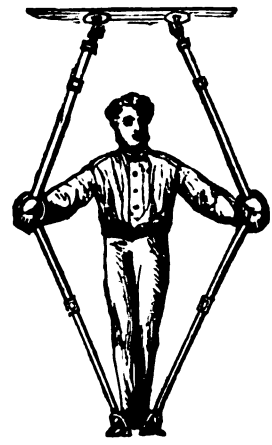
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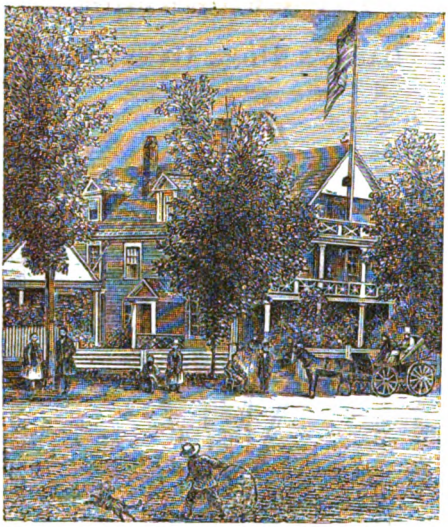
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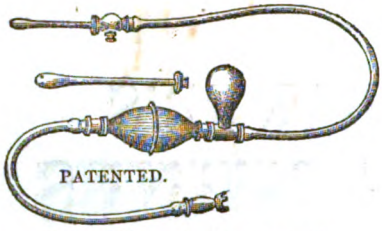
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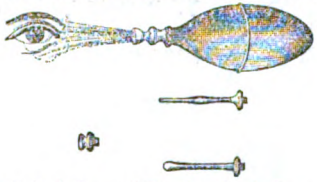


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DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

JUNE, 1867.

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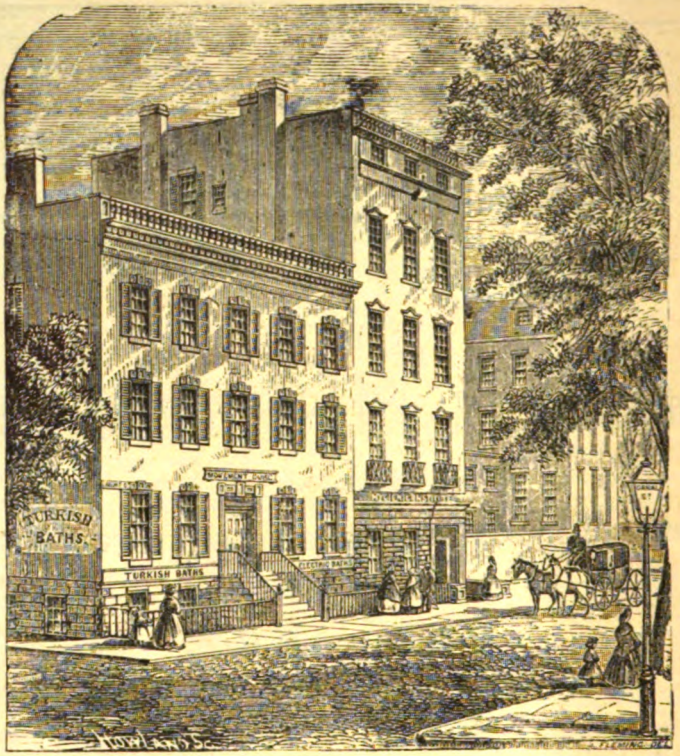
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General Articles---Hygienic and Miscellaneous.

MINUTES

OF THE

Brawnville Athletic Club.

EDITED BY MOSES COIT TYLER.

III.

JUDGE FAIRPLAY'S TEA PARTY.

BRAWNVILLE, *November* 15, 1865.

"MY dear," said the Judge, turning to his wife, as we all sat together in the drawing-room, "will you pardon for once an allusion to the mysteries of that man-forbidden place, the kitchen?"

"For just once!" she replied.

"If, then, you think there will be time before tea, I should like to read to these gentlemen the passage from Horace Mann, which I showed you last night."

"Oh certainly!" Mrs. Fairplay replied; "there will be ample time; and if our friends enjoy the extract half as much as I did, they will have a great treat. Harold," she added, speaking to her second son, a bright, handsome lad of a dozen years, "go, dear, to the library, and bring from your papa's desk the book you will find there."

"I do not suppose," said the Judge, "that the bit I want to read will be new to you; for you must all have seen it some years ago, when it was first published. Don't you remember the address which Horace Mann gave on the opening of a gymnasium in Boston?"

Dr. Drugger was sure he had never seen any thing more of it than the cover, if he had that; as a philosopher, he was willing to hear all sides of all questions; he must confess he had never been much edified by gymnastic addresses; but he expected that he should be on this occasion, for, somehow, Judge Fairplay had a gift of rendering every thing valuable which passed over his lips.

We all saw the ludicrous struggle in the Doctor's soul between his antipathy to gymnastics and his affectionate courtesy to his friends. The Judge acknowledged the compliment with an amused twinkle of the eye and a heroic nod. Mr. Bland and I said we remembered to have seen Mr. Mann's address many years ago, and that for that very reason we should be glad to hear it or any part of it again.

By this time Harold had laid the book on his father's knee. I thought the Judge took it up with a sort of tender reverence, and my impression was immediately confirmed; for, while he was turning over the leaves to find the place, he said:

"I am one of those who think Horace Mann to have been almost the ideal statesman. How many-sided was his comprehension; how broad his sympathy; how far-reaching, intuitive, prophetical, was his vision; finally, how grand his moral courage—the want of which is the chronic disease of American statesmanship. His is the praise which few of his political con-

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temporaries can receive—to have turned away from the lower lures of American politics, from the objects which a vulgar ambition covets, and to have devoted his great powers, not to the flattery of the national prejudices, but to the removal of them. With such gifts as his he might have made far more clamor in the world, gained far higher offices, made far more money; but he chose to enrich his countrymen, by making them wiser, healthier, better! I think that, judged by the highest tests, our Websters, Choates, Everetts, Clays, Calhouns, seem dwarfs—indeed, I had almost said demagogues—by the side of Horace Mann. What did their lives signify, after all? They went with the current, muddy and in the wrong direction as that current was. Horace Mann had the greatness to go against the current, that he might purify it and direct it into a nobler channel, to a grander outlet. How colossal seems the figure of the late President of Antioch College compared with any late President of the United States excepting—ONE! Ah! *Præclarum et venerabile nomen.* But of Horace Mann's services to popular education, mental and physical, I can not speak without emotion. Gentlemen, there's not a poor child thumbing his dog-eared spelling-book in a log hut in the remotest settlement of our American wilderness, but owes a personal debt to Horace Mann. If every toiling man on this continent, who has all his life been pursued by Poverty—that ghost that can cast a shadow—but who has been enabled, by the services of Horace Mann, to see his boys and girls, in spite of his own penniless, sitting down to the royal feast of knowledge which the good God meant should be spread for all, were to bring but one poor pebble and cast it upon Horace Mann's grave, there would rise a monument over his dust higher than the granite shaft at Bunker's Hill. We ought to gauge a statesman by this test—not how much does he know, but how much does he know which his own generation does not know. We can say of the true statesman what Wordsworth says of the wise man:

'——he sees what he foresees.'

Apply this test to Horace Mann. Take the question of slavery among us founded on color, the question of slavery among us founded on sex, and that other, that vast question, which so many of our own statesmen ignore—of the mental, and especially the sanitary condition of the people; and how great seems the statesmanship of this modest patriot! A moment ago I spoke of the late President of Antioch College in connection with the late Presidents of the United States. Were it not for the one redeeming exception among them, I should feel that I ought to apologize to the surviving relatives of Horace Mann for making such a comparison. Do you remember that grand sentence of gruff old Count Gurowski? 'It is great and stirring to see one's name recorded on the list of Presidents of the United States; but there is a record far shorter and far more to be envied—a record venerated by our race—it is the record of GREAT MEN!' On that venerated record who can doubt that the name of Horace Mann is written? But pardon me, dear friends—this is too bad—here have I been talking so long about Horace Mann, when an infinitely better thing was at our command—to let Horace Mann himself speak. Really, I must beg your forgiveness. Here is the extract."

Whereupon the Judge, with his fine, manly elocution read these sentences:

"To a reflecting mind there is a deeper pleasure than could be derived from any mere exhibition of strength, though it should equal Samson's; or of fleetness, though it should emulate that of Mercury. It is because we know that every leap and spring aids in renewing the body, and therefore in giving greater hilarity to the spirit, and superior vigor to the intellect. Every motion helps to construct a fortification against disease, and to render the body more impregnable against its attacks. It requires, indeed, no very strong imagination to see the horrid forms of the diseases themselves, as they are exorcised and driven from the bodies which were once their victims, and are compelled to seek some new tenement. Those prodigious leaps over the vaulting horse, how they kick hereditary gout out of the toes. Those swift somersaults, with their quick and deep breathings, are ejecting bronchitis, asthma and phthisis from the throat and lungs. On yonder pendent rope consumption is hung up like a malefactor, as he is. Legions of blue devils are impaled on those parallel bars. Dyspepsia lost hold of its victim when he mounted the flying horse, and has never since been able to regain her accursed throne, and live by gnawing the vitals. There goes a flock of nervous distempers, headache and tiodoloreux and St. Anthony's fire; there they fly out of the window, seeking some stall-fed alderman, or fat millionaire, or aristocratic old lady. Rheumatism and cramps and spasms sit coiled up and chattering in the corners of the room like Satanic imps, as they are, the strong muscles of the athletes having shaken them off as the lion shakes the dew drops from his mane.

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Jaundice flies away to yellow the cheeks and blear the eyes of my fair young lady reclining on ottomans in her parlor. The balancing-pole shakes lumbago out of the back, and kinks out of the femoral muscles, and stitches out of the side. Pleurisy and apoplexy and fever and paralysis and death hover round; they look into the windows of this hall, but finding brains and lungs and hearts all defiant of their power, they go away in quest of some lazy cit, some guzzling drone, some bloated epicure at his late supper, to fasten their fangs upon him. In the mean time, the rose blooms again on the pale cheek of the gymnast; his shrivelled skin is filled out, and his non-elastic muscles and bones rejoice anew in the vigor and buoyancy of youth. A place like this ought to be named the Palace of Health!"

The reading of this eloquent passage was greeted with exclamations of delight, in which even Dr. Drugger heartily joined—for he had a keen intellectual appreciation of a literary master-piece. Yet it was evident to us that while his intellect was pleased his prejudices were suffering from neuralgia.

"Capital, capital!" said he. "Fine piece of idealising. Was not aware that Horace Mann had so much imagination. Why, it's poetry—muscular poetry—yes, Judge, rather more poetry, I apprehend, than truth."

Before any of us could reply to this covert hit, tea was announced, and the subject was lost for a time in general conversation around the table. At last Judge Fairplay said:

"That last sentence of Horace Mann's keeps coming back to my mind: 'A place like this ought to be named a Palace of Health;' and I can't quite settle it with my conscience that we have no such Palace of Health in Brawnville."

There was a moment's pause. Would the Judge go on and unfold to us his project, or would he wait to observe the effect of this remark? Presently, Mr. Bland, our clerical athlete, broke silence:

"I know Drugger needs no help in his vocation of resisting all attacks of gymnastics with which Brawnville may be threatened; but he must be rather tired of the monotony of doing all the work himself. If he will permit me, I'll put in my oar on his side. Let me state to you, Judge, the objection which I know many will make to the idea of having a gymnasium here. This is but a village, they will say, too small to support a gymnasium—far too small to build one. Moreover, it will be said, we do not need a gymnasium here. In large cities, where the air is less pure, where people are inclosed in shops and offices all day, where access to fields and hills and river-banks is not easy, there is need of some artificial arena for exercise, some Palace of Health like that one in Boston, which Horace Mann inaugurated with the magnificent oration from which you have read to us; but here in this rural village the case is different. The fields are all about us. A five minutes' walk brings us to them. Yonder are the hills. Yonder the river-banks. Our gymnasium is nature. We, too, here in Brawnville, have a Palace of Health; but it is one not made with hands. The sky is the dome of it; the trees of the forest are its apparatus; the hills are its galleries; and yon beautiful stream of water flowing through the midst of it is its lavatory. Will it not be an ingratitude—nay, an impertinence—for us to build, by the side of this grand and capacious Palace of Health, any paltry affair of bricks and shingles, such as the best fabric made by man must appear?"

We all waited somewhat eagerly to hear how the Judge would receive this objection, which, by-the-way, we thought the parson had stated with remarkable felicity and vigor. The Judge sat some time in silence, evidently in deep meditation, but gazing steadfastly at no more considerable object than his teaspoon, which he turned over and over on the edge of the cup. As he did not offer to speak, Mrs. Fairplay rallied him laughingly:

"My dear, has Mr. Bland so effectually demolished your project of a gymnasium that you can't speak? Or do you expect to get some help from that teaspoon that you stare at so intently?"

"Don't be alarmed, madam, about your husband's silence," said the Doctor. "Lawyers are never *unable* to speak; though they do draw a good deal of inspiration from the metal of which that teaspoon is made. He will be all right in a moment."

"Mr. Bland," said the Judge at last, looking up with a smile, and quite ignoring the last two remarks, "do you remember what church Carlyle—I think in his 'Life of John Sterling'—speaks of going to?"

"No, Judge, I do not."

"Well, he speaks of going one Sunday to 'the great Cathedral of Immensity.'"

"Why, my dear," exclaimed Mrs. Fairplay, "what in the world has that to do with the objection to a gymnasium which Mr. Bland has just stated?"

"It has this to do with it—if nature serves for a gymnasium, it serves for a church too. If the gymnasium built by nature renders us-

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necessary the gymnasium built by man, so, likewise, does the church built by nature render unnecessary the man-made church."

"There, Parson," broke in Dr. Drugger, in high glee, "it's your turn now. Last Saturday the Judge upset my profession—now he's for upsetting yours! Why, what would the man have left in the world? Nobody, good heavens, but gymnasts and lawyers—the heroes of the muscle and the heroes of the tongue."

"No, Doctor," retorted the Judge; "it is not so easy to upset the Parson's profession as it is yours. Neither am I trying to. His profession was ordained of God; yours was ordained of ——well, never mind, I won't mention his name! No, no, Doctor, I am not attacking the Parson's profession, only the place where he usually engages in it. I wish to show him that the same argument which sends the gymnasts into the woods to practice, sends the parsons there, too, to preach."

"I appreciate the argument," Mr. Bland said, with a gracious bow. "But, Judge, do tell us a little more explicitly how you would meet the objection which I stated a moment since."

"With all my heart," said the Judge. "I should reply to the man who says 'Nature is our best gymnasium,' Certainly, and it is our best cathedral or meeting-house, too. The groves were God's first temples. There men worshiped in the infancy of society; there they would continue to worship, were it not for certain practical inconveniences, which make it necessary for us to erect a church, that ingratitude, nay, that impertinence, a man-made tabernacle, which, in comparison with the tabernacle which God made—the grand, sky-arched, star-lighted, mountain-buttressed, meadow-paved Cathedral of Nature—is, indeed, but a paltry affair of bricks and shingles. What are the practical inconveniences—do you ask—to worshiping only in Nature's Cathedral? They are chiefly those of climate. There are others, also; but climate presents the first and greatest. It rains, it is cold, the wind blows; therefore we shelter ourselves in churches of our own building, instead of occupying the one great church which nature built for us. So of gymnasiums—nature's gymnasium and man's gymnasium. There is no rivalry between them; they are both needed. There are many days in the year when, as you have just intimated, our best gymnastic exercises can be taken at the river and on the hills. But, in this climate, how many days, weeks—nay, months, there are every year when nature closes the doors of her big gymnasium and shuts us out. It is winter; so nature puts a notice on the door: 'Gymnasium closed for repairs!' The wind blows furiously; so nature puts up another notice: 'Gymnasium closed while being swept!' It rains; nature now puts up the placard: 'Gymnasium closed until washed!' Meantime what are we to do for exercise? The community replies: 'Wait a few weeks or months till nature's gymnasium be re-opened.' The community merely proves by that reply how imperfectly it is educated. The community confesses by that reply that it does not yet understand one of the most important of the primary laws of being—namely, that physical exercise is a sacred ritual for each day's service; that physical exercise belongs essentially to the economy which God has ordained for the harmonies and sanities of existence—no more to be intermitted for a week or a day than food, than drink, than sleep, than laughter, than prayer and praise. Therefore, my dear Mr. Bland, the objection of which you consented to be the mouth-piece for a moment, is but the objection of an imperfect education as to the laws of being. What is for us to do, then? To yield to that objection? No; let us try to remove it by removing its cause."

Mr. Bland was the first to speak:

"I don't need to tell you, Judge, how entirely, how heartily I accord with what you have said. And I would add just this in support of your view: Man's gymnasium is a preparation for nature's gymnasium. It is not only true that we can take exercise in a building when we can't do so in the open air; but the very exercises which we get in a building are a help in doing those which we are to get in the open air. They reach muscles which would be otherwise neglected; they promote erectness and symmetry; above all, they key up the instrument—they tune it—for service in the great orchestra of out-doors."

At this point, rising from the table, we adjourned to the library. The Judge has recently received from Paris Dore's illustrations of Dante, and we spent some time in turning over those leaves, on which the artist seems to have held a mad revel of horror, terror and woe. Presently, however, we were summoned to business by the Judge:

"Come, gentlemen, let us get out of Inferno and make our way to some wholesomer region. That sentence of Horace Mann's still haunts me: 'A place like this ought to be named a Palace of Health.' I long to see such a Palace of Health in Brawnville. I want to talk over

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with you a project I have carefully considered. Be my advisers. I have in mind something, not very large, of course, but far more complete in its way than seems to have been attempted in modern times; something which shall combine the modern gymnasium with the lyceum, the book club, the debating society and even the social circle; an institution on the basis of the gymnasia, but, like the old Athenian gymnasia, to be the nucleus and the vehicle for intellectual culture, for the study and discussion of health-laws, for the love of the beautiful, for all that can refine, expand and ennoble the manhood and womanhood of this community, and not merely for this generation, but for the generations that are to follow us. 'This is a fine dream,' you will say, 'but fine dreams do not travel except on golden wheels.' I accept the intimation. Awhile ago I quoted a saying of Carlyle's. I remember another of his sayings. It is about Schiller. He says that in his early manhood that great poet 'felt the mortifying truth that to arrive at the ideal world he must gain a footing on the real.' That is, indeed, a 'mortifying truth.' How often it thrusts itself in upon our petty enthusiasms, collapses our cheap air-castles, mortifies our vanity, our ambition, our youthful hope. Well, gentlemen, I have many things, even about this world, yet to learn; but I think I may consider myself a master at least of that lesson which Schiller learned so early. For my ideal Palace of Health I have indeed considered the necessity of a footing in the real world. The footing which I propose for it is just the size of two village lots, to wit: that pair of vacant lots on Main Street, just east of the Post-office, which, belonging to me, I am ready to dedicate to this purpose. Moreover, I have got from an architect in Boston plans and estimates for our Palace. On the principle that men value most that which costs them something, I wish to induce our people to invest in this enterprise; but my check is ready for half the cost. My idea is to form an Athletic Club; to have it incorporated; to have it erect a pretty Grecian temple, one part being a single large room to be used as a gymnasium and for lectures, the other part being for a reading room, for dressing rooms and lavatories, especially for a library room in which the literary and social meetings of the Club can be held. We have no lyceum in Brawnville. We never have among us any of the distinguished lecturers. We need the stimulus of an occasional visitor from the outer world. Our Club might easily supply that need. But of course the principal function of the Club would be not the importation of talent, but the evolution of it—our own exercise, physical and mental; the diffusion among us of health, and of just ideas upon health in the broad and sublime sense of that word. I have called you together as my special friends, my intellectual companions, in order to talk this matter over with you, before I propose it to the public. I am anxious before I go hence to assist in the establishment here of something which shall be an enduring blessing to the community. I believe that a genuine classical gymnasium would best accomplish that desire."

Extreme admiration puts out the critic's eye. The next few moments were consecrated to grateful enthusiasm. We thought too much of the nobleness of our friend's nature to be able to anatomize his project. As for the Parson and myself, it met our views exactly. We cordially indorsed and applauded it. In some matter of detail there might be room for a suggestion two from us; in the broad outline of the schem , none. With Dr. Drugger it was, of course, different. He is a sworn foe to "gymnastic monkey-shines," as he calls them. He makes no concealment of the fact; and Judge Fairplay, in asking his presence to-night, must have anticipated his opposition to all that part of his plan which involves gymnastics, a part indeed which holds the same relation to the whole which the Prince of Denmark does to the tragedy called by his name. The Doctor, who is a true gentleman, and was anxious to be faithful to his own nature and at the same to be not wanting in appreciation of Judge Fairplay's magnanimity, paved the way for his objection thus:

"We four are friends, dear friends. We are students of philosophy. We are bound together in the fellowship of culture and a love of truth. Our intimacy is all the deeper and all the more fruitful because it is based, not on identity, but on diversity—diversity in profession, habit, temperament, opinion. The one essential bond between us is the *spirit* in which we pursue our several courses of thinking and living; and that, as Goethe says, 'is the highest matter;' indeed, it is almost the only matter! We respect and love each other. We are honest, each to each, and therefore each to himself. We respect each other's personality, down to the last atom of idiosyncrasy and whim. For this reason, though we differ, we are harmonious; though our opinions clash, our hearts do not. You know, my dear Judge, that I hold very decided views on the subject of gymnastics. If I object to that feature of your beautiful scheme, surely you will not think me insensible to the large and noble benignity of the scheme as a whole."

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"I assure you, my dear Doctor," earnestly exclaimed the Judge, "you can not pay me a higher compliment than by bringing to bear upon my plan, whether for support or for censure, your own individuality."

"You are well aware, Judge," the Doctor replied, "that I do not join in what I must call this modern cackle over gymnastics. Perhaps if it had been indulged in with moderation, I might have assented to it. But the new claim for gymnastics by its extravagance, its pretentiousness, its shallow and illogical clamor, provokes my antagonism and disgust. It is soaked through and through with quackery. I wonder that your literary hero, Carlyle, has not got it into the list of things which he lives to denounce: '—— fire horses, jotuns, wind-bags, owls, Choctaws and horse-hair, shams and flunkeyism, unwisdom, tythes and unveracities!' I object to the present drift of the public mind toward gymnastics on many grounds. I object to it both as a physiologist and as a moralist. I see in it perils of all sorts. However, I need not go into that subject now; you and I have had it all over before. But concerning your plan of a gymnasium here, one personal consideration occurs to me. Let me ask if it be not essential to the plan, that you gentlemen who advocate the gymnasium should show your faith by your works, and personally engage in its exercises?"

"Certainly! by all means!" replied the Judge. Upon this reply, which was spoken with great earnestness, the Doctor sat in silence gazing disconsolately at the floor. Presently, however, throwing his eyes around our little company, he said:

"And do you, Judge, and do you, Parson, and do you, School-master, mean actually to plunge in among the village boys, and pull your coats off, and there, in your shirt sleeves, and perhaps in the presence of people who for many years have held you in respect, perform antics for their diversion. Shall it be said that Judge, Parson, and School-master, have turned acrobats? That, indeed, would produce mirth; but it would also produce something more than mirth. For no community can lose its reverence for its chief citizens without a loss of moral and social tone, without the general manners suffering. I can not understand how you can submit to such a humiliation. I can not but feel that it is unworthy of you. It seems to me that the voice of a true dignity, of a manly self-respect, breathes in those mournful and scornful words which Milton puts into the mouth of Samson, when the Philistines came to take him from the mill, and make an exhibition of his '*muscle*' for the amusement of a gaping crowd:

'Have they not sword players, and every sort
Of *gymnick artists*, wrestlers, riders, runners,
Jugglers and dancers, antics mummers and
mimicks,
But they must pick me out, with shackles tired,
And overlabored at the public mills,
To make them sport with blind activity?'

How it will breed degeneracy here in Brawnville to have our chief dignitaries turned into '*gymnick* artists,' and along with 'jugglers and dancers, antics mummers and mimicks,' making sport for all who can buy tickets to witness the show! Ha, ha, ha! Judge Fairplay in his shirt-sleeves, standing on his head! I speak now for reserved seats!"

The Judge awaited patiently the end of Dr. Drugger's sarcastic tirade.

"Well, Doctor, as you have attacked me with one quotation, I will meet your attack with another. Against your Milton, or rather against your Milton's Samson Agonistes, I will bring out Bishop Hurd. In one of his Dialogues, that on the age of Elizabeth, if I mistake not, he has this remark, which seems to me eminently pertinent to the present case: 'But you must not think to discredit these gymnastics with a little raillery, which has its foundation in modern prejudices.' Now, Doctor, you know I always enjoy a fine bit of raillery; and I must say the specimen you have given us is admirable. But as an example of reasoning—well, I imagine you did not intend it for that! Yet, beneath what you have said, lurks the real objection after all, which deters multitudes of professional men from engaging in gymnastic exercise; it is the feeling that on the whole it is '*infra dig.*' for gentlemen to do that sort of thing. I acknowledge that this objection *is* not often put into words. For that very reason I am satisfied that it is the deepest and most real one. Very well; the only question for us to consider is, whether the objection be founded on just ideas of the Becoming or only on artificial and therefore superficial ones. Is it based on sound reason or only on sounding prejudice? Does the ritual of a good gymnasium, conducted in a spirit of refined and enlightened taste, contradict the universal and permanent laws of Fitness, or merely our modern, local, absurd and transient customs? I should be convinced that the latter is the true view, by the simple fact that you, my dear Doctor, in attempting to portray the unseemliness of gymnastics, found yourself unable to make out a case without exaggeration,

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and exaggeration of a very palpable and grotesque kind. All that about 'shirt sleeves,' 'standing on the head,' and 'making an exhibition' of ourselves, is mere caricature. These offensive things are not an essential part of gymnastics. You can practice gymnastics without being in your 'shirt sleeves,' or 'standing on your head,' or 'making an exhibition' of yourself. In every true gymnasium a special costume will be worn by every practitioner; for example, the Garibaldi jacket and flannel trowsers—a costume at once decorous, easy, graceful and picturesque. Then, too, the *acrobatic* element is rapidly passing away from our best gymnastic methods, and from the Dio Lewis method it has passed away entirely. Finally, the exercises will not, by the true gymnast, be engaged in as they are by these 'mimicks' and 'jugglers' to whom you compared us, for show or for pay, but in conscious obedience to a great physiological law, and for our own individual improvement in bodily and in mental strength. You cited, a moment since, the noble aphorism of Goethe: 'The spirit in which we act is the highest matter!' Apply that wise principle to the case of true gymnasts. In what spirit do they exercise? Is it in a spirit unworthy of a gentleman? Is it in the spirit of acrobats and mountebanks and mummers? Is it for vanity, ostentation, lucre? Or is it rather in the spirit of thoughtful and conscientious men, reverencing all God's laws, and showing that reverence by active obedience? In such a work, pursued in such a spirit, is there any thing undignified, unmanly, or, if you prefer the next word, *ungentlemanly?* If the performance of legitimate gymnastic exercises by the Parson here, or by the School-master, or by myself, should make any silly people deride, it would be, not because the exercises were unbecoming, but because the people were silly. In my judgment, old Diogenes was a true gentleman, if he did live in a tub. You remember what he said when some one spoke to him of the sneers and laughter of certain foplings. 'Diogenes, they deride you!' 'But,' said the grand old fellow in the true dignity of a man, '*I am not derided!*' Why, my dear Doctor, are we in this world to be kept from doing what God requires; are we to be frightened from the pursuit of a healthful and beautiful object, by the grinnings of a clown or the booby stare of an ignoramus? The rude of all nations think that preposterous to which they are unaccustomed. With your frock coat, and silk hat, in the country villages of Turkey, you would be received with the same ridicule that a Pasha and six tails would be in the country villages of America. Let us be philosophers, not the slaves of local prejudice. Let us first ascertain what is intrinsically true, beautiful and good; then let us follow it, without scorn, without fear. The ignorant will gaze, the silly will giggle; that can not harm us, while our course may ultimately benefit them."

As the Doctor seemed disinclined to carry the discussion farther, Judge Fairplay rose and took from a drawer the plans for the gymnasium which he had received from his architect in Boston. These he spread out upon the table for our inspection. When we had carefully examined them, he asked us to suggest the best method of bringing the subject before the public. After much discussion it was decided to call a meeting of the villagers for the purpose of hearing Judge Fairplay's proposal and of discussing the whole subject.

As I wended my way home to-night to my lonely room, I felt revived and cheered by the conversation of the evening; above all, by the clear vision which has dawned upon me of the creation here, in this secluded spot, of a unique and beneficent institution which may yet shed a light across the whole land. Aristotle, speaking of Crete, uttered the aphorism that "Insular positions are favorable to political experiments." So it seems to me, by an obvious analogy, that retired villages are favorable to educational experiments. I expect that Judge Fairplay's plan will be opposed by a few bigots of the Deacon Snipp persuasion; and, no doubt, it will encounter other difficulties of a more important kind. But Judge Fairplay is a man who never fails. This project is the child of his matured judgment, of his conscience and his heart. Opposition will but rouse the energies of his nature and secure the accomplishment of the very object it meant to defeat. To him, more than to any other man I have ever known, might be applied the latter part of that description which occurs in Foster's Essay on Decision of Character: "An irresolute mind might be quelled and subdued by a formidable kind of opposition; but the strong wind which blows out the taper augments a powerful fire, if there be fuel enough, to an indefinite extent."

[TO BE CONTINUED.]

WHEN, in a case of doubtful morality, you feel disposed to ask, "Is there any harm in doing this?" please answer it by asking yourself another, "Is there any harm in letting it alone?"

WHICH runs the faster, heat or cold? Heat, because you can catch cold.

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Women at Home.

BY REV. O. B. FROTHINGHAM.

The home-life of women has undergone great changes within little more than a generation. These changes have been effected by the invention of machinery and the application of steam to industry. Previous to the discoveries which have revolutionized labor, the home was the workshop, the manufactory, the mill, and the superintendents and operatives were the women of the household. The women spun the cotton, flax or wool, wove the cloth, cut and made the garments. The decorations of the parlor were from their hands. They were active in the kitchen, making puddings, pies and cakes. In families that afforded the luxury of servants, the women of the household did the finer part of the sewing, and with their own fingers supplied the cotton and linen apparel. This kept all hands busy from early morning. Each had her own allotted duty, and went about it as matter of course. In all descriptions of household work the daughters were instructed by the mother. The daughters of even the wealthiest houses took on themselves the manufacture of a hundred things which now are made by steam or machinery. All this has passed by, and now the busy mornings and afternoons are great blank spaces of idleness. The women have nothing to do that can not as well be done, and more cheaply, out of doors. Few ladies, comparatively, superintend their kitchens; few ladies are brought up to understand the practical arts of cooking. The shops furnish every article of wearing apparel and decoration; even embroidery is bought half done already, and slipper-patterns have merely to be filled in. Machinery still allows so much grace to the tradition that ladies may occupy themselves with fancy work. How much longer they will spare so much is doubtful. The women of the comfortable middle classes need do next to nothing, and will be required to do less and less. Now, the great flour-mills do the grinding, the vast ovens do the baking, the huge cotton-mills do the spinning and weaving, and numerous factories undertake to furnish the articles of luxury and elegance. Presently, mammoth restaurants will do the cooking, and private kitchens will become luxuries for the few; self-regulating appliances will do the sweeping and dusting; perfected sewing-machines will save even the most delicate fingers, and the last vestige of feminine labor will disappear from the homes.

The class of unoccupied women in families is every year becoming larger, and as it increases there is an increase of uneasiness, languor, nervousness and discontent. The minds of women prey upon themselves, become morbidly irritable, morose and sad. We know nothing more melancholy than the aimlessness and vacancy of young women and women of middle age, married women and maidens, in hundreds of homes where all the outward conditions of content appear to exist. The tediousness, weariness, flatness of life, that one meets with so continually, is due mainly to the fact that women's occupations have been taken away, and no others have been devised to supply the place of them. Multitudes of noble girls, with fine capacities, excellent aspirations, admirable purposes, get up in the morning simply because the sun does, and wear wearily through the day, killing the hours with idle occupations and frivolous talk, not because they relish it or are capable of nothing better, but because there is nothing better for them. They would gladly see a reason for their existence, and find an aim for it; but the reason does not appear, and the end is hid. Hence, dissipation of body and mind; hence, languor, dyspepsia and a crowd of ails; hence, lounging, novel-reading, prinking, visiting, gossiping; hence, wild erotic dreams, visionary speculations, ardent longings after the romantic and impossible, which are mistaken for spirituality, but which are the sickly exhalations from unused minds.

Cases like these present some of the most mournful tragedies of modern society. The case of such women is peculiarly hard. The poor women have every thing against them. Change in social habits has taken away their employments, and no change in social opinions allows them new ones. Parents, friends, acquaintances, the "world," all make objections if the girl proposes to strike out into a new path, and do something that will make her at all conspicuous. They are surprised, grieved, shocked, that girls in comfortable homes, provided with every thing they can desire, well brought up, too, should cherish such stubborn and foolish wishes. It must not be thought of a moment. Put it away. Mrs. Grundy will think you mad. You are young, inexperienced, flighty. In vain the young woman urges that times have changed since her father and mother were young; that new aspirations call for new openings; that new needs demand new endeavors; that the mere craving for something to do is a divine intimation, as it were, that something there is to be done, and is a divine summons to

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be about it. The parents do not see it. Friends do not see it. Public opinion does not see it, and the young woman is compelled either to burst through a line of breastworks to get out into health of body and mind, or else to succumb beneath the weight of her weariness. A selfish mother wants her daughter at her apron-string, and is alarmed if she has any notions that *she* had not in *her* girlhood. A selfish father wants his daughter to amuse him when he comes home tired, to work him slippers and chair-coverings and tidies, to jingle the pianoforte in his ear, to mend his gloves, or to dress up in the silk he sent home and look pretty. Parental fondness makes the girl a doll, a toy, and not infrequently a dainty drudge. The case is indeed a hard one, and it is not surprising that so many originally fine girls, being systematically deprived of aim and discouraged in motive, settle down into the flimsy, false, fashionable creatures they are. The fault can be laid to no one's private door. The malady is incident to the temporary phase through which society is passing. The elderly women are not responsible for it, for they inherit the notions and habits of a past generation, and are naturally unresponsive to the impulse that stirs their younger sisters. The younger sisters are not responsible for it, except in so far as they are unresisting or too feeble victims of social prejudice. To this if they succumb, who shall reproach them? Uneducated, untrained, unsupported, discountenanced, with nothing but wild wishes, perhaps, to oppose to instituted ideas, it would be a wonder if they did not. The average woman is inert. She readily acquiesces in the existing order. She loves ease and luxury. She welcomes idleness. A very few have courage to make way for themselves through a host of difficulties. But for every one of these there are many with just intellect, passion and conscience enough to make them restless—not enough to nerve them to particular action, and without will enough to impel them in the way of a career. Why should the task of such be made needlessly hard and disagreeable? Why should it be taken for granted, if they fail, that they are silly and self-indulgent? There surely is something wrong in social regulations which demand peculiar force and wisdom from any class, especially from a class like this.

And the question recurs: How shall this wrong be corrected? Even if women were content with their own condition, they who respect them deeply can not contentedly accept it for them. But women are not content. The protest against the actual state of things comes from all quarters and in earnest tones. It is a protest that must be listened to.

In this country, usefulness, and usefulness alone, vindicates itself in the long run. Women will not be happy at home, or in the best sense useful there, until home industry is restored to them—until, in a word, they are brought up in the conviction that they too have a place to fill and a part to play in life. They must be made to feel that they are educated for a purpose; that their education is to go on from girlhood into womanhood, as their brothers' goes on from boyhood into manhood; that they have before them a definite career, demanding definite preparation, instead of having beyond them nothing but uncertain contingencies that may be happy or may be unhappy, but which, whether happy or unhappy, have no connection with their years spent in school or beneath their father's roof. *A definite career for women*—begun in education and completed in work—nothing less than that, I submit, will meet the demands of women in our society. All aimlessness must be banished from the theory of woman's domestic existence, before it will disappear from the existence itself.

But here, as at every other point, we are met by the marriage difficulty. What! educate women for a continuing interest, a steady purpose, an on-going, coherent career, when, in all probability, they will cease to be their own mistresses by the time they are fairly women, and will, in nine cases out of ten, have to abandon all they have learned? Any girl may be married, and marriage puts a stop to all industries but those of the houshold, and to all interests but those of husband and children. For these industries no cultivation will serve; for these interests no preparation will be adequate. The husband's society educates the wife; the birth of children educates the mother. Marriage is but an incident in the man's life, but it effects a revolution in the woman's. Incidents do not alter the current of existence, but revolutions do, and so it will never be possible to educate and train girls for their future as steadily as we educate and train boys. The law of continuity of life does not hold.

But let us pause here and consider. While it is true that any woman may marry, it is not true that every woman will. Some are foreordained to single life from the foundation of the world, and know it. These predestined celibates bear the sign of their predestination about them, usually, in their persons, their expression, their manners, their dispositions.

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Either they never are attracted or they never attract. These devotees to virginity ought not to be sacrificed to the law of the majority. Women who may live maids till the day of their death, may depend on their own efforts for support, may be thrown on their own resources for comfort and happiness, may be so situated as to need as much knowledge, as much tact, as much trained skill in business as men, may be placed in positions where the best culture is requisite for success—it is not only foolish, it is cruel, to push them unprepared into a world of so much exposure and hazard.

If it be true, again, that any woman may be married, it is equally true that any woman may be unmarried. For every argument that can be urged against women's preparation for a career, on the ground that they may have husbands, an argument equally strong may be urged in favor of such preparation on the ground that they may not have. If there be a doubt on such a matter, education and training should have the benefit of it. It should be made to redound to the interest of woman's future, in this country so precarious. Let the education be what it will, it should be an education looking toward her usefulness. Be it music, or drawing, or languages, the sciences, the mathematics, book-keeping, or other clerkly occupation, there should be some specialty which she may follow if she chooses. Then, if she does not have a home, she will have a hobby, and a hobby is sometimes an admirable substitute for a home.

If it be still urged that the mere probability of marriage will be sufficient so to scatter women's brains that the requisite preparation will be unattainable, I reply at once that the mere possibility of marriage should make such preparation imperative. Can any thoughtful man or woman regard it otherwise? Why, think of it a moment! The prospect of entering into the state of marriage is a prospect of entering on a career more definite than any that a young man has before him; more vital in the interests represented; more momentous in the issues involved; more sublime in the qualities engaged; more characteristic, as taking up the elements of a sex; more influential, as affecting men and women for time and eternity. Regarding marriage as woman's lot, it is a lot that no possible amount of preparation will adequately meet, and that the smallest real preparation will do something toward anticipating. No preparation will be sufficient; no preparation will come amiss.

In contemplating marriage, should it be forgotten that marriage means the bearing of children, the formation of the future society? Can that be forgotten? But can it be remembered without suggesting thoughts that make the young man's prophecies of a career seem like dim abstractions? It may be a great thing to be a merchant, a financier, an inventor, an advocate, a judge, a scholar, writer, orator, statesman; but before these can exist there must be men; before these can be what they should be there must be healthy, disciplined men. There must be well-bred youths, carefully instructed and faithfully trained children, infants lying in deep, motherly bosoms, and sucking warm, motherly milk, and, more than that, inhaling a pure, womanly spirit. It may be a fine thing for a woman to have control of her property, to help in making the laws she lives under, to do her part in places of trust; but to be a good mother of men and women is the greatest thing in all the world.

And does nature, at the moment of immediate need, provide all that is necessary for the discharge of this great office? Let trade and politics, finance and commerce answer. Let fashionable life answer. Let private and social vice, let passion, frivolity, meanness, dishonesty and selfishness answer the question.

The woman shapes the race. Consider. For months before this embryo man sees the light it lives entirely by her life, is entirely at her mercy, is literally flesh of her flesh and blood of her blood, absorbing her very tempers, and imbibing into its substance the very elements of her feelings, the very aromas of her thoughts. For months after birth this future merchant, engineer, statesman, preacher, lies in her arms almost as dependent on her for every thing that enters into his being as when he was fashioning in the secret parts of her body. In her he lives and moves and has his being. The milk she gives carries with it the essences of her own character. The passive infant takes from her air and sunshine, and from day to day dilates under the subtle influences which she distils from her looks and her voice. Then come the years of opening childhood, and these, too, are spent chiefly in her society and under her care. These are the years of most rapid and eager reception. The little active creature literally absorbs power. He asks a thousand questions which must not be put off, but which omniscience alone can answer. Memory, perception, knowledge, tact, wit, wisdom, are all brought into requisition. No sage needs so full a mind as the mother needs. She must sing songs, recite poetry, tell stories, teach facts, convey

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practical information, stimulate curiosity and satisfy it, instill ideas, communicate truths—in a word, nurture this budding intellectual being with her sunlight and air and dew.

She must understand the rules of diet; she must have some clear notion of the laws of health; she must be prepared to anticipate and prevent sickness, to meet and cure it in its earliest stages, at least; she must be something of a doctor, a good deal of a hygienist, every thing of a nurse; she must know the properties of herbs and medicines; she must be acquainted with the art of cooking food and mixing drinks, of alleviating pain and stilling restlessness and inducing sleep.

Do these acquisitions come by instinct? Does the dancing-master teach them, or the drawing-master? the instructor in singing or the pianoforte? Does the hair-dresser put them into the brain, or the milliner? Does the French dressmaker impart them? Do they come to the young girl while she is dressing for the ball, or whirling through a waltz, or carrying on flirtations? Does she get them from Mrs. Stephens's novels or Mrs. Gore's? Are women preparing themselves for all this while they are cultivating the most ingenious and graceful methods of killing time?

There are very definite things which no one is the worse for knowing, but which every mother ought to know on peril of failure in her most momentous work. There is both general and special culture as pointedly and sharply called for as book-keeping is for a clerk, or mathematics for an engineer, or mechanics for an architect, or navigation for a sailor; and in the face of it all the theory prevails that *because* women may be married they must *not* be educated! Because they may be called to enter on the most important of careers, there is no reason why they should cultivate themselves! Because duties may be assigned them which no amount of competency can more than adequately discharge, they may be excused from all exertion to enrich their minds, cultivate their feelings or train their wills! It is impossible to exaggerate the absurdity of such a position. If it were not so sad it would be ludicrous. If it did not involve the life and health and happiness of men and women, of all who are born; if it did not implicate the organization of humanity, and so all human interests—industry, vitality, intelligence, virtue, progress in all arts and sciences, in all social conditions, we might smile at its absurdity. But smiling at it is out of the question. It is the bitterest delusion of our modern life. The melancholy truth is that the greater number of women are incompetent to fulfill this most sacred and momentous office of womanly existence, and leave it to be discharged by nature, or allow it to be undischarged. This one, owing to late hours and dissipation, tight lacings and thin shoes, confectionery and indolence, has no health. That one, never having been taught, has no economy. A third, through ignorance, is at the mercy of nurses and soothing syrups. A fourth has no *morals*, but begins by pampering evil tastes and encouraging lawlessness. Their children must be snatched from them in order to be saved from a willfulness that spoils character, or a fondness that makes character impossible.

Do I seem to speak bitterly? My answer is that I speak from observation. One trembles for the future of the Republic when he looks at girls. "Paradise," said Mahomet, "is at the feet of mothers." Is it at the feet of such as these?

But there is more to be said on this matter of the serious, systematic education of women for a career in life. The domestic condition of women who no longer have the care of children is far from satisfactory as a rule. There is still with them more mental vacancy than there should be. Something must take the place of that vast amount of business which once occupied the active matron's day, and which is now made over to servants and work-people. What is to be done with all this time? May it not be devoted to higher culture, or even to professional occupations? Does housekeeping take more hours than it did when housekeeping cares were more numerous than they are now, and there were fewer servants? Does society demand more time than it did when it was less systematized and reduced to hours than it is at present? Poor women work and take care of their families beside; can not women in comfortable domestic circumstances, with better appliances, better culture, more intelligence and more help, do as much? Some of the most distinguished names in art and literature are those of married women, with children to care for, too. Many teachers are married. Married women are physicians, lecturers, preachers. The wives of clergymen all over the country do an immense amount of work outside of their families, as distributors of charities, managers of benevolent institutions, visitors among the sick and the miserable. Some of them are authoresses—Mrs. Stowe, Mrs. Gaskell—I have never heard that they neglected their families, that their kitchen was unsupplied, their children unwashed or untaught, their husbands

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uncared for, their social duties omitted. Ministers' wives stand a poor chance. Parish gossip is busy with them; but I never have heard that their avocations were productive of unhappiness at home. The fact is, the more is undertaken the more is done, and the more is done the more can be done. None do so little as those who have nothing to do.

It is a favorite theory with some, that as people have more leisure they get more culture. But experience does not justify the theory. I believe that the eight-hour system would reduce the laborer's *morale*, instead of raising it. How does he use his holidays? His leisure, as a rule, is spent in the gin-shop, not in the reading-room, the library, or the gymnasium. If you take away one kind of work you must substitute another. The vice of men and women both is indolence. The women of the middle class have more leisure than their mothers and grandmothers; are they more studious, thoughtful, cultivated? I very much doubt it. Their home-life is easier; it is not richer, it is not so earnest. Our women read more, perhaps, but they read poorer books, and they read them in order to kill time. A great deal of what is called domestic life, under our modern *regime*, is little better than domestic lifelessness. Much of what is called home life may be not too harshly described as life spent in plans for getting entertainment away from home. Fashion comes in and occupies the place which industry occupied before. The dignity of home is impaired; the attractions of home are weakened; the discipline of home is broken down. In fact, the very institution of home seems now and then to be in danger of undermining. Hotel life and life in boarding-houses is becoming fearfully popular, because more easy and careless. The women who have no homes at all, no housekeeping, no servants, no kitchen, no nursery, no parlors, are the idlest of all. When they have reached this stage of emancipation, the next stage they aspire to is release from their children and accommodating arrangements with their husbands.

In his book entitled "New America," Hepworth Dixon has a chapter on "Young America" which is calculated to make us thoughtful. But there are things that he does not say, that nobody says, that nobody dares say in polite circles; things that, in polite circles especially, need saying, too, which, if said as they should be, and presently must be, would make earnest people look grave, and would put a heart of indignant feeling into every man and woman who would save society from dissolution.

Letters to Ladies.

BY MRS. R. B. GLEASON, M. D.

LADIES—Now there is a noble band of model housekeepers of which no mention has been made in these letters—those who give their life-energies to their work, cheerfully, just so long as they have the ability to endure it; those martyrs who never complain of much serving, so long as they can carry the cares which come from our modern style of living. I have seen many such prematurely worn thread-bare in body and spirit. A Western asylum for the insane has a long list of inmates brought thither by household cares—so says the record. Surely, there should be some way by which a family not pinched by poverty could eat, drink, dress and sleep without shattering the mind or body of the maternal head of the establishment. The introduction of foreign help and modern improvements into our dwellings seem so to have multiplied and mystified domestic duties, that women are more worn and worried than when they did their own work, spun, wove, made and mended for the whole family. I note that those who keep up a genteel residence, with maids for every department, from laundry to nursery, are always worn out with care. While those who try to maintain a similar style with less help are overtasked, physically and mentally. Now, somewhere between the palace and the shanty there must be a golden mean where wives and mothers can live, if not to threescore and ten, at least to thirty or forty years, without being broken down by domestic work and care. In quiet country homes, where women do their own work, I observe less complaint about being overdone; less nervous solicitude about household affairs; more good food, with much less of waste, than anywhere else. By this, I do not mean that every wife to be *well* should live without hired help. Every woman should do the duty that lies nearest her. It may be to lengthen her husband's slender income by the simplest of means; or it may be by giving homes to those who only can have one by going out to service. But whichever way, let her manner of life be such that she can sustain it, and also maintain her good cheer, which, in a mother, gives a genuine charm to any home, however humble. Our present modes of living call for too much cash from the husband and too much care from the wife. Every home needs the presence and influence of the father as well as the mother; which can never be had, if he has to give body and soul to money making, in order to keep up the home establishment. When the head of the

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house is held to business, so as to seldom have an hour at home beyond those for eating and sleeping, the wife droops for want of that companionship which drew her from her parental home to his. Beside this, children need, during their impressible years, both the masculine and feminine element to secure their most perfect development. Without the co-operation of the father in family discipline and general guidance, the burden rests too heavily on the mother. That wives may not be overtaxed, let them learn to live more simply; and that husbands may have the needed leisure for home duties, let them learn to live with less money. As the first step toward diminishing family expenses and domestic duties, let us have a *small house*. Very many women have I seen, who said they "were broken down by the care of a large house." In many private residences comfort and convenience are sacrificed to custom and fashion. The kitchen too small, the parlor too large. The one scantily furnished, the other elegantly. Rosewood and damask in the one, while the other is scant of tin basins and small ware for convenient cookery.

And so through the house is plenty of elegant furniture, purchased at great cost, requiring much care, and while there is great want of convenient arrangements which serve to lighten labor. H. W. Beecher defined a parlor as a place where all the grand furniture had moved in and all comfort had moved out. These shut-up places, used only for calls and company, seem to have a confined air, in which no one feels at home, not even the lady of the house. The *best room* is the one in which the whole family find the most comfort. There is an atmosphere of cheerly chat, which can be kept up more readily when friends from without come in than anywhere else.

Let me give you a sketch of one with which I am familiar. A family sitting-room fifteen feet in width by thirty in length, with a coal-grate at one end and a small wood-stove at the other; so that all the emergencies of our changeable climate can be met, in the way of a quick fire for an hour, or a steady one for the twenty-four, or both. The room is divided midway, and the ground-glass in the doors makes a charming twilight in one for conversation, while the lamp for reading is in the other. Each side of the chimney there is a cushioned box which serves as a seat—having wood in one, the family slippers in the other. Here boots and gaiters are exchanged for evening comfort. A small cupboard in the side of the chimney, contains tools for all manner of small repairs. A closet for children's toys, and another for coats and cloaks; a case for books, with shelves below for magazines; on the wall, amid the pictures, is a fancy case for letters and another for newspapers. Under the glass may be found a stand with a series of drawers—a deep one for family mittens and gloves, the smaller ones for each member to occupy with such articles as they please. In the back room a piano, secretary, a closed wash-stand with its many conveniences, a large cupboard in the hall for hats and shawls, with deep drawers below for the articles to be made or mended; also for all bits and ends needed for repairs. Within this room all the varied emergencies incident to an industrious circle can be met without a flight to some remote corner to wash a soiled finger, brush a stray lock, find a hook or a button, a spool of thread or a piece of cloth to meet any want. Here gather all the household, from the grandfather of more than fourscore years with white locks to the youngest brown-haired boy. The tired ones rest on a lounge or in easy chairs, while some one reads. Others mend or make, and the boy in the corner oils his boots or repairs his skates. During study hours the doors are closed; one goes to the piano, another to pen and paper at the secretary, a third to books; and so the family circle is not scattered, but the elder are still at hand to steady and instruct the younger, and to receive life and cheer in return.

There is no chapel scene so charming as the family gathering around the open fire; where the youngest may ask a question for the better understanding of the Bible reading before evening prayers. With Cuyler, we believe not only in the "moral and spiritual influence," but in the mental and physical benefit of an *open fire*. Around this all gather to warm their feet, cool their heads and settle their suppers by a hearty laugh over a few nice stories, and so are ready for a good sleep in a cold room.

But some one says this is more like a New England kitchen than a private parlor? We grant it, and that is just what we like. For those old-fashioned large rooms witness more work easily done, more things cheaply learned, combined with more good cheer, than any other apartments ever seen.

Good housekeeping seems to me to consist in making the most people comfortable with the least possible care. To this end never pen people up in private parlors to be entertained, and thus make the wife hurried and anxious lest her guests lack due attention; but give them the freedom of the family room, where each at their leisure can do their part toward making the

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visitor happy. No woman can so dispatch business, so multiply her gifts and graces, or entertain much company with ceremony, look after children properly, direct domestics, and not work and worry so as to wear out before her time. How can she look well to the ways of her household, even during long winter evenings, when the family are scattered to the four corners of a large house? The older daughters in the parlor receiving calls from gentlemen with whom the mother has not the pleasure, or perchance the pain, of an acquaintance. The younger who have not yet emerged from school into society are in their private rooms reading stories, when they should be studying history. The little ones are in the nursery, in charge of a servant, with whom the family silver would not even be intrusted. And the sons are—where? Rumor answers, Anywhere, but where they should be.

The Israelites did make brick without straw, difficult as it seemed; but how any mother can train her children without being with them, is more mysterious still. She must be where she can see what they are doing, without going to look after them. She must hear what they are saying, without trying to listen. Children are often poisoned in the nursery, by that which is more difficult to eradicate than even drugs.

Now what can we say to quiet those housekeepers who are more nice than wise? Those who wage such unceasing war against dirt and disorder that neither love nor money can give them rest. No, not even the best hired help can bring relief; for none are nice enough to meet their needs. Such must die before their time, for they are like the Scotchman who, on falling into the water, exclaimed, "I will be drowned, nobody shall help me." Such are submerged by care, and will be, because nobody can help them satisfactorily. Nerve and muscle are ever on the stretch lest a fly leave a speck on the window pane, or a spider festoon ever so finely some obscure corner.

A friend of mine was asked if she did not think Lucretia Mott the neatest housekeeper she ever saw. "No," she replied; "not the *neatest* but the *best*." When I spent a day with this queenly Quaker woman, I, too, thought her among the best; in that she was at ease herself, and made her family and friends feel so, too. There she sat in the corner by the open fire, in her pleasant parlor, with her mending-basket by her side. So she stitched while she talked of the country and its political prospects; looked after her little grand-daughter, who played beside her; reminded Isaac that it was time for him to take his bitters before dinner; and chatted with us all in a way that made us feel a family freedom—not a bit like a stiff parlor visit.

Now I like this distinction of my friend between the *neatest* and the *best* of housekeepers. Some are so neat as to be always uncomfortably anxious, and make those who would help them feel so, too; for they fear they shall fall short of their standard of neatness and order. With such, "Cleanliness is not only akin to Godliness," but the more important. Such are the Marthas, who are so cumbered that not even the Marys who have chosen the good part can understand and appreciate their responsibilities sufficiently to afford timely relief. The eternal vigilance which is the price of freedom is just what these pattern housekeepers pay for their position.

When the Disciples came back, after their first mission abroad, our dear Lord said to them: "Come ye yourselves apart into a desert place, and rest awhile." This sweet recognition by our Divine Teacher of our human needs should be a comfort to every earnest worker. For all such, along the way of life are little by-paths and nooks for rest, which should be to us what the desert place was to the early Disciples. But too often we are blinded by pride, hurried by an imperious will, and so rush on past these resting places, not seeing them, not believing there are any for us. To all who are in the "narrow" way, the good Father either gives the strength to work or opens a way for rest. It matters little which He plans for us, if we accept it aright. Let wives and mothers live so simply and listen so reverently, that from day to day they may know whether rest or work is their first duty.

ELMIRA, *May*, 1867.

HORSES AND SALT.—A traveler in Morocco writes thus: "We purchased of a tribe of Bedouins an Arab horse for our own use. As a matter of course, we made a great pet of him; and almost the first thing we offered him, as a condiment to his feed of barley and straw, was a handful of salt; but, to our surprise, he would not touch it, but turned up his aristocratic nose at it, as if he felt a big disgust at such an unsavory dose. On making further inquiry and experiment, we found that neither the Moors nor Arabs ever gave salt to their horses, cattle or sheep. And yet there are no horses in the world equal in beautiful vigor, in powers of endurance, elasticity of movement and robust constitution, to these same Arab horses."

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Normal School of the New Gymnastics.

My Dear Doctor—You ask me for a brief history of my "School of Physical Culture." I will say that after several years' invention and teaching in this department, I came to Boston to establish a Training School for Teachers in the New School of Physical Culture. An act of incorporation was obtained and the institution established during the summer of 1860.

The first class consisted of one pupil, Mr. Charles S. Royce of Ohio. The class of the following winter numbered about a dozen, and subsequent classes have continued to increase in number. The graduates now number about two hundred and sixty, two-thirds of them being ladies. They are scattered all over the country. Three or four are teaching in the Pacific States. One has taught with striking success in London, England, for several years. Every large city in the North has several, and almost every school of any considerable note in the Free States employs a graduate of this institution in the department of Physical Training.

The policy adopted in the beginning has been continued throughout. Classes have been instructed in physiology and hygiene, and thoroughly drilled in all departments of muscle culture. Constant additions have been made to the number of exercises in each series, and their order has from time to time been re-arranged. Many of the more ambitious graduates, who have returned from year to year to obtain the new exercises, have brought with them many important suggestions and improvements.

I may mention that the exercises with the dumb-bells have continued from the beginning to occupy a very prominent place, although I think those with the rings are more valuable as a means of harmonious muscle training.

The exercises with the wands have at length been made very numerous and complete, and are particularly valuable as a means of removing all rigidity about the shoulders and chest.

The exercises which I have named "mutual help" have been from year to year steadily growing in importance and interest, and now constitute a very interesting and valuable department.

The free gymnastics have become very numerous, and are always stimulating and fascinating, though as a means of muscle development they are inferior to the other series.

In all the papers I have written on the subject of the "New School of Gymnastics," I have refrained from making any claim to originality. I have thought that if the work was well done, it mattered little who had the honor of invention. But as recently much has been said on the subject, I will take the liberty to say here, that of the forty-six exercises with the dumb-bells more than forty were original with myself. Of the exercises with the rings, numbering about forty, all save a single one were invented by myself. And I may add that the idea of exercising with rings, and the piece of apparatus itself, were my own inventions.

Prof. Langdon devised a very remarkable and excellent series of exercises with the wands, and deserves all honor. Of the sixty-eight exercises with wands in the "New School," there are not more than eight or ten which are similar to his, and not one of them is identical. The entire series as practiced by myself is original.

Of the free gymnastics, a large proportion have been in use for many years, and many of the most valuable were invented by other persons.

In the department of "Mutual Help Exercises"—which are to play an important part in the future, and which are especially valuable in securing a harmonious development of the muscles of the arm and shoulder—the original suggestion was obtained from a German writer; but the series as employed in this institution is in its plan and practical application entirely new.

I have said this much by way of vindicating my own claims to originality, although there have been no doubts expressed on the part of writers in this department of education in regard to these claims. One voluminous writer, however, residing in your city, has omitted in his volume to recognize these claims.

The "New School of Gymnastics" has inaugurated a new era in physical training. Heretofore gymnastics have been confined almost exclusively to young men. Now both sexes have engaged in the good work, until to-day this nation is more generally interested in physical training than any other nation on earth; and I doubt not that Americans will within a generation show a very general and pronounced physical improvement. We have a great work to accomplish. The subjugation of a vast continent demands strength and energy; we were in great danger of failing in our destiny for lack of these vital elements. A revolution has now been fairly inaugurated, which promises to fit us for the triumphant accomplishment of the great task which, in God's providence, rests upon the American people.

DIO LEWIS.

Boston, Mass., *May*, 1867.

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The Future.

BY GEORGE W. BUNGAY.

"Speak out, dim Future, speak to me
As shells speak to the sighing sea;"
And then I bowed my eager ear
And hushed my heart, that I might hear.
The tones were sad, and soft, and low,
As the soft whispers of the snow,
And fell upon my heart as flakes
Fall on the palpitating lakes.

A chill crept through my trembling frame
And turned to ice my blood of flame;
Like moonlight on a marble vase
The smile was on the Future's face.
And then came cold words, clear and slow,
As though a statue spoke in snow;
And this is what it said to me,
As shells speak to the sighing sea:

"In vain you bow the eager ear;
The Future will not let you hear
The story of your coming fate;
Be strong to toil, have faith to wait."
And this is all those lips revealed,
I looked, and lo! the mouth was sealed.
The Future would not speak to me
As shells speak to the sighing sea.

To the fair Present, then, I said:
"Light with thy lamps the path I tread;
Give me true courage in the fight,
To hate the wrong and love the right;
To battle bravely for the weak,
To speak for those who can not speak;
To live and toil for others' weal,
And heal the wounds that man can heal."

The Present pointed to the skies,
The clock which counts the centuries,
And said that time is flying fast
Between the Future and the Past.
There are no moments for delay;
To-morrow comes, and yesterday
Has fled; now is the precious time
To crown a life with deeds sublime.

THE London Lancet says: "It is certain that many ladies carry about with them in their chignons the seeds of ringworm, an intractable malady." It also states that much of the hair used for chignons is "churchyard hair," pulled from the scalps of the dead. It may seem paradoxical, but it is a fact, that while some aver that the rage for chignons is going down, the fashion seems to be "going up."

The Human Body a Temple of the Holy Ghost.

BY REV. HENRY WARD BEECHER.

MEN'S opinions and enthusiasms have ever been vibrating between two extreme schools—the *physicists* and the *spiritualists*. One age worships the mind, and seems to disesteem the body as if it were an antagonist of the mind, and, by reaction from a gross way of living, comes to despise the body, frequently, and to traduce it. Then comes another age, which, rebounding from this, as if to make up an injustice, takes sides with the body, and so urges physical development and praises physical manhood so that one would think that *athlete* and *Christian* were equivalent terms.

The Word of God covers the whole ground. It takes sides with the body, and it takes sides with the mind. It mediates between them and harmonizes them. In spiritual excellence it transcends Plato and all that ever wrote. In bodily vigor, there is nothing in literature that puts so high an estimate upon the body as does the Word of God. The Bible makes the human body a distinct object of instruction, and our duties to it are included in the circle of Christian duties. For instance, this is the language of the Apostle Paul:

"And I pray God your whole spirit and soul and body be preserved blameless unto the coming of our Lord Jesus Christ."

Here is the classification that obtained at that time, by which the man was divided into a body, an intellect-mind, and a spiritual or soul-mind. And all of them, and each of them, comes under the apostle's desire.

Again we read:

"That she may be holy both in body and in spirit."

Here the classification is more general, as distinguishing between the mind and its encasement, and contemplating the welfare of both.

In Philippians it is said:

"That Christ shall be magnified in my body, whether it be by life or by death."

And then, again, we read:

"Know ye not that your body is the temple of the Holy Ghost." "Therefore, glorify God in your body and in your spirit, which are God's."

There are certain phrases which may seem to despise the body, as in Philippians, where it is said that Christ "shall change these vile bod

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ies." But the context will show that Christ speaks not of the body in its normal state, but as it has been abused and desecrated by the passions and appetites of men, and contrasts it with that condition to which it will attain in its future state as a spiritual body. It is of the body abused that he speaks as vile.

In the Christian scheme the human body, rightly trained and held, is an instrument of moral ends; and in this preliminary human life the body is the indispensable means of developing, educating and perfecting the soul itself. The whole scheme of life involves the need of bodily excellence. The body is usually regarded as an instrument of pleasure and amusement; but this is its least and lowest estate. For, though it be curious, and wonderful, and worthy both of study and of admiration; though much of pleasure is bound up in the human body, healthily kept and rightly and virtuously used; yet, this mere transient pleasure-producing power is the least and lowest consideration.

As an economic agent, too, the body is worthy of study. For we are not to forget that human society stands on physical development, and that this physical development proceeds wholly from right uses of the human body. It underlies all enterprise. It stands as the cause of all production. It is that which executes. That it is which enables the soul to embody its conceptions in physical forms. And by as much, and just as far, as men change its nature, so that it becomes the symbol of higher uses than it originally has, it in some sense may be said to become intelligent. We may conceive a day to come when men shall have so worked their thoughts into laws and matter, when they shall have so cast physical things into new forms in which they give evidence almost of thought and feeling, that the whole globe may be said to be born a second time, and to possess the qualities of human genius. And the body is the instrument by which all this is to be brought about.

While not overlooking these things, the New Testament brings out the distinctive spiritual uses of the body—the holiness of the body because of its high spiritual relations and instrumentalities. It is the temple of God. And no one word could ever mean so much to the Greek mind as that word *temple*. A temple is a thing of mere archæological interest to us. Temples are dumb. They are dead. Their uses are remembered, not felt. As a matter of historical investigation we love to research them. But there was a time when *temple* epitomized, to all who heard that name, whatever was most select, finest, noblest, richest, truest, justest and best.

Antiquity built temples with lavish beauty. These temples absorbed every thing from society, and represented in themselves what by distribution in our day is found in the household, in museums and in courts. In the palmiest days of art in Greece, beauty was not permissible to the household in the shape of sculpture, architecture or painting. In other words, these things were sacred. When the Acropolis was at its height, the beauty of Athens was not in its dwellings. There was scarcely a house that would satisfy a laborer now. Its streets were unpaved and absolutely filthy. Its streams were unbridged. All domestic life was low and mean. Templar life had sucked up in itself what we now have distributed through streets and in dwellings and mansions. We have now made society rich all the way down to the bottom. Then men had not learned to do that. Society was not rich, and the household was not; but the temple was. Houses were mean, but the temples were gorgeous. No marble was too fine, or too far brought, or too expensive; no designs were too magnificent; no skill was too minute; no genius was too affluent to be expended on that which represented the glory of the State—its temple. The highest art developed itself there.

These temples, also, were national treasuries. In them were deposited, frequently, not only the public money, but the wealth of individuals. It was not thought to be safe in private hands, it was not thought to be quite safe to bury it, and there were no banks where it could be kept; and temples were the safest places, because not only were they under constant watch, but there was a certain sort of sanctity about them in the minds of men. So that the temples became, according to the popular idea, the richest places in the State.

Here, also, almost alone, pictures were to be found. Here the finest sculptures were to be found. Here were to be found statues of their gods and goddesses, which were almost countless in number, and some of which were so transcendent in beauty that it was thought to be a misfortune to die without seeing them. It was the custom, when one had served well the State, to vote him a statue, and this was deposited in the temple. And thus one by one all the eminent names of the State became treasured up in these temples. They became museums and galleries of art. Whatever was beautiful, and rich, and gorgeous, and glorious, the temple had. It was the custom, also, for men to show

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their devotion to the State by donating their statues to these temples; and so that which patriotism began, pride and vanity continued.

The temple was, beyond and beside all this, the point and center of devotion, the place of worship. Here was the altar; here were the sacrifices; here were the robed priests; hither came and thither went long processions, such as modern times scarcely know. Here day by day rose the sweet-scented offerings. Here the incense was burned. All the feelings were struck through and charmed by the myriad associations that clustered about this place.

Now consider what, to a Greek, must have been the significance of the figure, when the apostle said to him, "Know ye not that your body is a temple of the Holy Ghost?" We do not think any thing of it; for to us the temple is three thousand miles off. It is a heap of shattered marble lying desolate on some distant promontory. When this was spoken to the Greek, he thought of the temple as it stood in its beauteous form, full of treasure and vitality and sacredness. It epitomized to him what was most august, and richest, and noblest. There was no word that compassed so much to a Greek as that one word *temple*. And when the apostle said to Greeks, "Your bodies are temples," he put more emphasis upon the human body than he could have done by the use of any other word. By the use of no other word could he have inspired his hearers with such a sense of its dignity and value.

Now, is there any such estimate of the human body as this among us? Do we regard it from a religious stand-point? Are we not for the most part physical? Are we not in a low and ignoble sense materialists? We think of our bodies in purely physiological relations. We scarcely dignify them by regarding them, as the apostle did, as temples of the Holy Ghost.

Let us look at some physical conditions from this spiritual view.

In the first place, a poor, unhealthy body is either like a temple poorly built, badly furnished and unsightly, or else it is like a temple rent and shaken down by the elements or by some ravage of war. A body in perfect health and vigor is like a fair and beautiful temple, white as marble, pure as the altar, and every part fit and ready for worship.

Far be it from me to say that all sickness is disgraceful; because much of it is honorable. They that have made a living sacrifice of their body to love or patriotism have offered up the noblest thing that one can well offer. As there is mutilation that is more symmetrical in beauty than the full form; as now in our streets there are many men whom we almost envy because they limp; as there is many an empty sleeve that fires the heart as no perfect man could; so there are those that have been broken down in the service of love and the cause of humanity, for whom we feel reverence and whom we honor. But they that are prematurely old by an unnecessary waste of life; they that by neglect, by defilement of passions, and by indulgence have unroofed this temple, and broken its fair cornices, and shattered its beautiful statues, and cast down its pillars, have indeed degraded the temple of God. But while we are not to blame indiscriminately all that are sick, it may be said, as a general truth, that sickness is an indication of sin, either in one's own self or in his parents. And the question might be put: "Did this man sin himself, or his parents, that he is weak and miserable?" Sickness is a sign of disobedience and sin, and good health is a sign of obedience and virtue, in this large sense.

In the next place, bodily grace, beauty, health, is, after all, the most beautiful thing about a man. The fairest face, the finest feature that ever was, in an unhealthy body, is not handsome; and the rudest and most uncouth specimen of humanity, rounded up in a bundle of health, is very beautiful. There is something fine and admirable in a high condition of health.

Bodily graces, beauty and physical accomplishments have hitherto been given over to vanity and self-seeking; but they are worthy of larger uses. There is a reason in beauty, and there is a use in beauty. There is a reason in grace, and there are uses in grace. There are reasons why our children should become accomplished. There are reasons why they should take on graces. There are reasons why they should be essentially manly, graceful and skillful. There are reasons why they should so bear their body that whoever beholds it shall admire. There are reasons why it should make an impression on men's eyes by what it is in form, and by what it is in carriage. I hold on Christian grounds that God has given us a body as an instrument of grace and beauty, and say that it is only held religiously when we feel, "This is God's temple, and I am bound to make it beautiful. This is that in which the Holy Ghost dwells, and I am bound to make it pure and noble."

MEANNESS EXTREME.—A Russian miser is noticed as having learned to bark, to save the expense of keeping a watch-dog.

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Basis of Therapeutic Effects.

BY GEORGE H. TAYLOR, M. D.

It is very well understood that all function in the body depends on the incessant interplay of activities pertaining to elemental substance. Growth, repair, waste and disease, all hang by this fact. Upon the innumerable varieties of this elemental action depend all the degrees of dynamic manifestation, pain and pleasure, of which the body is capable. Good health and bad have their origin here; acts of obedience or disobedience to hygienic laws are recorded here; here is the arena for the display of the physician's skill; and here is the judgment-seat, to which all disputes of rival medical theories are ultimately referred and secretly decided.

Hence, it would appear that remedial means are such, because in various direct and indirect ways they excite, modify or support these primary actions. Now, the supporting or elementary *nutritive* action is impossible without, in the long run, preliminary reducing action. Repair is necessitated by waste, and can not take place in the absence of waste. I have previously shown that oxygen is the normal agency in effecting this waste or removal, and that the product of change by oxygen is always palpably increased by every treatment that is remedial. The *ultimate* result of remedial treatment, even of diverse kinds, is, hence, in this respect, somewhat similar. But ordinary medication produces other and, often, in the long run very undesirable effects. A drug acts, not by virtue of its friendliness, but by its antagonism to vitality, and, of course, must, in the end, cause a diminution of vital power, and permanent impairment of the capacity of the vital instruments. Indeed, the knowledge of this fact usually guides the selection of remedial agencies. Nothing but food, air and motion can be said to coincide completely and directly with the vital wants.

Recovery often takes place by a very indirect and circuitous method, so that when the complexion clears and the eyes brighten with returning health, the real agencies that have been instrumental in accomplishing the result are quite lost sight of, and praise is bestowed where it is utterly undeserved.

Since, then, from the necessity of the case, recoveries can never take place but in *one way*—namely, by adjusting the actions of waste and repair in the system and in its several parts to each other, the question presents itself, whether this object may be secured by methods more direct, certain and safe, than by those currently practiced.

Many years have been expended and much sacrifice made by the writer in pursuance of this investigation. A sketch of some of the points subjected to scrutiny will here be made:

Electrolysis, or the decomposing agency of electricity, was tried, with the idea of rendering the nascent oxygen yielded from various sources available in the bodily fluids, locally and generally. Many facts were elicited confirmatory of the principles herein advocated; but the means were of difficult adjustment to the ends. But a greater objection to this means was that, like all medication, it discouraged the idea in the invalid of the superior utility and availability of hygiene.

Then the various methods—now curiously enough revived with a good deal of trumpeting—of *decreasing* and *increasing* the normal atmospheric pressure upon the body or its parts were experimented with. Here still more distinct and uniform as well as intelligible results were obtained. This is, of course, experimenting with the very thing that we want to learn the use of. Respiration is simply bringing fresh air in contact with successive portions of the fluids of the body, capable, with every opportunity, of taking up its oxygen. If we withdraw atmospheric pressure from a limited portion of the body, gaseous bodies, soluble in the bodily fluids, by a law of physics well known to every student, will travel in that direction, of course, supplying conditions for increased absorption. While the alkaline nature of the fluids facilitates such solution, yet it is not possible in the absence of pressure; and it will readily be seen that a diminution of pressure at one point is equivalent to its increase at other points.

Experiments with *increased atmospheric pressure* upon the whole of the body yielded very unequivocal results. The *Compressed Air-Bath*, it may surprise some of the present patrons of this means of cure to learn, was first employed systematically many years ago by Fabarie, at Montpelier, France. The effect of this bath (which subjects the body to an increase of pressure of five pounds and upward to the square inch) may be described in brief to consist in *supplementing deficient respiration*. It diminishes the pulsations in those whose diseases are characterized by rapidity, and it increases to a notable extent the products of elimination. Nothing could more completely confirm the positions taken in this and my preceding article than the effect of these experiments. Thus it is that em-

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piricism and science work hand in hand in developing the means for improving the condition of humanity.

There are many considerations that seem to conjoin in the suggestion of the remedial effects of *vibritile motion*. The demonstration by current philosophy of the vibritile character of those great forces of nature with which we are best acquainted, may not be without effect in support of this suggestion. The incessant atomic and molecular activity of which the living body furnishes the arena, would seem very naturally to imply the need for some reinforcement of motion from without, when the usual and spontaneous motion becomes defective, the condition which ever occurs in disease. Indeed, the ruder peoples, the world over, have always, with apparent instinct, carried this idea forward into effective practice—a practice which has served as a more or less complete substitute for the more elaborate, but not certainly more efficacious, practice of civilized people.

What is *vibritile motion* as applied to the body? A man who travels with the earth the twenty-five thousand miles that its surface moves in one revolution is not regarded, on that account, as having received motion. He must change his place in respect to a specific point. Within the body the most real motion is when the particles of matter, seeking each other, are brought in contact and thus enabled to fulfill their destiny. There must be something like successive acts of collision, impact or attrition. This occurs in all parts of the body in health, under the stimulus of the reflex agency of the will. The same thing is secured in the invalid, to an eminent degree, by means of regular and rapid changes in the direction of motion supplied from without. In this case, as the will is not engaged, there is no expense of vitality. This is economized, husbanded. Those changes, to which all constituents of the body are progressively tending, are by this means consummated. These effects must, in general, be in the direction of health, because no new element or foreign material is introduced to conflict with the organic or natural tendencies. These tendencies are aided, while their direction is not changed but maintained.

Vibritile motions may be applied to any part of the body, sufficiently for experimental purposes, by the hand of an operator, as, before remarked, has ever been practiced among ruder peoples. Their peculiar effects in dissipating congestion, quieting pain, restoring real warmth and energy, can be tested quite satisfactorily in this way. But the hands of an operator can hardly exceed in rapidity one or two hundred strokes per minute, and the labor is peculiarly and excessively exhaustive at that. But the patient is gratified in proportion to rapidity and lightness of the strokes or pressure, and the best effects are those produced at the rate of twelve hundred to two thousand changes or vibrations per minute. This rate of delivery, of course, requires mechanical contrivances to perform. By such means, while there is no expenditure of the vital force of an operator, the purely mechanical cause, vibritile motion, is converted progressively into chemical, vito-chemical and vital results, to support and reinforce the faltering powers of the organism.

Without reference to methodical classification, the effect observed to be produced by and following the application of vibration may be stated as follows:

The blood contained in capillaries is urged forward. If capillary walls are distended, and the vessels filled with a sluggish current, changed in quality, as usual in disease, the obstructions are cleared away and the vessels contracted to normal caliber, the fresher current entering. Thus congestion of every form is removed.

Venous absorption is increased, as the flow in the vessels draw into them the interstitial fluids. Swellings, whether dropsical or otherwise, together with local soreness, is removed. The physical act, called osmosis, whereby fluids, both nutritive and waste, are transferred from membrane to membrane, is secured by this motion supplied from without. This principle is brought to bear for the relief of a great variety of diseased conditions, and is a necessary concomitant of all healthy nutrition in the body.

This bringing of elemental matter into mutual contact, as before described, results in a greatly increased elimination from the body of the products of oxidation. This is the root of the matter. The bodily fluids are silently but surely purged of their non-vital constituents, in whatever intermediate condition these may exist. The skin is moistened, the urine cleared and increased, the furred tongue cleaned, and buoyancy of spirits and strength of body return.

These applications are always made to circumscribed regions, in such a way as to oppose the reigning diseased tendencies. In chronic disorders, some regions of the body retain more than their due share of blood, causing corresponding deficiencies in others. This class of applications are so managed as to counteract this condition. While nutritive action and the

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flow of the circulation is increased in the skin and extremities, the caliber of the central vessels is diminished, and so the equilibrium is secured.

The effect of this class of applications is, perhaps, most marked in the nervous system. In no other way has the excited and irregular manifestation of the nervous power been subjected to such complete and permanent control. This I conceive to be because nutrition is employed by this means in parts remote from the nervous centers, the latter being left in a quiescent state. This effect, alone, would render vibrations of untold value, superseding the use of the whole of the formidable list of sedatives in chronic affections.

Temperance and its Champions.

BY GEORGE W. BUNGAY.

TEMPERANCE is not the occasional use of intoxicating drinks; it is not what is commonly called "moderation." It is, in the language of the dictionaries, the proper use of things that are good, and the total abstinence from things that are bad. Corrosive sublimate is a rank poison, and the temperate use of it as a beverage is impossible. Alcohol is an acrid poison, and it can not be used as a common drink, without a breach of the physical laws, and the violation of the principles of temperance. All fermented and distilled liquors have alcohol, hence they can not be used without infringing on the law of temperance. He who drinks a little alcohol becomes a little poisoned; or, if you prefer the other word, a little intoxicated. The more he drinks, the more poisoned, or the more intoxicated, he becomes. Some persons take alcoholic poisons every day, and several times a day. Some indulge the use of these poisons so excessively that they lose the control of their tongues and their feet. They can not speak correctly, they can not walk in a direct line. Alcohol is a brain poison and affects the mind as well as the body—poisoning the thoughts as well as the blood of those who drink it. Alcohol is a poison which can not be changed into a harmless beverage by changing its name. Whatever alias it may assume it is the same evil spirit. You may call it Cordial, it is poison; you may call it Medicine, it is poison; you may call it Bitters, it is poison; you may call it "refreshing drink," it is poison; you may call it Rum, Gin, Brandy, Whisky, Wine, Beer, or Lager, it is poison. It does not become harmless by being mixed with water or other liquids. You may dilute it, you may change its color, you may disguise its taste, you may give it another odor, you may mix it with your food, but you can not change it into an "innocent" or harmless liquid. Nature disowns it. It can not be found in any living substance. The grape and the grain must die and pass through the process of vinous fermentation before this evil ghost can rise from the ruins of Nature. When it is received in the mouth of the child, whose taste is unperverted, it is rejected with unpleasant contortions of face. The saliva flows from its wells to wash it out of the mouth. When it gets into the stomach, the digestive apparatus rebels; it is indigestible and mixes with the blood, so that one may bleed a drunkard, and separate the alcohol from his blood. The fact that alcohol mixes with the blood explains the cause of spontaneous combustion. A large number of men and women, more or less distinguished, have protested against the use of alcohol. The evils of intemperance excited the pity and the alarm of benevolent men and women, and the emotion kindled in their hearts became an idea in their heads; and finally an institution for the suppression of a habit which long ago towered into a colossal vice, filling the receptacles of want and crime. The feelings of the heart became a thought in the head, and the thought of the head was reduced to a deed, resulting in the Temperance Reform, which now numbers millions of supporters. About half a century ago the first Temperance Society was formed in this country, hence, the Temperance movement, which is now agitating the world, is of American origin. Among its ablest champions we find the names of men who are illustrious in literature, in science, in law, in theology, in war, in politics, etc.

Dr. Lyman Beecher, the Ajax of the cause, was one of its foremost champions, and his six sermons on the great reform have never been surpassed by the most brilliant efforts of those who followed him. He was upward of eighty at the time of his death, and his long life was an argument in defense of the principles he defended with such great power and eloquence. Dr. Nott of Union College was more than ninety years of age at the time of his death. His Scripture argument in defense of total abstinence, was scattered like the leaves of autumn over this continent. It is not possible to estimate the value of his labor in creating a healthy public sentiment on the question of Temperance.

John Hawkins was a "Washingtonian," a live soul from the spirit land, and the truths he uttered echo even now, though he "sleeps the sleep which knows no waking." I will not attempt the task of writing out the starry list of

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the noble men who were the pioneers of this great reform; my object in writing is to notice very briefly a few of the most prominent living advocates of the cause, the "cause of all mankind." John B. Gough is the most popular and eloquent speaker on the Temperance platform. There he is—king—and no rival can take his throne. His literary lectures suffer in contrast with his wonderful argument and humor and pathos; illustrated with fact and anecdote and presented in a style which is inimitable on the teetotal platform. The masses are drawn to him as steel-dust is drawn to the magnet when he speaks on the thread-bare and hackneyed theme of Temperance. Mr. Gough is in the front rank of public speakers, and there is no man, who can command such vast audiences so many nights in succession as he can; there is no man, whose services are in greater demand and whose compensation for lecturing is greater than his. The announcement of his name will fill the largest halls and churches at any season of the year, in any condition of the weather. He now has an offer of $60,000 for a single years' work in the city of London, England. The Temperance Reform found Mr. Gough poor and poisoned by the use of rum. It cast out the evil spirit, and he became one of the most potent advocates of total abstinence. In this country and in Europe he was greeted with immense audiences embracing persons of every phase of society. His pilgrimage became a march of triumph, and his notoriety grew into popularity and fame. For many years after he had indorsed the pledge he continued to be the victim of the tobacco-pipe; but he finally gained the mastery of the habit of smoking, and now, at the age of fifty, he is able to speak night after night and travel day after day to meet his appointments and maintain his position as a lyceum lecturer. Mr. Gough is an actor, a story-teller, a natural speaker, an electric orator, and he exhausts more vital energy in a two-hour's speech, than a ditch-digger or a wood-chopper would exhaust in a day; yet his temperate habits enable him to keep up the supply of strength he needs, so that the demands made upon him are seldom dishonored by sickness. He is wise enough to recuperate—by wooing sleep to his rescue—and one good night's rest is usually sufficient to repair the damage done to the system by his great effort in public.

Is there a victim of alcohol who can do as much work as he can? Is there one who can do it as well? Is it true that an orator needs the inspiration of wine to bring out his best points and his most brilliant work? Did Mr. Gough accomplish any thing worthy of note while he was violating the physical laws by the use of intoxicating drinks? Did "Jersey-lightning" do as much for him as human lightning does?

Gen. Cary is a man of brains and culture, and of considerable fortune. He drank moderately and had not much sacrifice to make when he signed the pledge. He was a volunteer in "the cause," and became its advocate because he wished to make the world the better for his living in it, and because he liked the mental exercise and the excitement of public speech. The same amount of labor devoted to politics would have sent him to Congress, or placed him in the Senate, or in the gubernatorial chair; but it would not have accomplished one tithe the amount of good, nor have given him a more radiant record on the list of fame. He is about the age of Mr. Gough, perhaps a few years his junior. Like him, he can endure an amount of work which would prostrate a man who seeks stimulation at the lips of the bottle.

Gen. Cary is a politician, as well as a Temperance orator, and he has shown the world that a man can leave the restraints of home, mingle in the society of those who drink rum, and say "No," with emphasis, when he is invited to drink. He travels extensively, and is constantly in contact with classes of men who think they can not be cheerful, and sociable, and hospitable, without the conviviality of the wine cup.

The drinking usage, so long interwoven with custom and fashion, is a spider's web in which many human flies are caught and slaughtered. When a prominent man has the courage to refuse "to walk into the parlor" and be taken in the meshes which have been braided for him, we chronicle the fact because we are proud of the example. When the Temperance men and women can make the sale of intoxicating drinks odious and unprofitable and unfashionable, victory over the vice of drunkenness will be near at hand. When distinguished men like Senator Wilson give their influence on the side of absolute abstinence from intoxicating liquors, they help to lift others to the highest peerage of the best society. Senator Wilson has been a practical Temperance man for a score of years, and his precept and example like the contripetal and the centrifugal forces, have been the team which has whirled him on starry wheels along the path of honor. He takes the seat once occupied by the great statesman Daniel Webster, but he does not take the unnatural stimulus which sometimes made that "wise man mad." Wilson was a shoemaker, and he exchanged the shoe

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branch for a seat in the Senate of the United States, an honor difficult to attain in the fastidious State of Massachusetts; an honor more difficult to hold, term after term, in times of revolution and political disasters, when parties are shattered by cannon balls and constitutions are written in fire with the point of the bayonet. Had Senator Wilson won the unenviable reputation of being a *fast* man—a lover of wine, or had he shown himself to the public in a state of inebriety, unable to stand erect in Fanueil Hall for instance, leaning upon the desk to "maintain the center of gravity," and uttering words that fall sprawling in "muddy obscurity" from lips redolent of rum, rendering it necessary for a prompter and an interpreter to sculpture his speech into symmetry for the public ear and the public press, he would have been pelted from his high office with the indignant ballots of his constituents. Without the brain or the culture of Webster, who was a giant and whose colossal mind lit up a face of kingly majesty, he has been a more truthful representative of the Old Bay State than was his illustrious predecessor. This work he has done in the face of the most adverse events, and the most unpromising surroundings. The aristocracy of the State opposed him, the literati laughed at him, the vulgar were jealous of him. In the front of snobs and pretenders he fought his way into distinction, doing honor to the seat of the great statesman and the great State he represented. His speeches were sound, his votes had a conscience and his labors were evidence of untiring industry. Senator Wilson is a true Temperance man and Chairman of the Congressional Temperance Society. At a recent meeting in the city of Washington, Senator Yates, who had been a victim of the drinking customs so common in political life, arose and made a most eloquent speech against the tyranny and cruelty of the drinking usages. There is the ring of the pure gold of eloquence in his words. He seems to be a strong man who has broken his chains and escaped from the tyrant. There was not a dry eye in the vast audience that listened to his stirring speech. He is considered a great acquisition to the cause, and millions of men and women and children at the West and at the East are praying that his good resolutions may be kept inviolate. He has the brain, heart, soul, inspiration, speech and purpose of the true orator. If he can keep his pledge in the city of Washington, he may take courage; for he will find fewer temptations to drink in the country. The State of Illinois is taking rapid steps in the path of reform, he will find many of his friends going the way he has chosen, and his wife, of whom he speaks so tenderly and lovingly, will be an angel to lead him unharmed through the fiery furnace of temptation.

Henry Ward Beecher claims to be a Son of Temperance because his father was a Father of Temperance. He is the Shakspeare of the American pulpit, and his sermons and speeches abound with arguments in behalf of Temperance. To the credit of the American pulpit be it spoken, our clergymen of all denominations, with rare exceptions, are among the most devoted advocates of the disuse of intoxicating beverages.

In a recent speech Mr. Beecher said that if he had "enough bread, mutton and water, he was equal to any task that he could perform." "Alongside" of the most famous preachers I will place the most noted editor, Mr. Horace Greeley. The Editor of The Tribune is now, and has been for many years, an out-speaking non-compromising Temperance man. The friends of Temperance point with pride to such men as E. C. Delavan and W. E. Dodge, men of great wealth and high social status, who have been faithful supporters of the abstinence pledge for a quarter of a century, giving their money and their influence to keep up the enterprise. The men at the head of the organization of the "Sons," and of the "Templars," and of the State and National Temperance Societies, are men whose word is a bond and whose influence is power.

THE LAWYER AND THE WITNESS.—A well-known Yankee criminal lawyer, who prides himself upon his skill in cross-examining a witness, had an odd-looking genius upon whom to operate. The witness was a shoemaker. "You say, sir, that the prisoner is a thief?" "Yes, sir; 'cause why, she confessed it." "And you also swear that she bound shoes for you subsequent to the confession?" "I do, sir." "Then" —giving a sagacious look at the court—"we are to understand that you employ dishonest people to work for you, even after their rascalities are known?" "Of course; how else could I get assistance from a lawyer!"

A COUNTRY fellow went to see his intended wife, and for a long time could think of nothing to say. At last, a great snow falling, he took occasion to tell her that his father's sheep would all be deprived of food. "Well," said she, taking him by the hand, "I'll keep one of them!"

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The Physiological Anatomy, Physiology and Pathology of Man.

BY RUFUS KING BROWNE, M. D.,

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Number III.

In the preceding parts of this series we have described the minute primary forms designated "units of organization," each of which has a particular shape, anatomically *dis*-continuous from its fellows.

We have specified that, though these have a *common* origin or parentage, the changes which are to succeed, to constitute the building up or formation of tissues, commence by division, partition or break in the parent mass or masses. Hence, from one unitary little mass numerous more masses form. We also specified that the *sum* of these masses collectively, in any given quantity of them, is much greater in size than the single parent mass. In its progeny, therefore, *during* the increase of numbers, there is an increase in *size*, which the whole together have equally undergone. This process, therefore, is not one of merely anatomical division, but of growth; or, in other words, each fraction into which the mass is dividing equally grows. Thus, if the parent mass simply enlarged, it continued an undivided unit. If it simply divided, without enlarging, there would be two or more fractions, together identical in size to the mass before division; but if, in the proceeding to divide, there is a process of growth, each of what would have been, without that growth, fractional parts, becomes the equal in size of the parent mass.

The parent mass has discontinued its *singular* form, and survives in a plurality of masses, with increase of quantity by growth. The anatomical singularity and minuteness which characterized the first mass has now changed into the plurality and size of the several masses.

From this statement of the facts of life we see the earliest and simplest example of a physiological *process*, which, in a more complex form, becomes a physiological *function*. In this example the process is two-fold. In it no mass or substance is obliterated or ended, no cessation has occurred, but merely a modification or transformation of the individual and unitary anatomical *character* and shape of the one into several masses, in each of which equally it survives together with the increments of growth. The uniform mass has become multiform, or a number of masses, and their subsequent growth is but a continuation, for each one of many masses, of the process described.

Now this process, we said, was of a two-fold character—anatomical and physiological; but it must be understood that in the phenomena of life they are a fusion, and the discrimination or distinction we make in speaking of the process as two-fold is purely mental, and hence does not physiologically exist as two separate or distinct phenomena in the matter itself and its changes.

We have now to understand that, on its physiological side, this process varies between wide extremes. In some cases the growth is so limited while division proceeds that the several masses are scarcely greater in size than the parent mass of which they are the divided form; in other cases, their sum greatly exceeds in size that of the parent mass. This variation depends upon varying conditions and substances near or continuous to them, or which may influence them; and to these matters and their composition, in a physical and chemical aspect, we must now turn our attention, before proceeding to describe the process of *building* up the tissues. This apparent break in our progress is really indispensable in order to enable us to understand the character of the *substances*, which in themselves have no anatomical form, with which these little masses have to deal, and which afford the conditions of their growth.

SOLIDS AND LIQUIDS.

The solid textures and their several components contain only about one-fourth of solid matter. It exists in the greatest proportion in the hard tissues. The *perfectly dry* mummy of a large man is of very trifling weight. All the tissues, in great part, consist of water. It forms four-fifths of the nutrient liquor of the completed organism—viz., the blood. Germinal matter is itself semi-fluid, but from its earliest to its latest stage it may pass through all gradations of consistency and density. The very active movements of the portions of which it consists could not take place unless every portion of the living mass contained, or in great part consisted of, such fluid. Water will hold, in a flowing state, many organic and inorganic matters, and will convey them by its flow, enabling the anatomical elements to appropriate them. What it thus conveys is their *pabulum*, from which they derive the substance they hold for their growth. This process is called "nutri-

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tive." It consists in their fixing other particles of matter which come within their bounds in organic union or cohesion with them. But in this process, if the supply be too great, these elements may undergo a change from their previous anatomical identity by complete or partial liquefaction.

Water, moreover, dissolves various gases. Oxygen is thus carried in solution to various parts of the body. Oxygen, thus carried, may act upon certain anatomical elements and change their character. So far as water permeates the elements of structure, it exists in its ordinary state; but although it may be obtained from every one of these elements of structure, it is not proved nor fully understood that it exists as a part of them in its ordinary state, but probably under a form which is to them analogous to what it forms in crystallization.

COMPOSITION OF TEXTURES.

The solid textures and the soluble substances held in solution in the fluids of the body consist of two classes of compounds, spoken of as *organic* and *inorganic*.

Organic compounds are composed of certain of the non-metallic elements, and principally of oxygen, hydrogen, nitrogen and carbon. These elements, in the living body, are combined so as to form complex but unstable compounds, and under certain conditions—as with more or less water combining with them, or by the influence of oxygen—may be chemically divided into much simpler substances.

The *organic* compounds which enter so largely into the composition of the various solids and liquids of living beings differ from one another in composition and properties. Many have been classed by chemists in certain artificial groups, but it has not been found possible to place more than a few in a *naturally* connected chemical series.

The analogous substances in different animals exhibit equal differences of properties and composition. No definite relation has been found to exist between the "chemical" composition, form, structure and properties of organic any more than inorganic bodies.

Inorganic bodies may be resolved by ultimate "analysis" into oxygen, hydrogen, nitrogen, carbon, and about fifty other substances, which chemists regard as simples, because they appear to consist of one kind of matter only. These elements, naturally united in certain definite proportions, form the compound inorganic substances.

Organized bodies are capable of being resolved, by ultimate "analysis," into inorganic simple elements; but the list of simple substances which may be obtained from this source are about twenty.

Of the four widely-spread elements—oxygen, hydrogen, nitrogen and carbon—two, at least, will be found in every organic compound, and hence these four may be regarded as the commanding or essential elements of organic bodies.

There are no living or germinal masses of matter taking part in the formation of the tissues of animals which does not yield oxygen, hydrogen, nitrogen and carbon; but of the exact relation these elements bear to each other, or the precise character of their function, chemical analysis tells us nothing. The germinal masses of all living beings, animal or vegetable, contain nitrogen, and the broad difference between the formative and functional changes in these two appears to be, that in the former a large proportion of the nitrogen entering into the composition of the germinal matter enters into combination with other elements in the resulting formed substance, while in the latter, as a rule, the nitrogen, although necessary to the formative process, does not enter into combination.

PROXIMATE PRINCIPLES.

From many animal and vegetable tissues, and from their fluids, may be obtained a class of substances which have been grouped together under the head of *proximate principles* or organizable substances, because they are specially concerned in nutrition. These form the most important constituents of the food of man and higher animals. Gluten, starch, lignine, are examples from the vegetable kingdom; albumen, fibrine, caseine, from the animal ones.

For example: from the organised structure, called muscle, we obtain first fibrine—a proximate principle, its chief constituent; and, again, by the analysis of fibrine we obtain the simple elements—oxygen, hydrogen, carbon, nitrogen and sulphur.

Certain saline or inorganic substances form constant and very important constituents of the animal body; and although formative changes may continue to proceed in the absence of these it is certain that the tissues could neither be produced or nourished without them.

Chloride of sodium is one of the most important of these. It is always present in large proportions in the early forms of tissues, and is intimately concerned in some of the active changes taking place in the germinal matter itself. Wherever formative processes or growing is

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taking place in organisms, chloride of sodium is always present.

The saline constituents consist principally of chlorides, but a small quantity of alkaline and earthy phosphates are present. It renders the albuminous pabulum less viscid, more diffusible, and hence capable of being appropriated by the growing masses of matter; for wherever there is a rapid progress of germinal increase, chloride of sodium is found in considerable proportion.

From every kind of formative material a substance which coagulates naturally, and another which coagulates by heat and nitric acid, may be obtained.

The first is fibrine and the second albumen.

All kinds of germinal or formative matter or masses also yield fatty matter. This matter is nearly the same in character in both vegetable and animal tissues.

Little is known, even chemically, concerning the exact character of the fatty matter developed at the earliest period of embryonic life, but the compound substance known as *myelin* is present very early. The oil globules, seen in formative masses of germinal matter at an early period of development, consist of this peculiar fatty matter.

We have now recognized the substances with which, beside the germinal masses, we have to deal, in our subsequent proceeding of following the anatomical work of forming or building up the tissues and organs. These are the substances which, throughout the earliest condition of the germinal masses of every living organism, the latter are in intimate association with. These latter may be said to perform their work *among* these substances, which everywhere infiltrate between these latter and cohere to them on every side, presenting them a supply of compound pabulum. There is no fraction of any portion of those germinal masses, from center to outside, where the fluid part of these substances, more or less rich in saline and albuminous or fatty material, does not present itself. They have their physiological shape taken by a perfect adaptation to every most minute anatomical form. In their least viscid form, these substances form an unbroken or undivided continuity from within to without, and are the anatomical elements in their earliest stage.* As the anatomical elements build themselves into tissues and organs, they both incorporate and employ these substances in structural conjunction, so close as to constitute an exact organic coalition. This conjunction is far more intimate than that of water, with the sides of a vessel holding it, for they take part in every process of formation by those elements, being wholly inseparable therefrom.

Although these anatomical masses have no physical pores, they are permeable in different degrees and at different stages to those substances, and physiologically move, live and have their being in them.

How Gas Consumers may be Cheated.—The question is often raised as to whether there is fraud in the manufacture of gas. It is probable that there may be a great difference in quality, and it is possible that companies understand how to make cheap gas. It seems that the people of Liverpool were troubled with the same mystery in connection with their gas bills which has puzzled our people. Finally, with the view of solving the difficulty, the following question was submitted to the editor of Musgrave's Chemistry: "Is it possible, by manufacturing inferior gas, to compel the meter to register against the consumer?" The editor replied: "It is no matter what kind of gas, insoluble in water, is made—the registration is the same; but if atmospheric air was passed into the mains and entered the meter in company with coal gas, it would tell against the consumer, and the light would be deteriorated."

Experiments made at the gas works in Liverpool justified the statement. If no more than one-tenth of common air is introduced into the gas-holder charged with gas, the meter will register ten per cent. or more against the consumer, and have no visible effect upon the light.

The mode of detecting the presence of air in coal gas is by collecting a portion of the gas over mercury, then by passing up a few drops of caustic potassia, and afterward a drop or two of a solution of pyrogallic acid. If the liquid assumes a blood-red hue, oxygen, indicating the presence of atmospheric air, is mixed with the gas.—*Anon.*

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*I attach the utmost importance to a correct understanding of this point.

Experiment.—Take as much loose, dry cotton as you dare press into a small tumbler or wine-glass, and lay it by itself. Carefully cleanse and dry a glass and fill it heaping full of alcohol. Now very carefully add, in successive quantities, the cotton to the fluid, and the whole may be put in the same glass without causing a single drop of the alcohol to overflow. This experiment illustrates, by a striking analogy, how much of the entire volume of a given mass of tissue in an organism is fluid.

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Revelations of a Retired Physician.

BY THEODORE THORNTON, M. D.

IV.

"BREAD PILLS."

Among the office patients of my venerable preceptor, during my first year's study, was a man suffering from sore eyes.

I was so deeply interested in the questions which he put to the patient, and the prescription he gave, that the case made a profound impression on me, while serving as one of the most valuable professional lessons I have ever learned. The questions and answers ran about thus:

"Where do you live?"

"On —— street, sir," naming a thoroughfare running north and south.

"On which side of the street?"

"The west side, sir."

"Is your bedroom on the east side of the house?"

"Yes, sir."

"Are there any shutters to the windows?"

"No, sir."

"Any inside blinds or shades?"

"There are some paper shades, I believe, sir; but they're always rolled up."

"You're a boarder, I suppose?"

"Yes, sir."

"How long have you been sleeping in that way?"

"About a month, sir."

"Do you sleep after sunrise?"

"Always, sir; because the nature of my business requires me to keep late hours."

"Do you drink intoxicating liquors?"

"Some, sir."

"Do you use tobacco?"

"Yes, sir—I chew and smoke both, *moderately*."

"Of course; for I never heard any other answer from any body about his own unnatural habits."

"Do you drink coffee?"

"Yes, sir; at breakfast and supper."

"Go home," prescribed the doctor, "and see that your window-shades are drawn down and one of the windows opened a few inches every night before you retire, and in the morning, before you leave your room, hoist the window; leave off the use of rum and tobacco and coffee; and take the pills which my student will bring to you with the directions. Having followed my directions strictly for two weeks, you can call again, and I will see what—if any thing—is further needed to cure your eyes."

So soon as the patient was gone, the doctor proceeded to explain the causes and nature of his ailment.

He said: "Mr. Thornton, that is a case of what the books call opthalmia. It belongs to what should be classed as symptomatic diseases. The stupid exposure of his eyes to the glare of the light of both the sun and the moon is the proximate or exciting cause of his ailment. But this implies that there was a more remote cause. It was, doubtless, the use of rum, tobacco and coffee. These agents have congested his liver and general portal system, and Nature has just set up an *issue* on his eyes, because they are the weakest part of his body by reason of his negligence as to the light. But he really needs no medicine, Mr. Thornton."

"How so, sir," I ventured to inquire, "when you promised to send me with some pills to him?"

"I know I have promised to send him pills," replied my preceptor, "but not medicine."

"That sounds like 'a distinction without a difference,'" I again ventured to suggest; "are not pills medicine?"

"You will soon see," he replied. "Now go to Dinah, the cook, and tell her to send me a piece of fresh bread about as large as your thumb."

I did as I was requested, and speedily returned with the bread.

"I will now let you into a little secret," smilingly said the old doctor, as he quietly took it and broke it into two parts, handing one of them back to me, and pinching small bits of the other and rolling them into pills as he talked on. "There are some samples of 'bread pills' for you, Mr. Thornton, which you can imitate this afternoon at your leisure, and take the result to the opthalmic patient to-night. And now," continued the doctor, "I will explain my reasons for prescribing pills of some sort."

"Had I told him, as I have done, how to remove the remote and proximate causes of his disease and prescribed nothing, he would have set me down as 'no doctor at all,' and treated my hygienic prescription with contempt. Therefore it became necessary to *promise* him 'medicine' of some kind, and these bread pills will be as medicine to him."

"But is not that deception, doctor?" I again ventured to inquire.

"Certainly it is; and you will find it necessary, when you go into practice, to employ more or less of deception!"

"But I would explain the relation of cause and effect, and so teach my patients to do with-

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out medicine, where medicine, as I understand you to say is the case with this patient, is not really called for."

"Then you would teach them, my young friend, to do without *you*, also—and so Othello's occupation would be gone! In fact, it is a bad plan to be everlastingly explaining diseases. It rarely leaves the patient any wiser than we find him, but it is very apt to make him *conceit* that he knows all about his case, and he reasons that, as you can not possibly be as well acquainted with his constitution and habits, after all, as he himself is, that he can apply the knowledge which he now possesses equally with you, more successfully than its imparter. What is the inevitable consequence? Why this: that you have lost your standing and your patient both, as the reward of your disinterestedness! I hope, Mr. Thornton," he concluded this lesson in medical ethics, "you now understand why I have prescribed the bread pills in this case, as you will probably find me doing in some other cases before your studentship is ended."

I replied that I saw clearly enough his motive for pursuing that course, and that it did not become me to dispute his better judgment—better because formed in the light of a long experience; but that, still, it struck me as lacking that element of frankness which I, as a member of the Church, had been taught to think requirable of all men, whatever their pursuits.

Seeing that I had crowded his rule of ethics into a very close corner by my reference to the Church—he happening to be one of the officers of the Church to which we both belonged, and therefore "a bright and shining light" in the eyes of the younger members—he replied, with great adroitness, "Why, do you forget that the great Apostle to the Gentiles, himself, told the church at Corinth, in one of his letters to them, 'I am made *all things to all men*, that I might, *by all means*, save *some*?' If this be a correct rule of conduct in regard to saving the souls of men—one which even Paul followed—can it be a sinful one as to saving their bodies? Certainly not; and in the phrase 'all means,' bread pills are surely included!"

I was now cornered in turn, and came to the conclusion that what the doctors of divinity, as well as the doctors of medicine, concurred in must be right. "Beside," thought I, "have I not selected the old doctor, to whom I am listening, as my teacher, and is it not my duty to confide in him?"

So I reasoned with myself—that is, with my natural consciousness, as I now see the matter, and stilled its voice—stilled it for almost a lifetime, as my own practice has since evidenced.

Is this to be wondered at? Or is it surprising that, with thousands of medical practitioners "turned out" every year from schools that inculcate such ethical doctrines as the above, the masses are kept in such woeful ignorance of the laws of life as they are?

But I have left a little story unfinished, and I must tell the reader the result of the bread-pill treatment.

Well, I prepared the bread pills and delivered them according to arrangement with the patient, and along with them the most exact and emphatic directions to take "one in the morning, the first thing on rising, and another at night, the last thing when retiring," as the old doctor charged me to do; "for," said he, "a great deal depends on his faith in the *medicine*, the hygienic part of the prescription—the negative or letting-alone part, if you please—not being appreciated by him!"

At the appointed time "our opthalmic patient," as my preceptor spoke of him to my satisfaction, called to report progress. I was lucky enough to be on hand when he did so.

The moment he entered the office, as he did smiling, I was utterly surprised at the change. His eyes were nearly well already.

"Doctor," said he, with evident depth of emotion, "I have reason to be a thousand times obliged to you. Your pills acted like a charm, and my eyes, as you see, are nearly well! Every time I took a pill, which I did before I washed my face and 'bathed my eyes in cold water,' as the young doctor charged me to do, I could feel it going right straight to my eyes! I had heard tell of medicine 'going to the spot,' but I never realized the fact before."

The old doctor gave me a side look which had a volume of meaning in it. It had a suppressed laugh in it, too; and I confess that I had to retreat into the back office to hide the unrepressed play of my risible muscles at the absurd idea of bread pills going right to the spot!

I was, however, instantly brought to a successful effort at self-control, which long practice had made so facile to my venerable preceptor, by his requesting me to prepare some more of those "opthalmic pills for Mr. ——."

The order was speedily executed, and the second box of bread pills was handed to the patient, with directions to take them as before, and to do as he had been doing, in order to give the pills a fair chance, as the doctor expressed it; for, in answer to inquiries, we learned that he had complied with all the health-restor

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ing conditions as to ventilating and shading his room, and omitting the use of rum, tobacco and coffee, as originally prescribed, and on which his cure depended, as I hardly need assure readers so well indoctrinated in hygienic laws as those of THE HERALD OF HEALTH have been by its faithful Editor and his collaborators.

I have only to add to the lesson of the bread pills, that therein we have a most striking example of "What Men Do to Make Money," not included in Mr. Beecher's all-too-truthful catalogue. Nor will it be far otherwise, even with Christian physicians—as Christianity is too commonly taught and practiced—until we have truer and more accessible medical schools, and the rules of Hygiene more generally taught, not only to medical students, but to the common people as well.

[TO BE CONTINUED.]

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

IF the directions given in the last article have been followed, there must now be new witnesses who will affirm that such exercises *do* strengthen both voice and lungs. How invigorating to go into the open air, and use the organs of speech as there directed! Though it costs trouble, yet how it repays that trouble in every fiber of the system!

Force may be applied in various ways—that is, it may be applied to entire sentences, to words or to syllables. In applying it to syllables, it may be applied at the commencement, in the middle or at the conclusion of the syllable; or it may be applied at the commencement and at the conclusion of the same syllable; or from the commencement to the conclusion of a syllable.

The application of Force to syllables or to single sounds is called "*Stress*." The application of Force at the commencement of a sound is called Radical or Initial Stress; in the Middle, Median Stress; at the conclusion, Vanishing or Final Stress; at the beginning and at the conclusion, Compound Stress; and from the commencement to the close, Thorough Stress. Either of the above forms of Stress may be accompanied by a tremor of the voice, produced by joy, grief, anger, etc., or by feebleness, to which the name of Intermittent Stress is given.

Radical Stress is used in expressing strong, manly passion, and generally, though not always, in giving command. It is the governing Stress in argument and in earnest narrative. It is more or less abrupt, as circumstances demand. To give this form of Stress with ease and accuracy often requires much patient practice.

To produce the Radical Stress, the lungs should be filled as directed in the first article of this series. Having thus filled them, let the breath be barred up in the throat as it is just before we cough, and then enunciate with the abruptness of a cough.

To study this occlusion or barring up of the breath, take the word "Awe," and, having filled the lungs, utter the word with a coughing vocal utterance. Do not do this with force enough to irritate the throat, but do it mildly and deliberately, and watch the movement of the muscles of the throat with great care. Again, do the same with a whispered cough.

Having thus studied the positions of the organs of the throat, fill the lungs; deliberately place the organs of the throat, for the occlusion of the breath, nearly in the position they were held when preparing for the coughing utterance of the word "Awe;" and then, with an abrupt action of all the organs of speech, speak the word, with explosive force on the first part of the sound—for there is but one sound in the word—and a gradual diminishing of the force, until the sound dies upon the ear. Take the word "Owe" and practice upon it in the same manner. Now take the word "Eye" and do the same with that. Then practice upon all the full and stopped vocals, remembering that the stopped or short vocals have no vanish, that they are stopped almost as abruptly as they are commenced.

Read the following sentence:

"*Rouse!* ye *Romans; rouse!* ye *slaves*,"

giving the Radical Stress to the vocals in the words printed in *italics*.

Read that sentence by the vocals, as directed in previous articles, giving the Radical Stress to them.

Practice upon the following sentence in the same way:

"Fret till your proud heart breaks."

Take other sentences and practice upon them in the same manner.

It will be noticed that the Radical Stress is placed on the Unobstructed Vocals; and, for that reason, it is more easy to place that stress on words or syllables that commence with those sounds than upon words that commence with Obstructed Vocals or with Aspirates; but practice will enable us to place it on syllables, how-

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ever they may commence; and the learner is urged to be content with nothing short of complete success.

The Median Stress very nearly corresponds to the Swell in music. It is used for the expression of grand or sublime thoughts.

To master this stress, practice upon all the Full Vocals thus: Having filled the lungs as before, commence the utterance of any one of them in a soft voice, gradually increase the force until the middle of the sound is reached, and then as gradually diminish the force until the close of the sound. The Stopped Vocals do not admit of the Median Stress in this utterance.

Now we should take examples for reading. They may be found in abundance in the Psalms of David, and, in fact, all through the Bible.

David's Lamentation over Saul and Jonathan affords a very fine example, as: "How are the mighty fallen! Saul and Jonathan were lovely and pleasant in their lives," etc.

From the Book of Psalms: "Oh! sing unto the Lord a new song, for he hath done marvelous things," etc.

The poets give us examples without number. Bryant's Forest Hymn may be referred to:

"Father, thy hand
Hath reared these venerable columns; thou
Didst weave these verdant roofs," etc.

Practice upon Median Stress until it is your own, and then read the following passage and similar passages as we often hear them read from the pulpit and in the family, with the Radical Stress, and then as they should be, with the Median Stress upon most of the emphatic words, and note the difference in the effect:

"Woe unto thee, Chorazin! Woe unto thee, Bethsaida! for, if the mighty works that are done in thee had been done in Tyre and Sidon, they would have repented long ago in sackcloth and ashes."

The subject of "Stress" will be continued in the next article.

A POOR toper, as a last resort for more drink, took his Bible to pawn for liquor, but the landlady refused to take it. "Well," said he, "if she won't take my word or God's Word, it's time to give it up." And he went and signed the pledge and kept it faithfully.

A DANCER once said to Socrates: "You can not stand on one leg so long as I can." "True," replied the philosopher, "but a goose can."

How to Bathe—No. V.

BY H. P. MILLER, M. D.

THE advocates of water treatment are considered by many to be people of "one idea," from the fact that they treat all the various forms of disease with water and its concomitants—air, light, diet, exercise, etc.

But those who use this title in connection with Hygienists do not realize the fact that water, in the variety of ways in which it is applied, is made to arouse action in the system, analogous to the action produced by the administration of almost every drug in the *materia medica*, and without any of the deleterious consequences which always follow, to a greater or less extent, the use of these drugs.

Nearly all the different medicines used in the treatment of disease are classified by medical authors according to the effects they produce on the system. A certain class of remedies are said to act upon the stomach and cause vomiting; these are called Emetics. Another class "acts" upon the bowels, producing a discharge of their contents; these are called Cathartics. Those which "act" upon the kidneys, causing a free flow of urine, are called Diuretics; those which induce perspiration are called Diaphoretics, and thus we might go on with the different classes of medicines, such as tonics, stimulants, sudorifics, alteratives, astringents, anthelmintics, emmenagogues, cologogues, sedatives, etc. etc.—each being said to have a peculiar affinity for some organ, and each producing a different effect upon the system. It has been supposed that these different agents *act* upon the system in some unaccountable manner, so as to produce different effects; but recent investigations prove that the action is in the living tissues, and by means of medicines this action is either increased or diminished, or is often even entirely suspended.

The medicines called Emetics are so obnoxious to the stomach that all its powers are put forth to rid itself of the offending substance. Cathartics do not so arouse the action of the stomach, but when they come in contact with the delicate lining of the intestines, fluid in large quantities is thrown out to dilute and wash away the poisonous material which must be ejected, and the result is purging or diarrhea. And so with other medicines, each seems peculiarly obnoxious to some particular organ; or rather one organ has the faculty of getting rid of certain substances more readily and more effectually than any other; and by a mistaken idea it has been considered that these medicines have a special affinity for the very organs which work the

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hardest to get rid of them. Notwithstanding the system is aroused to action in these various ways, and takes such method to rid itself of the injurious effects of vitiating substances, yet a certain portion must of necessity be taken into the circulation, poisoning the blood and often doing great injury to different parts of the living economy, subsequently producing diseases far more to be dreaded than those which the medicine was intended to *cure*.

Now, the skillful Hygienic physician can, by a proper and judicious use of water and other Hygienic agents, produce nearly all the results sought for in the use of medicines without the injurious effects so liable to follow in their wake.

Water may be so given as to produce vomiting, purging, diaphoresis, etc.; it may be made a tonic, a stimulant, a sedative, an alterative, in short, by means of it we produce in the system all the various phenomena resulting from the use of drugs; but as water enters largely into the composition of the body, however much may be absorbed no ill effects follow, as in the use of poisons.

In the different forms of bath described in previous numbers, many of these effects have been spoken of; but probably the application that is most effectual as a sedative and alterative is

THE WET-SHEET PACK.

Dr. John Bell says, "It is a stimulant, a depurative, a resolutive, a digestive, an opiate," etc.

It is one of the most powerful, most useful, but most abused of all the Hydropathic appliances. Among those who know but little of the principles and practice of water treatment the wet-sheet pack is almost universally dreaded, and yet, as soon as people get a smattering of ideas with regard to the system, this bath is generally more or less abused.

It is resorted to for the cure of diseases to which it is not at all applicable; and it is often administered to those whose temperaments or conditions are totally unfitted to receive it.

But, let us inquire, what are the diseases and conditions to which the pack is applicable. Dr. Edward Johnson says, "The wet-sheet pack has certainly the power of depurating the blood. Of this we have the unquestionable evidence of ocular demonstration. It is a powerful anodyne and antispasmodic, as well as depurative. It allays excitement, soothes the nerves, and lowers the pulse.

Dr. Gully says, "By it the nerves proceeding from the brain and spinal cord to the skin, which are so morbidly sensitive in all chronic diseases, are relieved for the time from the irritation of the air, and placed in the mild atmosphere of warm vapor. Instead, therefore, of irritations proceeding from the nerves of the skin to the brain, this last is quieted by the temporary withdrawal of all irritation; so much so that the patient ordinarily sleeps while packed, and will sleep then when he is unable to sleep without it."

The facility with which irritation is allayed by means of the pack is one of the most important facts in relation to Water-cure. "When properly modified to meet the actual state of the patient, it may be said to be the most soothing application that can be administered to the external sentient surface"

One important result of the wet-sheet pack is to produce augmented and healthy secretions from mucous membranes, particularly the digestive.

Dr. Shew said the wet-sheet pack was "one of the most soothing and agreeable of all Water-cure appliances," and I may add, of all remedial measures known to man. It is so delightful and tends so much to slumber that patients seldom feel ready to come out of it. There are however exceptions to this, for some patients have such a horror of being deprived of the means of helping themselves, that however much their physical condition may indicate a necessity for this treatment, there is so strong a contra-indication in the mental, that it is unwise to resort to it; in such cases we have sometimes packed the patient, allowing one arm to remain free, thus doing away with that feeling of being bound which to some is so unpleasant.

Dr. Shew says, "The wet-sheet pack draws morbific matters out of the body, as any one can see who applies it for a short time only, and then washes the sheet; observe what an odor arises from it when a diseased, tobacconized, narcotized, pork-eating patient has been packed."

Many curious phenomena occur in some patients by the frequent use of the pack. Sometimes the entire surface will assume a beautiful rosy hue; this will continue for a week or two, then cease, and again return after a few weeks.

In some cases, the sheet when removed from the patient is found to be glutinous. In my own practice, I have frequently known the pulse of a patient suffering from fever to be reduced twenty or thirty beats to the minute, and the headache and heat of skin almost entirely removed, by lying for an hour in the wet sheet. I have also seen distinctly the fetid matter upon sheets in which a patient had been packed, and the odor arising from them was such as to make

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it exceedingly unpleasant to remain in the room. By means of the pack, mercury, and other poisons, taken into the system years before and retained in the tissues of the body, have been worked out of their hiding places and thrown into the circulation sufficient to cause severe salivation. Sulphur has also been eliminated from the system so as to blacken silver in the pockets, and fill the whole room with the odor.

The *mode of action* by which these poisons are eliminated from the system by the wet pack is in accordance with the laws of endosmosis and exosmosis discovered by Dutrochet, and proved, beyond a doubt, by Liebig and others.

A frequent repetition of the pack not only removes morbific agents from the system, but has a tendency to establish a strong determination of blood to the surface, thus relieving the congestion of internal organs; in short, the wet-sheet pack tends to purify the blood, and cleanse the skin and internal organs; it removes heat of surface, reduces inflammation, soothes and quiets the nerves, promotes sleep, equalizes the circulation, and improves the health generally.

PACKING PROCESS.

To administer the pack successfully there is need of one sheet, one thick woolen blanket, and one or two comfortables; or several blankets in place of the comfortables will do as well. The comfortables are spread upon a bed or lounge, the blanket spread over them, and the sheet, having been wrung from tepid, cool, or cold water, is placed upon the blanket; the patient having removed his clothing lies extended upon the sheet in such a way that the upper edge of it shall come fully up to the ears. The patient then lifts his arms, and one side of the sheet is drawn over the body, letting it come under the arms, tucking it snugly under the opposite side of the body; the arms are then dropped down by the sides, and the other half of the sheet, being drawn over so as to enfold the arms, is brought down as tight as the comfort of the patient will admit, and tucked well under the other side—it should be folded closely around the neck and feet; one side of the blanket should then be brought over and tucked under in the same way; then the opposite side; and after this the remaining comfortables or blankets should have the two sides alternately brought over and tucked in in a similar manner.

The part of the process from the time the bather lies upon the sheet till he is well wrapped in the first blanket, should be performed as quickly as possible, so as to prevent chilliness.

In order to have the packing done properly about the neck, it is well to take hold of the upper corner of the blankets and comfortables with one hand, and draw them down over the shoulder, lengthwise of the body; place the other hand upon the shoulder over which it is drawn, to hold it in place while the corner is folded back under the chin and tucked under the opposite shoulder; do the same with the opposite side, and if it is done with each blanket and comfortable, the neck will be so well covered that the air can not well get in at this point.

At the feet, too, the blankets should be long enough so that the lower end can be folded back around the bottoms of the feet and tucked under, so as completely to exclude the cold air.

The head should be elevated so as to be comfortable, and a wet cloth placed upon the forehead; a hot jug or brick should be placed at the feet if they are inclined to be cold. It may be necessary in some cases to place hot bottles at the sides, or other parts of the body, in order to have the patient become sufficiently warm.

The temperature of the water from which the sheet is wrung should depend entirely upon the condition of the patient. If there is a good degree of vital force, a better reaction will be secured in a cold pack than in a tepid or warm one; but many persons have so little animal heat that they will not easily react if the sheet is applied cold.

The length of time a person should remain in a pack also depends very much upon circumstances, and should vary from ten minutes to two hours or more.

It is thought by some, that a person should always remain until perspiration is established; this is not essential, yet it is a favorable indication if they perspire readily. It is quite essential, however, that the patient should get thoroughly warm, and if he is inclined to be chilly a cup of hot water should be given to drink, which may be repeated at short intervals; hot bottles or bricks placed around him, and perhaps more clothing may be necessary.

If the patient lies comfortable and quiet in the pack, it will do no harm to remain from one to two hours, but if the head aches, or he becomes nervous and irritable, he should be taken out and put in a tepid or warm bath.

The full bath, half bath, rubbing-sheet or sponge bath, should be used immediately after the pack.

In cases of high fever or severe inflammation the pack may be repeated four, five, or six times in the twenty-four hours; the sufferer remaining in only till thoroughly warm, then being taken out, bathed, and soon put back again.

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General Topics of the Month.



NEW YORK, JUNE, 1867.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ The Publishers *do not hold themselves as indorsing every article which may appear in* The Herald. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* The Herald of Health and Journal of Physical Culture.

BY M. L. HOLBROOK, M. D.

Close of a Year.—With this number closes the first year of The Herald of Health under its new editorial management. In passing to another volume, we have only to return our hearty thanks to those who have stood by us in our labors, who have aided us by extending our subscription list, or who have added to the interest of our pages by furnishing valuable articles. We may also say that during the year our subscription list has constantly increased, and we are now adding to our circulation at a much more rapid rate than at any former period. The efforts which were made in certain quarters to injure us have proved abortive, and people everywhere are congratulating us on the excellence of our magazine. We are going on in the path marked out, determined to make The Herald a monthly which shall carry healing on its wings, and that shall be warmly welcomed in every family as a help to make life more complete, and health, culture and beauty more certain.

To the few of our readers whose term of subscription expires with the June number we would say: We hope to welcome you back to our circle of friendly intercourse; and will not many of you add to our list by bringing your friends along with you? With an earnest promise that for the future its course shall be onward, we say to them—for only a month, we hope—Good-bye!

Medical Literature.—The influence which is exerted by the Press is little less than omnipotent. By it news is promulgated; discoveries in art, science and mechanics made known; ideas and opinions, facts and theories discussed, and spread before the world like seed on good and bad ground. The Press, however, is not always useful. When uninspired with great and good thoughts; when spreading news and discoveries that have little value upon human progress; when conservative beyond the point where conservatism is useful, or when timid and fearful to launch out into new fields of thought, it fails in fulfilling its mission; it retards progress; it blocks the wheels of improvement; it sows bad seed, perhaps, on good ground, and thus becomes an engine of injury and corruption. The mission of the Press is to inform, instruct and inspire the people. It should inform them of what is worth knowing, instruct and guide them toward what is good, and inspire in them a love for progress and truth. Less than this we ought not to expect; more than this we have a right to hope.

Now, from this stand-point, what can we say of the medical journals of the country? They occupy a field not half cultivated; they appeal to men of intelligence and, we should hope, of more or less scientific attainment, but it is a fact that their influence is comparatively trivial. They do not inspire the profession with a healthy zeal for progress; they do not permit innovation; they insist that the profession shall stand on its dignity, and that no outsider shall attain honor, distinction, or even a hearing, as a medical discoverer or innovator. The best men of the profession of Medicine rarely write for the medical journals, and they do not reflect even what little spirit of progress is manifested by the advance men of the schools. This is all wrong. A medical journal should be alive, liberal, progressive. It should be opposed to the spirit of intolerance; it should aspire to influ-

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ence—not a mere ephemeral influence which lasts but for a day, and is confined to only a few of the profession, but a permanent influence, and one that goes far outside of the profession. So, too, it should be the means of inspiring medical men, and those who propose to become such, with a holy zeal to make improvements in the treatment of the sick, and, above all, with a disposition to do their duty in preventing sickness and extending a knowledge of the laws of health among the people. Why should not a medical journal make itself felt among medical and non-medical men, as The New York Tribune is felt in politics and in industry? Why should it not offer liberal inducements for the best articles from the best men, on science, on progress in medicine, on hygiene, on physiology? Why should it not expose the errors of its own schools of medicine, and stir up the dry bones of ignorance that abound in its own ranks, letting in the sunlight of science, of common sense and of nature, to purify and make clean? Why should medical journals be so dry and uninteresting that even medical men care little for them, and the non-professional much less? None of them are leading medical students or practitioners to a higher level; not one is advancing the science of Medicine. Until new life is infused into them; until they inspire with broad, grand ideas; until they get out of the rut of fossilized conservatism, we shall have little medical progress through their influence.

THE TURF.—We believe in turf, when it is used to cover the soil, to make a handsome lawn or rich meadows and pastures; but "the Turf" as it is known among sportsmen is something so entirely different and so entirely useless, that we can not help saying a word in reference to it. When we remark that we do not think this institution—where the wealthy and the idle, the dissipate and the gambler, find a place for excitement and employment—should obtain favor among the intelligent and virtuous, it is not because we ignore amusements, but because we do not indorse those which debase the mind, corrupt the body and injure the morals. This sort of sport has always been a curse to the Old World, as has recently been attested by Thomas Hughes (better known as "Tom Brown"), and so it will be to America. There are fields enough for study, for recreation, for sport, in the highest sense of the term, without the immoral allurements of "the Turf." Let all good people use their influence against it, as against intemperance and gambling.

"HARVARD UNIVERSITY.—Miss Sophia Blake and Susan Dimock, on applying for admission to the Medical College of Harvard University, received a note from President Hill, the other day, informing them that there is no provision for the education of women in any department of that University, and that none was at present contemplated."

Women contemplating a medical course of study had better look to other schools than the old medical colleges in which to prepare themselves for the profession. There are two ways of looking at the course pursued by Harvard—one as perfectly right and the other entirely wrong. Surely, the University has a right to limit its students to one sex, when we look at the question in the abstract. But there is another side from which the answer appears to be quite wrong. Harvard is an old institution. It possesses all the facilities for thorough instruction. The opportunity was an excellent one for setting an example to other prominent institutions to open their halls of learning, in order that women, where they choose, could avail themselves of the opportunities for a thorough education for any profession. They have seen fit to say very coldly, but politely, that Harvard has "no provision for the education of women." This we already knew. Suppose, however, that a hundred men were joined together, in a pleasant way, to furnish themselves with food of an excellent and wholesome character, together with rational social amusements and enjoyments, and that hungry women, who could not find the facilities for eating elsewhere, should ask admittance to their table in a respectful and dignified way, and should receive for an answer, "We have no provision for feeding women"—what would we think? Why, simply this: that they, in common politeness and justice, should have *made* provision for them—permanent arrangement, if the nature of the case demanded it, or temporary, if this was sufficient. Hospitality teaches this. Any other course would have been wrong. No institution of learning gains any thing by pursuing a different course. They will always profit by taking an interest in all the healthful tendencies of the age, and sharing their privileges with women would have improved their own natures, and helped along a cause which needs the influence of the wise and good. From this point of view, the answer received by the young ladies appears very uncivil. We are sorry that Harvard was so impolite, but hope the Misses Blake and Dimock will not abandon their plans, for there are places where they will be welcome.

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THE STUDY OF PHYSIOLOGY.—That noble and progressive leader, John Stuart Mill, in his very able Inaugural Address upon a course of study, delivered before the members of the University of St. Andrews, February 1, 1867, gives his views upon the subject of the study of Physiology as a part of the University course. He says:

"The importance of understanding the true conditions of health and disease—of knowing how to acquire and preserve that healthy habit of body which the most tedious and costly medical treatment so often fails to restore when once lost, should secure a place in general education for the principal maxims of hygiene, and some of those even of practical medicine. For those who aim at high intellectual cultivation, the study of physiology has still greater recommendations, and is, in the present state of advancement of the higher studies, a real necessity. The practice which it gives in the study of nature is such as no other physical science affords in the same kind, and is the best introduction to the difficult questions of politics and social life. Scientific education, apart from professional objects, is but a preparation for judging rightly of man, and of his requirements and interests. But to this final pursuit, which has been called *par excellence* the proper study of mankind, physiology is the most serviceable of the sciences, because it is the nearest. Its subject is already Man; the same complex and manifold being, whose properties are not independent of circumstance, and immovable from age to age, like those of the ellipse and hyperbola, or of sulphur and phosphorus, but are infinitely various, indefinitely modifiable by art or accident, graduating by the nicest shades into one another, and reacting upon one another in a thousand ways, so that they are seldom capable of being isolated and observed separately. With the difficulties of the study of a being so constituted, the physiologist, and he alone among scientific inquirers, is already familiar. Take what view we will of man as a spiritual being, one part of his nature is far more like another than either of them is like any thing else. In the organic world we study nature under disadvantages very similar to those which affect the study of moral and political phenomena; our means of making experiments are almost as limited, while the extreme complexity of the facts makes the conclusions of general reasoning unusually precarious, on account of the vast number of circumstances that conspire to determine every result. Yet, in spite of these obstacles, it is found possible in physiology to arrive at a considerable number of well-ascertained and important truths. This, therefore, is an excellent school in which to study the means of overcoming similar difficulties elsewhere. It is in physiology, too, that we are first introduced to some of the conceptions which play the greatest part in the moral and social science, but which do not occur at all in those of inorganic nature. As, for instance, the idea of predisposition, and of predisposing causes, as distinguished from exciting causes. The operation of all moral forces is immensely influenced by predisposition; without that element, it is impossible to explain the commonest facts of history and social life. Physiology is also the first science in which we recognize the influence of habit—the tendency of something to happen again merely because it has happened before. From physiology, too, we get our clearest notion of what is meant by development or evolution. The growth of a plant or animal from the first germ is the typical specimen of a phenomenon which rules through the whole course of man and society—increase of function, through expansion and differentiation of structure by internal forces. I can not enter into the subject at greater length; it is enough if I throw out hints which may be germs of further thought in yourselves. Those who aim at high intellectual achievements may be assured that no part of their time will be less wasted than that which they employ in becoming familiar with the methods and with the main conceptions of the science of organization and life."

POISONING CHILDREN.—At the recent meeting of the Buffalo Medical Association, Dr. Strong reported a case of death of a young child from taking one drop of tincture of opium, repeated six hours afterward. The child lived twenty-eight hours. It seemed that the tincture had been given by the parents without the advice of a physician. Probably, had a physician ordered the medicine, the public would never have known what caused its death. Every year multitudes of children are sacrificed by this or similar nostrums.

DOCTORS IN RUSSIA.—In Russia and some parts of Germany, it is said, the Governments restrict the number of medical men. In Bavaria, particularly, there is a limitation to the number of practitioners, and no person is allowed to practice until it is ascertained that there is a vacancy for him. In a selection, the Government is often more influenced in its choice by political influences than by merit.

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THE MICROSCOPIC FLEET.—At a recent lecture on the blood, Dr. Browne delivered the following striking similie:

"The current of blood, and its channels in the body, is the great canal by which the subtle life-supporter, oxygen, is carried along. It constitutes the means of communication between the interior of the body and the atmosphere, and serves for import as well as export. The blood corpuscles, which are continually rushing about in the stream, constitute the exact analogue of a fleet of vessels laden with oxygen, and carrying the cargo to the most distant part of the system and all the different organs, where part of it is consumed for works going on there, while another part is stored up and accumulated for future use. The carbonic acid is the return load put on these little vessels, each of which are only visible under the microscope. In spite of their tiny form, they are able to transport forward and backward four pounds and a half of oxygen and carbonic acid per day, to condense within themselves four hundred liters of oxygen from the atmosphere, and to give off as much carbonic acid, without any of their speedy and airy movements being discerned by the observer. During the day they export much more carbon than they import oxygen, and during the night, in quietude and sleep, they follow each other with rich cargoes of oxygen to provide for the expenditure of the next day."

BOSTON SCIENCE.—It is very evident that science and the opinions of scientific men are having a great influence upon the pursuits and opinions of men. It is only recently that the Committee of the Legislature of Massachusetts on the Petition for a License Law called before its members the men of science and those whose opinions were entitled to respect, in order that they might better understand the question as to whether there should be a license law or prohibition of the sale of intoxicating liquors throughout the State. The argument which has attracted the most attention from the public is that of Ex-Governor Andrew, an individual who can not lay claim to being a man of science at all, but who, like any intelligent lawyer, can collect the opinions of other men, and present them as scientific evidence in such a way as to make the case appear indeed very plausible. It is very strange, however, that Governor Andrew, with the scientific men of Harvard at his right hand, left hand and back, should have made the great mistake of trying to prove that alcohol is not a poison but a food. Can it be possible that the science in vogue about Boston is so much behind the times? Certainly, if alcohol is food, it requires no more regulation in its sale than bread, potatoes and fruit. We do not restrict or try to regulate the sale of these articles, except that a spurious and bad kind shall not be sold. If alcohol is a food, it is not a poison at all, and should not be made the subject of special legislation. On the other hand, if alcohol is a poison, then it is not a food, and may appropriately be made the subject of special legislation, and its sale prohibited if the public interest demands it. We should like to have Governor Andrew test the value of any alcoholic preparation he might choose—wine, cider, beer, rum, whisky, brandy—and see how long he could support life with it. If he can live and thrive as he can on bread, on potatoes, or any single variety of food, for days, weeks, months, and even years, then it will be evident that alcohol is a food; but if, on the other hand, he becomes excited, feverish, morbid, drunk, insane, then we opine he would have very different views in regard to the value of alcohol as food. We have nothing to say in this connection regarding Governor Andrew's honesty; we do not doubt it as other papers have done, but only marvel at the fact that he has become the mouth-piece of a false and exploded scientific opinion. If this is Boston science, we think the less we have of it the better.

"REV. D. R. THOMPSON has written a work with the title, 'Teetotalism as a Rule of Duty unknown to the Bible and Condemned by Christian Ethics.'"

It is much to be regretted that those who wish to serve the cause of truth and maintain for the Bible the love and reverence of men, should be so short-sighted as to take the course they do. Certainly, if the Bible is to be regarded as a sacred book, it must not be used to prove wrong right, but always as supporting justice, truth and purity. People will not regard the Scriptures as holy unless they teach holy things. The spirit of our age is such that the moment the Bible is made to stand on the side of wrong and oppression, good men will fail to love it. Let those who love the Scriptures see to it, that the book always maintains what is intrinsically good and true—never what is doubtful and wrong—and they will find no difficulty in making the world love and reverence its truths and accept it as a rule of life. The Bible, rightly interpreted, presents the strongest reasons for temperance, sobriety and abstinence from intoxicating drinks.

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Hygienic Home Treatment of Diseases.

BY E. P. MILLER, M. D.

Bright's Disease of the Kidneys.—The term "Bright's Disease" is now applied to four or five different derangements of the kidneys, all of which have some peculiarities in common. All those disorders which are characterized by partial or complete suspension of the function of the kidneys, by general dropsy, and by albumen in the urine, come under the head of Bright's Disease. Of these disorders we have two distinct forms, the acute and chronic. The acute form is generally considered curable, while the chronic is regarded as incurable, because it almost invariably, sooner or later, terminates fatally. There is only one variety of acute Bright's disease, but there are three forms of chronic.

We will first consider the acute form, or, as it is often called, acute albuminuria, or acute desquamative nephritis. Acute Bright's disease is an inflammation of the convoluted uriniferous tubes.

CAUSES.—This disease is found among the old, the middle aged and the young; infants, even, are liable to become its victims. It often occurs after a recent attack of scarlet fever.

When we consider that the function of the kidneys is to eliminate poisonous matter from the body, and think how many irritating and poisonous medicines are given in scarlet fever, it is not very surprising that we so often find inflammation of the convoluted tubes excited by the attempt to eliminate these poisons.

Thomas Hawks Tanner, Member of the Royal Society of Physicians of England, says: "It consists essentially of disease of the epithelial cells lining the convoluted uriniferous tubes, induced by their having to eliminate from the blood some matter not naturally excreted by the kidneys." There is no substance more unnatural or exciting to the kidneys than medicines taken to cure disease. In corroboration of this statement I would say, that I have treated many cases of scarlet fever by water and hygienic means, without medicines, and never yet, in a single instance, has Bright's disease followed as a sequela.

Bright's disease occurs, also, as a sequela of diptheria, measles, small pox, typhus and typhoid fevers, and in epidemic cholera; also in consumptive patients, and in those suffering from articular rheumatism. Persons addicted to intemperance and gluttony are especially liable to suffer from this disease. Spices, condiments, pepper, vinegar, etc., and exposure to cold and damp weather, may often induce it.

SYMPTOMS.—General dropsy, usually commencing in the face, and extending to the chest, abdomen and limbs. Albumen, and almost always epithelial tubes or casts, are found in the urine—this latter being a sure sign that Bright's disease is present.

The patient is usually afflicted with chills, rigors, headache, thirst, pain in the region of the kidneys, fever, nausea, vomiting and sometimes purging, frequent urination, the urine being scanty and of a dark, smoky color. If some of the urine is slowly heated to the boiling point, a milky, albuminous deposit is thrown down. A few drops of nitric acid will also cause a similar deposit.

The epithelial casts above spoken of are small cylindrical tubes, which are thrown off from the inner surface of the convoluted uriniferous tubes, and pass away in the urine. These are readily detected by means of the microscope.

There are four varieties of these tubes; the one first formed in acute Bright's disease is composed of fibrine, which is thrown out from the blood in the first stage of the inflammatory process, and forms a coating upon the inner surface of the tubes; this subsequently becomes loosened and is thrown off in a tubular form, and carried away in the urine; these are called fibrinous casts.

The second variety consists of the epithelial cells lining the convoluted tubes; these become agglutinated by an exudation, and, during the inflammatory process, are loosened and washed out in the urine.

The third variety consists of patches of epithelium, which have undergone a fatty change by the accumulation of minute granules of fat in their cells; these are called fatty casts.

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The fourth variety, or waxy casts, are doubtless formed upon the basement membrane, after the epithelial lining has been removed; they are composed either of tubes formed by exudations from this membrane, or by portions of the membrane itself being thrown off.

The fibrinous and epithelial casts are usually found in acute Bright's disease, and the fatty and waxy casts are present in cases of the chronic form; yet occasionally we find two or three varieties of these casts in a single case. Sometimes blood corpuscles are mingled with these casts, giving them a dark look; these are called by some bloody casts.

The solid portions of the urine are excreted from the blood by the epithelial cells lining the convoluted tubes, and it is self-evident that if these cells, by inflammation, are exfoliated, the urinary function must inevitably be interfered with, so as to cause a partial or total suppression of this secretion.

The first symptoms of abatement will be an increase in the quantity of urine, diminution of the quantity of albumen and tube casts, and lessening of the dropsy.

When there is an unfavorable termination there will be entire suppression, and if this continues more than thirty-six hours uræmic poisoning will take place, followed, probably, by coma, convulsions and death.

In consequence of the accumulation of urinary matter in the blood, various complications are liable to occur, such as pleurisy, pneumonia, bronchitis, pericarditis, etc. The vomiting and purging are supposed to be caused by the poison of the urine in the blood, creating disturbance of the stomach and bowels.

TREATMENT.—First arrest the inflammatory process, subdue the fever, and restore the natural function of the kidneys; by this means the dropsy will be relieved; and, secondly, remove from the system the urea that has accumulated in the blood.

The patient should be kept very quiet, and warm in bed, with the room thoroughly ventilated; if there is much pain, hot fomentations may be applied over the kidneys for an hour or more at a time, and when removed the part to which they are applied may be sponged with tepid water, and a wet girdle or compress, wrung out of tepid or cool water, placed around the body, covered with oiled silk, and a dry muslin or flannel sheet; this wet girdle should be changed as often as it becomes heated.

If there is much fever the wet-sheet pack may be used, followed by a rubbing-sheet or towel bath. The hot, tepid, or cool hip bath, with water reaching above the kidneys, is also useful. The fomentations, compresses and hip baths will subdue the local inflammation; the wet-sheet pack, rubbing-sheet and towel bath will remove the fever, restore the function of the skin, equalize the circulation of the blood, and help to re-establish the function of the kidneys. The pack, vapor bath, and Turkish or hot-air bath, will subdue the dropsy and remove the urea from the blood. Some of the leading Allopathic practitioners of the country are advising this treatment. Dr. J. Hughes Bennett, in his celebrated work on Clinical Medicine, remarks:

"The connection which necessarily exists between the kidneys and skin as excretory organs is well known. In health, impeded function in the one is, to a certain extent, compensated for by increased function in the other. . . . Such being the case, it seems highly judicious, in our efforts at cure, to excite, by all means in our power, the function of the skin in cases of Bright's disease of the kidneys; and, with this view, Dover's powder, keeping the surface warm, hot-air baths, warm baths, and a warm climate, are among the means which prove to be the most useful."

Tanner, also, in a recent work, recommends confinement in bed between blankets, low diet, free allowance of milk, tea, cold water, barley-water, lemonade, ice, hot baths, blanket baths, hot-air or vapor baths, linseed poultices to the loins, etc.

Austin Flint, a recent American author, advises: "Rest in bed, warmth of surface, unstimulating diet, water and other bland fluids as freely as the thirst dictates, dry cupping, fomentations over the region of the kidneys by means of moistened cloths, hot-air baths," etc.; and then follows a list of Allopathic remedies.

DIET.—Little or no food for two or three days, till the pain and inflammation have subsided; give pure water freely for drink—bits of ice, if desired; wheat, oat or corn-meal gruel; boiled rice, toast, milk, ripe fruit, etc., may be given in small quantities after the pain and inflammation have subsided.

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Answers to Correspondents' Notes and Queries.

BY A. L. WOOD, M. D.

Whisky and Consumption.—"What do you think of the use of whisky in the treatment of consumption? Most physicians with whom I am acquainted prescribe it freely."

I think it is one of the most absurd and injurious practices which the medical profession is at present guilty of. If the patient should recover in spite of the whisky, as they will sometimes, the chances are that it will have created an uncontrollable appetite for stimulants which will lead its victim to a drunkard's grave. But, to say nothing of this aspect of the question, there is another, which ought to convince any person at a glance of the folly of this practice. People generally, and especially all physicians, know that wounds or ulcers upon the persons of drunkards, or those who imbibe freely of intoxicating liquors, are far more difficult to heal than they are upon those who are temperate. How, then, can it be possible for whisky to excite or aid a healing action in the delicate structure of the lungs, especially when whatever is taken into the stomach has to pass to and through the lungs before it can be distributed throughout the body? How can whisky promote a healthy action in *any* disease, when its effect is always to retard the reparative processes of nature?

Fresh Bread.—"Is it healthful to eat unleavened bread hot from the oven or fresh? If so, why is this an exception to other bread in this respect?"

It is unhealthful to eat unleavened bread—or, in fact, any thing else—*hot*, but it *is* healthful to eat it warm and fresh. Then is when it should be eaten. Bread raised with yeast is unhealthful, if eaten while warm and fresh, for the reason that the saccharine matter of the grain is changed by the process of fermentation to carbonic acid gas and alcohol, and it is necessary that the bread should stand awhile to allow the alcohol to evaporate. In unleavened bread there is no injurious chemical substance evolved.

Times of Eating.—"If it is better for a dyspeptic to eat but two meals a day, at what time should they be taken?"

Under favorable conditions, about 8 A. M. and from 2 to 3 P. M.

Cooking Potatoes.—"What is the best and healthiest mode of cooking potatoes?"

Baking is the best, and steaming the next best.

Fruits and Acidity of the Stomach.—"Why do fruits generate acid in the stomach?"

Acidity of the stomach is caused by food remaining in it undigested until fermentation takes place. Fruit will not produce acidity in a healthy stomach, if it is eaten at proper times, in suitable quantities, and thoroughly masticated. Fruit is usually eaten as dessert, after the stomach has been loaded and perhaps overloaded with other food, or, what is still more common, it is eaten between meals, when the stomach is fatigued from the digestion of the previous meal. Then, again, it is scarcely ever sufficiently masticated, much of it being swallowed in solid pieces from the size of a pea upwards, in which condition it is almost impossible for the gastric juice to dissolve it, and being subjected to the warmth of the stomach until decomposition commences, it produces acidity, flatulence, and a general irritation and derangement of all the digestive organs. Fruit should never be eaten except as a part or the whole of a regular meal, and it should be thoroughly masticated. There are some stomachs so debilitated that they can not digest fruit, but they are very scarce when rightly managed.

Cider and Dyspepsia.—"Is hard cider allowable, if taken at meal-time? It has been recommended as excellent for dyspepsia."

If ale, whisky and wine are allowable, then hard cider is; if they are not allowable, then cider is not, for they all belong to the same family. It has been recommended for dyspepsia, and so has a thousand other articles more or less injurious. It stimulates the stomach to increased activity for the time, but in the end leaves it more deranged and debilitated than ever.

Cold Sores.—"Will you please inform me through your columns, what will cure 'fever blisters' commonly called 'cold sores?'"

Keep the skin clean and healthy and restrict the diet and your "cold sores" will soon disappear.

Best Tonics.—"What are the best tonics for a person who is naturally strong, but who has injured his health by over exertion?"

Rest, pure air, proper food, moderate exercise, sunlight, cleanliness and a cheerful and hopeful spirit.

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Base Ball.—"The young men of Natchez have started a club for the purpose of playing a game of base-ball once a week, and as I am very fond of the game I have become a member, but my parents are much opposed to it because they think it is bad for my health, and also that there is great danger of hurting myself by bursting a blood-vessel and setting me into consumption. What is your opinion of the game?"

The game of base ball, if judiciously played, is one of the most healthy, invigorating, muscle-culturing, lungs-strengthening and digestion-improving games there is played. If all the young men in the country—and young women, too—would play a game of base ball or its equivalent every day, a majority of the doctors would soon, like Othello, find their occupation gone, the apothecary shops would disappear like stars before the rising sun, and the next generation would be seen rapidly ascending the pathway of physical perfection. Yes, play base ball once a week, twice a week—every day if you can. Commence moderately, especially if you are weak or have weak lungs, and guard against too vigorous exercise at first; but do not quit it for fear of its producing consumption, for a thousand would die for the want of it where one might die from the effects of it.

Wet Clothing.—"When a person has been out in a storm until his clothing has become wet through, which is the best course for him to pursue to avoid taking cold—to let his clothes dry upon him or change them at once?"

He should remove his clothing as soon as possible, rub the entire surface of the body with a coarse towel until it is all in a glow, and then don dry clothes.

Physiology and Chemistry.—"Which of the two sciences, Physiology and Chemistry, is the most important for children from twelve to fourteen years of age to study, provided they only have the time to study one of these branches?"

A knowledge of Physiology is as much more important to the young than a knowledge of Chemistry, as the living human body is superior to dead, inorganic matter. What study is there so important to the human being who is just entering upon the great drama of existence as that which teaches him what he is, and the laws which an all-wise Creator has instituted for his guidance and control? There can be none more important—there is none. First and foremost in the system of education for the young let Physiology be placed, where it by right belongs—the foundation-stone of all human culture.

Severe Labor After Meals.—Eating while the body is fatigued is a very injurious habit, for the reasons stated in a recent number; but severe labor soon after a hearty meal is none the less so. A large share of vital force is required to properly perform the process of digestion, and if this is called away to the muscles or brain to accomplish severe physical or mental labor, the stomach is left insufficiently supplied, and the food remains for a long time undigested, creating acidity, flatulence, and ultimately weakness and derangement of the digestive organs.

Perspiration.—"What is the easiest and most effectual mode of inducing perspiration?"

This is a very indefinite question, as there are so many different circumstances under which perspiration needs to be induced. Where it is available, the Turkish or hot-air bath is far preferable to any other means. Where that can not be obtained, the dry, hot pack, the wet-sheet pack, the vapor bath, or vigorous exercise in a warm atmosphere, may each be specially indicated in certain cases. The Turkish Bath alone is applicable to every case where perspiration may be desirable, and it never fails, if properly managed.

Sleep.—"Where a person is obliged to sit up late, is it better to sleep correspondingly late in the morning, or to rise early?"

The rule should be to retire early, if possible, and to rise as soon as a sufficient amount of sleep has been obtained. If a person can not retire until late, he should sleep late in the morning. To sleep during the hours of darkness is best, but better sleep in the day-time than not at all.

Position in Walking.—"What should be the position of the body to secure the greatest ease and benefit while walking?"

The body should be slightly inclined forward but not bent, the shoulders thrown back, the chest forward, the hips back, the head erect, and the mouth closed.

Gluttony a Cause of Intemperance. Excess and imprudence in eating is one of the chief causes of intemperance. It produces derangement of the digestive organs and a feverish condition of the whole body, and creates a morbid and craving appetite, which often leads to the use of intoxicating liquors, drunkenness and death.

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Healthy Spices and Condiments.

WANTED—a quill from a flying report.

TO HAVE tarts for tea, let your wife see you kiss the waiting-maid. A sure thing.

WHY are good husbands like dough? Because women need them.

MANY institutions are improperly called semi-naries, for they do not half teach any thing.

AN exchange says: "Lovers, like armies, generally get along quietly until they are engaged."

"YOU look," said an Irishman to a pale, haggard smoker, "as if you had got out of your grave to light your cigar, and could'nt find your way back again."

"I STAND upon the soil of freedom!" cried a stump orator. "No," cried his shoemaker, "you stand in a pair of shoes that have never been paid for!"

"WERE you guarded in your conduct while in New York?" said a father to his son, who had just returned from his visit to the city. "Yes, sir—part of the time by policemen."

A MISTAKE SOMEWHERE.—A country paper says: "A cow was struck by lightning and instantly killed, belonging to the village physician who had a beautiful calf four days old."

A LADY fainted a few days since in the cars. A medical gentleman present, who went to her relief, exclaimed: "Has any gentleman a flask of whisky or brandy?" Over thirty pocket-pistols flashed in the air at once!

FEINAGLE taught a system of memory—mnemotechnics. One day a friend of his found a hotel-servant laughing heartily. On asking the cause of his mirth, the fellow replied: "I can't help it, sir; it's raining hard, and that 'ere memory man has gone, and forgotten his umbrella!"

VERY GOOD.—At a school examination a young tyro in declamation, who had been told by the teacher that he must gesticulate according to the sense, in commencing a piece with "The comet lifts its fiery tail," lifted the tail of his coat to a horizontal position, causing roars of laughter.

A LIGHT employment—making candles.

WHEN does a man sneeze three times? When he can't help it.

A CORRESPONDENT of The London Journal treats at some length on the best way to prevent hydrophobia. A wag, in reply, suggests that he once prevented a case of this dreadful malady by getting on a fourteen-rail fence, and staying there until the "dog" left!

Literary Notices.

AMUSEMENTS: Their Uses and Abuses. A Sermon, by Rev. Washington Gladden of North Adams, Mass. Price, 25 cents.

This excellent pamphlet takes advance ground in favor of rational and healthful sport for old and young, male and female. The text of Scripture used as a foundation for this discourse is: "A time to laugh." We heartily wish such a discourse could be given in every church. It would do good. We have no space for a lengthy review, but Mr. Gladden's closing advice is too good to pass over without mention. He says:

"When you find your spirits wearing on your strength, stop. When you find yourself beginning to think more of any amusement than of study, or work, or worship, stop."

The author believes in the higher forms of recreation, as music, gymnastics, manly sports, and would make all games help to improve by right, rather than debase people by excesive or wrong use.

LITTELL'S LIVING AGE.—The March number of this magazine is very interesting. It contains John Stuart Mill's address on "A Course of University Study." This address is broad and liberal, and ought to be read by all educators and by all who have an interest in the subject. Mr. Mill claims a high place for the science of Physiology among university studies, and while he may not accord to it as high a rank as it deserves, he certainly asks a better place for it than it has yet occupied in any university in either this or foreign countries, except those devoted to Medicine. This is certainly gratifying.

Published by Littell & Gray, Boston. Single copies, 20 cents.

GARDENING FOR PROFIT—A Guide to the successful cultivation of the market and family garden. By Peter Henderson. New York: Orange Judd & Co.

This is a very neat, well-printed book of 250 pages, written by a successful gardener, which means, we presume, one who has succeeded in raising good vegetables and making gardening for market profitable. It is well illustrated, and discusses nearly or quite all that any one needs to know to be able to do likewise, and it will have, an extended sale and healthful influence. Price, $1 50.

THE LIFE AND ADVENTURES OF NICHOLAS NICKLEBY. By Charles Dickens. With original illustrations by S. Eytinge, Jr. Boston: Ticknor & Fields. 1867.

This is the fourth of the "Diamond Dickens" series. It is uniform with the others, printed on fine, tinted paper and beautifully bound. Nowhere can the works of Dickens be had so cheaply and yet in such beautiful style.

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Rebutting Testimony.—The Rebutting Testimony taken before the Committee of the Legislature of Massachusetts on the Petition for a License Law; also a Review of Governor Andrew's Argument so far as it relates to Alcohol as a Poison. By A. J. Bellows, M. D. Boston: Bela Marsh.

This little tract, sold for 15 cents, is a good Temperance document, as well as an able argument against Gov. Andrew's false position before the Legislative Committee where he attempted to prove that alcohol was not a poison but a food. We hope and believe the Ex-Governor will not hear the last of his ridiculous reasoning for a long time.

The American Naturalist, a Popular Illustrated Magazine of Natural History. Published by the Essex Institute, Salem, Mass. $3 a year.

This is a new magazine and has been very favorably received. We welcome it to a field of usefulness wholly unoccupied, and ask for it the patronage of all students of Nature.

The Poetical Works of Henry Wadsworth Longfellow. Complete Edition. This beautiful little book, uniform with the "Diamond Tennyson," contains all of Longfellow's poems, and is really a gem, and, considering that it costs but one dollar and a half, a very cheap one at that.

Publishers' Department.

This Number.—This number of The Herald of Health closes the first half of the volume for 1867, and is the last number of Volume 9, New Series, and of Volume 42, Old Series. The July number will commence a New Volume. To those who have been our patrons during the year just closed, we can hardly say a word in favor of our journal which they do not already know. Regarding the future, we may remark that we shall make important advances and improvements as rapidly as possible. The important papers of Mr. Tyler, Dr. Browne, Mrs. Gleason, and others, which will extend through future numbers, will of themselves be sufficient inducements for a renewal of subscriptions; but the need of just such a journal in every family, to help in forming good habits and to keep up the ideal of a true, healthy life, and the cause of Physical Culture and Health Reform, will be sufficient reason, we hope, for all our old patrons and friends remaining with us during the volume about to commence.

Letters.—Very many persons do not know how to write a business letter. In the first place, no old, dirty slips of paper, with pale ink, should be used. Then again, the name and address should always be in full and written very plainly. If the name comes at the bottom of the sheet, reserve room enough to write it without cramping any of the letters. Letters requiring answers should always contain a stamp to prepay postage. Letters ordering books or Heralds should not be written mixed up with matter regarding medical advice, or answers in The Herald, or matter for publication. Keep every department of business distinct, and write briefly and to the point. We have before us a business letter filling four pages of foolscap, when all might have been said in four lines. We are always glad to hear from our correspondents, and feel happy in being able to say that most of them write briefly. The above reminder is intended but for a few.

Announcement.—Dr. Dio Lewis is preparing for The Herald of Health a series of papers on the Rearing, Physical Culture and Health-management of Children. They will probably commence in the July or August numbers. The first paper will be one of exceeding interest, discussing as it will the influence of the health and habits of parents on the well-being of unborn children. It is a sad fact that in thousands of instances children inherit a tendency to vice and disease, which they are obliged to carry as heavy burdens through life, all because of the ignorance or thoughtlessness of their parents. Dr. Lewis will furnish a valuable chapter in relation to this point. This feature alone will be worth the full subscription price.

A Friendly Epistle.—"*Dear Sirs:* I can not help thinking, every time I peruse your journal, how much practical and general knowledge can be brought out in so concise and plain a manner.

"I took your journal in 1865, and liked it very well; but I like it this year much better. It ought to be in every family, and I think that if it was there would be less sickness in the family; I am sure there would be less quarrelling in the family.

"Respectfully yours, GEORGE W. CLARK."

Tipter Topter.—A subscriber who got a machine for a club of subscribers writes us as follows:

"Kate likes the machine tip-top, and I like The Herald tipter topter, and one subscriber says it's worth $10 to the head of any family who will read and act upon its suggestions."

"The Herald of Health, published by Miller, Wood & Co., New York, is one of the most valuable publications we know of in this country. The author of 'Pleas for Children,' which have been very favorably received by our readers, says it is, in his opinion, the best of its class, free from fanaticism, ably conducted, and is well calculated to aid in the reform which he has been advocating in his 'Pleas.' Our readers know that we occupy very little space for puffing magazines and periodicals; but we do most heartily and cheerfully commend this work to our readers. The May number, now before us, contains information that is worth ten times the price of a year's subscription, and if heeded might save the payment of a heavy doctor's bill."—*Meriden County Transcript.*

Renewal of Subscriptions.—To all whose subscriptions expire with this number we give notice by a little slip inclosed in the magazine, on which may be written the name or names for return to us for renewal. We only send The Herald when it is paid for in advance.

Clubs.—To those who are forming Clubs for 1867 we would say, Hurry them up! Back numbers are fast disappearing. We have not had in any year so many new subscribers and so very many encouraging words.

October Number for 1866.—We will thank all those who have the October number of The Herald for 1866, and do not wish to keep it, to mail the same to us.

Filters.—See advertisement of Kedzie's Water Filter in another column. These Filters may be ordered of Miller, Wood & Co., at manufacturers' prices. They are the best made.

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Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Lincoln at Home.—It will be seen by reference to our List of Premiums for 1867, that for a Club of 10 new Subscribers and $20, each of these Subscribers will be entitled to a picture of "Lincoln at Home." This picture is a large steel engraving, which sells for $1, and in many places even as high as $2. There are very many engravings of Lincoln, some of which sell as high as $30 a copy, but in our opinion none of them have the same elements of popularity and are so characteristic of the man as this one. It was engraved from a photograph, and represents Lincoln and his little son looking over the pages of the Bible together, gathering strength and wisdom from the words therein. We are sure it will please every one of our subscribers to possess one, and we are happy to be able to make so liberal an offer with this end in view. It will be sent by mail prepaid.

Premiums.—Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Write Plainly.—All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

To Querists.—We only answer letters in our Notes to Correspondents which are of general interest to all our readers. Persons wishing prescriptions made out for home treatment must, in all cases, send a stamp and $5 for consultation fee. Address Drs. MILLER, WOOD & Co.

PREMIUM LIST FOR 1867.

As will be seen by our Prospectus on the fourth page of the cover, our Premium List is more valuable than ever before. The following is an abstract of it:

For 30 *Subscribers and* $60,

We give a "Wheeler & Wilson Sewing-Machine," worth $55, or a Silver Watch of the same value and of American manufacture;

For 15 *Subscribers and* $30,

Webster's Pictorial Unabridged Dictionary," worth $12;

For 10 *Subscribers and* $20,

Each member of the Club will receive a copy of "Lincoln at Home." This Picture is 19x24 inches, and a very valuable one, being well engraved on steel;

For 6 *Subscribers and* $12,

One copy of the "Hydropathic Encyclopedia," worth $4 50.

For 4 *Subscribers and* $8,

A Gold Pen worth $3;

For 3 *Subscribers and* $6,

A copy of the "Hand-Book of Hygienic Practice," worth $2;

For 2 *Subscribers and* $4,

[One of whom shall be a new subscriber], one copy of "Lincoln at Home," worth $1.

These Premiums are all valuable ones, and priced at just what they sell for in market. Owing to our taking a large number, we are enabled to offer very great inducements to our patrons. We hope our friends everywhere will help to extend our circulation.

Agents Wanted—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

Books.—On sending in orders for THE HERALD OF HEALTH, our friends will find it convenient also to look over our book list on another page. We can also procure any work published in New York, and send the same at Publishers' prices.

Send Stamps.—Persons sending for circulars, or wishing answers to letters sent us, must inclose postage stamp to insure a reply. Three cents is but a small amount for one to pay, but when you pay that amount over three or four thousand letters it amounts to many dollars.

City Subscribers.—Subscribers who reside in New York city or Canada, should add 12 cents extra to prepay postage, as the law requires that it be paid in advance.

Samples.—Those who receive THE HERALD as a sample are respectfully requested to send us their subscription for a year. It will be a constant help in every household where found.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

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To the Reader.—Friends of the cause of human improvement who may see a copy of our magazine, are requested to lend a helping hand in extending its circulation, if only by their own names. Our aim is to do all the good we can in extending a knowledge of the laws of the body and brain. Many a person has cause to bless our labors, because he has better health from learning how to live, and better children from knowing how to rear them. Half the children born die before they arrive at five years of age. Why? Because of ignorance on the part of parents. Teach them the laws of life, and they would swell the lists of living men and women and bless the world.

Sewing Machines.—Already the Clubs of 30 Subscribers with $60, which call for a Wheeler & Wilson Sewing Machine worth $55, are coming in. This is really a liberal offer. Some are sending $60 for the Machine, and giving away the thirty subscriptions to their friends as presents.

Back Numbers.—Those who wish to be sure of back numbers had better subscribe at once, as we will not agree to furnish them during the entire year. Our editions for the last six months of 1865 were large, but it was not so large as the demand, and several of the numbers are out of print.

Herald for 1863, 1864 and 1865.—We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25 per volume.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 5th of the month preceding that on which they are to appear.

WATER CURE & HYGIENIC INSTITUTE,

Nos. 17 AND 19 WEST MARKET STREET, WEST CHESTER, CHESTER CO., PA. This being a most desirable location for invalids and the house large, convenient, and newly furnished with every thing requisite for the comfort and restoration of my patients, I trust many afflicted ones will avail themselves of the opportunity to regain the greatest blessing life can afford—*sound health*. In addition to the science as taught by Trall, Shew and Jackson, I have gained some practical knowledge in my own experience, which adds greatly to the good results to be attained in our curative home. Afflicted ones, *come and try*. The money charged for treatment shall be returned if you are not benefited. First-class boarders accommodated. Take the West Chester cars at West Philadelphia. Fare, 85 cents.

je-1t* DR. LETITIA W. LUKENS.

THE "GREAT" HYGIENIC BOOK ON "SENSE AND NONSENSE,"

IN RELATION TO ALL TOPICS CONCERNING HUMAN AFFAIRS.

BY REV. S. M. LANDIS, M. D.

This wonderful book is published by the "First Progressive Christian Church of Philadelphia." Over three hundred pages; 12mo; handsome in cloth. Price, only $2. For sale by Dr. Landis, Thirteenth Street and Girard Avenue; Prof. Capen, 722 Chestnut Street, Philadelphia; Fowler & Wells, 389 Broadway, New York, and everywhere by booksellers. Agents wanted everywhere. Forwarded prepaid by mail upon receipt of $2 50. Send stamp for Circular of Contents. Address DR. LANDIS, P. O. Box 1641, Philadelphia, Penna. je-1t*



A PLEASANT RESORT.

Persons visiting New York who desire to avoid the bustle of hotels will find ample accommodations, with first-class rooms and good Hygienic table, at No. 63 COLUMBIA STREET, Brooklyn Heights, New York, three minutes' walk from Fulton Ferry, being nearer to the business center of New York than most of the best hotels in that city.

Connected with this establishment is the

TURKISH BATH,

One of the greatest physical luxuries, nor is there any agent so powerful to renovate and restore the enfeebled or diseased system. For terms, etc., address

dec-tf CHAS. H. SHEPARD, M. D.

LOOK HERE!

AGENTS WANTED FOR THE NEW PATENT Water Cure Appliances by Rev. S. M. Landis, M. D. One physician or intelligent person wanted in each State to sell Rights and manufacture Dr. Landis's celebrated "*Patent Compound Electro-Magnetic Hot and Cold Air Bath*," being a most complete Water-cure, Electrical and Turkish Vapor Bath Establishment in a portable box resembling a wardrobe. Also Agents wanted everywhere to sell his "*Patent Compound Male and Female Magnitude Syringe and Organic Bath*." Price, only $16. Also for his books. Without these you are behind the age of Hygienic improvement. Patients treated by Dr. Landis and his wife. Call at Medical Offices, Thirteenth Street and Girard Avenue, or address him, inclosing a stamp for "Medical Guide," special circulars, etc. Cut this out for reference. je-1t*

THE YOUNG LADY'S FRIEND;

A Favorite Monthly Periodical. Terms, 75 cents per annum. Premiums of Sewing Machines, Melodeons, Dress Patterns, Furs, etc., given to getter up of Club lists. Send 10 cents for Specimen Copy and List of Premiums. Address W. T. HORNER, Buffalo, N. Y. je-1t.

BOARDING IN THE CITY.

Parties who are visiting New York, either for business or pleasure, can generally find accommodations at the HYGIENIC INSTITUTE, Nos. 13 and 15 Laight Street, where they can get good rooms and wholesome food, and be free from rum and tobacco, at much less price than at hotels.

TRUE TEMPERANCE PLATFORM.

The True Temperance Platform; or, An Exposition of the Fallacy of Alcoholic Medication, etc., is now ready. Price 60 cents. It should be spread broadcast as a Temperance document. MILLER, WOOD & CO., 15 Laight St., New York.

HYGIENIC CURE, BUFFALO, N.Y.

Compressed Air Baths, Turkish Baths, Electric Baths, and all the appliances of a First Class Cure. Send for a circular. Address H. P. BURDICK, M. D., or Mrs. BRYANT BURDICK, M. D., BURDICK HOUSE, Buffalo, N. Y. je-tf

DR. R. WILSON, HYGIENIC PHYSICIAN,

1109 Girard Street, Philadelphia, Pa. dec-tf

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LIFE INSURANCE?

If you are healthy, vigorous and intelligent;

If you have good habits, a healthful residence and occupation, and are descended from healthy, long-lived people, the

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If you are in the country, call on an Agent. You will save money, time and trouble.

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FOR FAMILIES & MANUFACTURERS,

Have all the latest improvements and attachments, are simple, durable, noiseless, and easy to work. Agents wanted. Liberal terms. No consignments made. Illustrated Circular sent free. Address

EMPIRE SEWING MACHINE COMPANY,

ap-1y 616 Broadway, New York.

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By R. T. TRALL, M.D., containing the latest discoveries in the Anatomy and Physiology of the Sexes explaining the origin of life how and when Menstruation, Impregnation and Conception occur giving the laws by which the number and sex of offspring are controlled, and valuable information in regard to the begetting and rearing of beautiful and healthy children. It is high-toned, and should be read by every family. Agents wanted. Price, by mail, $2.

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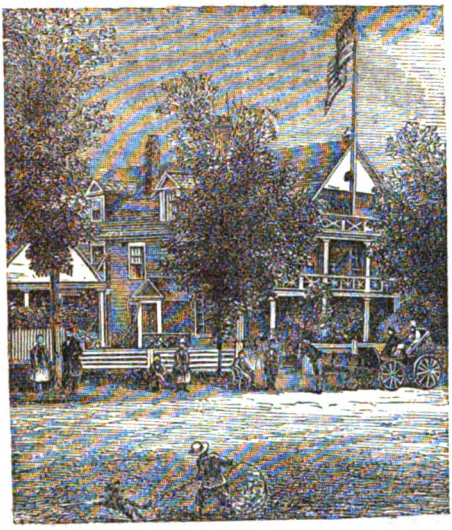
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oc-tf Dr. J. H. HERO.

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No drugs are given in this establishment. All sorts of diseases are treated successfully. Large numbers are cured who have utterly failed by other modes, having been pronounced incurable by drug doctors.

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We have the best of assistants.

We do not mean that any patient, who is in any sense curable, shall come here and leave us again without being restored.

We have now pursued the Hygienic mode for 15 years. Our practice having been extensive our experience has become large, and we are fully persuaded that few patients will ever come to us who will repent their coming.

Patients are treated successfully at all seasons of the year.

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feb-tf W. T. VAIL, M. D., Hill, N. H.

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ELECTRO-MEDICAL APPARATUS

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☞ Address Dr. JEROME KIDDER, 480 Broadway, New York. ap-tf

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The Proprietors of the New York Hygienic Institute would like to find a suitable place, somewhere within thirty or forty miles of New York City, for a Health Institution. Among the indispensable requisites of such a place are pure air and an abundance of pure, soft spring water. We should prefer a mountain scenery, near a lake, where there was enough of cultivated land for gardening purposes. Address

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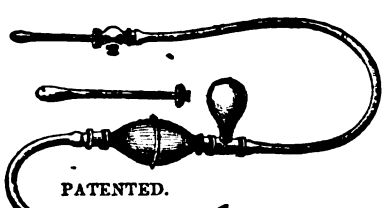
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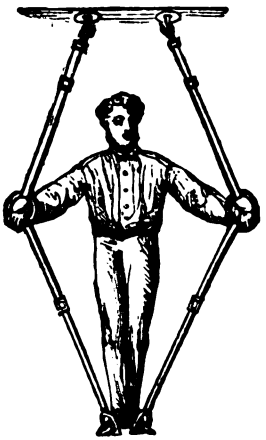
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