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## Who and What Are these Vegetarians?

[THE following communication, by an associate member of the Vegetarian Society of England, we have received through the kindness of R. Bailey Walker, Esq., secretary of the society. The Vegetarian Society has our most hearty good wishes for its continued prosperity. Its existence for nearly thirty years, and continued increase in numbers and influence, in spite of much opposition, are undoubtedly the results of good organization and persistent efforts on the part of its chief supporters. We cannot but think that a similar organization among the health reformers of America—perhaps on a little broader basis—would be productive of a much greater degree of success than is at present attained in the propagation of the truths of this reform.—ED.]

The writer had occasion, recently, to have some alterations made in his garden. The firm he employed for the work sent two skilled workmen, one being a man of five-and-twenty, while the other was a man considerably advanced in years. The latter exhibited remarkable activity, did his work in a thorough, business-like manner, and in point of quantity got through as much in one day as the younger man did in two. Not that the younger man was an idle or an inferior workman; nothing of the kind. But there was precision, and a scientific method of working in all that the old man put his hand to, while what forced itself peculiarly on my attention was that although the harder work, such as stooping, wheeling the barrow, and digging, fell to his lot, he never appeared tired, never swerved from his work, but maintained a close and uniformly steady application. This excited my curiosity. I was prompted to inquire his age, when he informed me that he was in his 78th year. I then asked him what was his diet. He replied that he lived entirely on bread and vegetables. I inquired next if he ever ate meat. His reply was, "Very seldom; my old woman may buy a pound of meat for Sunday's dinner, but I seldom touch it. I am fond of vegetables." The old gentleman had a profound belief in the hygienic value of his diet, since he assured me, as a final wind-up of our conversation, that he had "not had a pain to speak of these forty years!"

A simple fact of this sort will sometimes drive home the advantages of a given scheme with greater force than the most elaborate argument; and since I have been asked to furnish briefly an outline of the objects and operations of the Vegetarian Society, this must be my apology for introducing it here.

The Vegetarian Society of England was established in 1847, and bears upon its muster-roll not a few names which have been distinguished in science, art, and literature. At the present moment, Prof. F. W. Newman, one of the most cultivated intellects that this century perhaps has provided, occupies the presidential chair, while the list of vice-presidents includes the names of many who are recognized as men of note and influence. The society has corresponding secretaries in various foreign parts, who record from time to time the progress that is being made in the advocacy and adoption of its principles. Its head-quarters are at Manchester, whence the Executive Committee direct and control its beneficient propaganda. The object of the society is to induce habits of abstinence from the flesh of animals as food; and it is supported by (1) members, (2) associates, and (3) subscribers, the supporters of each class contributing a minimum subscription of half a crown a year. I may shortly explain that a *member* agrees to *adopt* the vegetarian system of diet, pays a yearly subscription, may vote at the society's meetings, receive the society's magazine, and is eligible

for election to any office of the society. An *associate* agrees to *promote* the vegetarian system, pays a yearly subscription, may *attend* the society's meetings, and receive the society's magazine; while a *subscriber* pays a yearly subscription and receives the magazine. At the beginning of July, 1876, 1818 members had been enrolled since the society's establishment, in 1847; while the number of associates, a class of supporters only instituted in 1875, was 380. After deducting the losses by death, withdrawal, backsliding, etc., it is computed that the society can still depend upon a thousand supporters.

The society's magazine, to which reference has been made, is published monthly, and is called the *Dietetic Reformer*. It is ably edited, and appears to enjoy a very wide circulation. Its pages are of course mainly devoted to the advocacy of vegetarian principles, though cognate subjects of reform, such as the health, temperance, and tobacco reforms, are by no means ignored. An anniversary meeting takes place in the latter part of the year, at Manchester, which is usually well attended. After the conference, which forms the business feature of the gathering, a *soiree* is usually held, at which, in addition to an excellent vegetarian banquet, there is a feast of reason and a flow of soul. I have attended two of these anniversaries, and can aver that the vegetarian platform is not deficient in good speakers.

Seldom has it been my lot to witness a more robust company of ladies and gentlemen, with the glow of health visibly mantling their cheeks, than was assembled on this last occasion, at Manchester. Nor have these excellent people merely the looks of health; they have also sturdy appetites. Not many bald heads are seen. Perhaps the one thing that surprised me most on the last occasion referred to was the splendidly efficient manner in which every vegetarian present showed off the capacity of a good appetite. In the Finnish language it is said that the word stomach is synonymous with soul; and in this view I can confidently state that a vegetarian has a very capacious soul indeed. To all those, therefore, who are deficient in appetite, I would say, Become vegetarians.

Finally, I should mention that the society has a very extensive and instructive literature, well worthy the perusal of those who take an intelligent interest in the subject.

AN ASSOCIATE.

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READER, study the laws of life and health, and obey them, and you will soon be able to snap your fingers at the doctors.

## The Use of Chloral.

BY T. F. HICKS, M. D.

LAST week there was a meeting of the Superintendents of the Hospitals for the Insane throughout the United States. Many of the most learned and practical physicians of the country were present. Their head-quarters were at the Continental Hotel. They held several meetings in the Continental parlors; one in the Blocksley alms-house, and two at the Friends' Hospital for the Insane, at Frankford. Their meetings were frequently informal. One at Frankford was held on the steps of the hospital, some members sitting on the steps and others standing in the yard. I had the privilege of attending their sessions a part of two days, visited with them Dr. Worthington's Hospital, at Frankford, and enjoyed with them the feast of ice-cream and of fruit, as well as of science.

In one of their meetings at Frankford, the question of the use of chloral was introduced by Dr. Smith, of Missouri. On his motion a committee was appointed to examine the subject, and report at next meeting. He thought much injury was done by injudicious use of this drug. It is a very unsafe remedy. Few chronic cases could bear it. He believed that frequently what was held for the regular progress of disease was but the results of chloral, and that sometimes it causes death.

Dr. Catlett, also of Missouri, corroborated Dr. Smith's statements, and said that he knew of three well authenticated cases of death from the administration of ordinary doses of chloral as a sedative.

Dr. Kirkbride agreed with what had been said. He had used chloral to some extent, but had learned to look upon it with great distrust.

Dr. McDonald, of Ward's Island, New York, had given it in large doses, and had never seen any evil result.

Dr. Kirkbride asked Dr. McDonald if he had not had patients taking chloral who died suddenly and unexpectedly. That had been his sad experience. He would rather his medical friends would not administer it to him under any circumstances.

Another physician made a similar remark.

Another said that he had given chloral in cases of chronic mania, and had found that the patient's irritability had been increased. Instead of producing sleep, it aggravated the nervous disorder.

Dr. Kirkbride said, "I sleep so well at night that if I took chloral I should not give it the credit."

Some one asked: "What do you depend upon, Doctor?"

Dr. Kirkbride—"Hard work."

Dr. Compton, of Missouri, was decidedly in favor of chloral. He had now a patient in his institution to whom a dose of chloral had been administered every evening for several years. He did not know that it had any curative effect, but it was given that the patient might have a good night's rest, which he could not get without it. He had never seen any bad effects from its use.

REMARKS ON THE ABOVE.

Dr. Compton had "never seen any bad effects from the use of chloral." It occurred to me that his own remarks gave a hint of bad effects.

1. The chronic inability to sleep might have been an effect of the chloral.

2. The sleep which was produced by chloral was not sound, restoring, refreshing sleep, or it would have been likely to have some curative effect. In other words, the condition of the patient which required the continued use of chloral was probably the result of chloral itself. If the patient, having been placed under the most favorable conditions, had never taken chloral or anything of the kind, the probability is that he would have gotten natural sleep, and in the course of a few weeks, or months, have recovered. But having taken chloral, a condition of the system demanding its continuance was set up, and in this very condition we see a possible reason why the patient never recovered.

My impression is, that if a patient can get two or three hours of natural sleep in the twenty-four, he is much more surely on the way toward permanent recovery than he would be to sleep twelve hours under the influence of chloral or of any kind of soporific or narcotic drug.

More—a single night of natural repose is perhaps worth more toward the real cure of the patient than years of such sleep as chloral induces.

"The best way," as Dr. B. remarked, "is to get along without hypnotics, if possible." And if for certain temporary reasons, it is thought best, at times, to use them, their use should be discontinued as speedily as possible, lest a depraved and sleepless condition of the brain be made chronic.

Then, again, chloral is a poison. All poisons are unfriendly to life. Their unfriendliness to life is what constitutes them poisons. Can it be that the giving of any poison is an unmixed good? The good secured (admitting that in rare cases they are admissible) is at the expense of some subsequent damage. From the nature of the case, there must be an evil effect, whether we see it or not. When, therefore, after the administration of any poison, a physician says, "No evil effects followed," he says what he does not know, and what he has no right to assume.

DANGEROUS EXPEDIENTS — CHLORALIZING TO RELIEVE ATTENDANTS.

In this connection it may not be amiss to mention another point. Sometimes attendants may be tempted to give soporifics to noisy patients to still them, and make it easy to take care of them. It is needless to say that such a course should never be allowed. Human life is too sacred to be made the subject of experiment for such reasons. Not a drop of medicine should be allowed *under any circumstances* unless, in the judgment of the physician, it is best—permanently best—for the patient himself.

CHLORALIZING ONE FOR THE SAKE OF OTHERS.

Again—stupefying medicines are sometimes administered to noisy patients, not for their own sake, but to quiet them that others may sleep. The arrangement which requires this is defective. There should be facility for the isolation of noisy patients, that they may not disturb their neighbors. A good plan is to have cottages for such at some distance from the main buildings. The friends of every patient send him to the asylum with the expectation that he will receive the treatment best possible for himself, individually. They have a right to send him with this expectation.

The asylum is built for the purpose of furnishing protection, and, if possible, cure, for each patient. The physician's responsibility, too, is for each patient. He has no right to poison one for the sake of others. He has no right to experiment upon the life of one for the accommodation of others. He has no right to give a patient that which will not be likely to benefit, but which will possibly injure, if not kill him, for the sake of a quiet house. The very suggestion of such a policy is a sufficient condemnation of it. It is simply outrageous and murderous.

If a patient is noisy, divert him; change his mind, if possible, by a new thought. If this cannot be done, or if there is no one to attend to him, let him vociferate; let him sing or talk on. When he gets tired out, he will stop, and will then, perhaps, get natural sleep, from which he may awake in a better mind.

## Fever and Ague.—No. 2.

### TREATMENT.

PERHAPS no other disease, unless it be rheumatism, has been treated by so many different remedies. When there is a long list of remedies for a disease, it is very good evidence that none of them are satisfactory. Each has at some time attained celebrity by reason of the fact that the majority of cases of ague end spontaneously after a few paroxysms. The remedy used just previous to the last shake is sure to have the credit of effecting a cure.

Quinine is by many regarded as almost a specific; but there are numerous instances in which it does not cure the *disease*, even, to say nothing about the miserable *patient*. Its use is frequently productive of immediate and serious injury, sometimes occasioning permanent blindness and deafness. It is a violent poison. When taken into the blood it paralyzes the white blood corpuscles, besides occasioning injury to the organs upon which is thrown the task of eliminating it from the system. It is also believed by many physicians that the use of quinine will produce chills resembling those of ague.

There are numerous patent nostrums which claim to be specifics for the cure of this disease. Many of them claim, as a recommendation, that they are free from quinine. That the claim is false, has been proved in many cases; and when quinine is absent, it is replaced by cinchonia—a substance closely allied to quinia, being obtained from the same source, and equally objectionable—or by arsenic, a poison even worse than either of the others.

That intermittent fever can be cured without the use of any of these poisons has been demonstrated again and again. Such remedies as spiders' webs and placebos have often proven eminently successful. A violent mental shock, fear, hate, joy, or grief, has suddenly brought the paroxysms to an end, when other remedies have been unsuccessful. Hundreds of people are ready to testify that they have been cured of the disease by such remedies as creeping down stairs head foremost three times in succession, or some equally absurd proceeding. A powerful will has not infrequently checked a paroxysm at its beginning. Again, the disease has been known to continue on for months in spite of every remedy that could be employed.

When quinine is employed, the "chills" are often "broken," but only to return again in a few days in a great many cases. Quinia does not destroy the malarial poison in the blood, it does not eliminate it from the system, it simply occasions vital resistance or action in another direction. From an attempt to eliminate malaria, the vital organs are diverted to an attempt to expel quinine from the vital domain. While quinia, arsenic, cinchonia, and other remedies may cure the disease, they evidently fail to cure the patient, since the cause of the disease is left in the system; and in many instances the vital organs are greatly injured by the employment of large quantities of those poisonous drugs.

We would recommend the following plan of curing the patient of this disease:—

1. If possible, remove the patient from the malarial district in which he has contracted the disease. All efforts to effect a cure may be unavailing if he continues to receive into his system the cause of the malady.

2. Restrict his diet. Allow him only the simplest food, and that in very sparing quantity. A cup of oatmeal, graham, or cornmeal gruel, eaten with a few graham crackers or dry toast, with a baked sweet apple, would constitute a very admirable meal for an ague patient. If the paroxysm occurs in the forenoon, as it usually does, allow no food until after the sweating stage is well established. The diet is a most essential part of the treatment. The appetite must be restricted. Overeating will prolong the disease indefinitely; and a single injudicious meal of unwholesome, clogging articles of food will cause a relapse when the patient is just recovering. During the paroxysm the stomach cannot digest food; and any food in the stomach at that time will be likely to cause nausea and vomiting, and will increase the fever. Almost entire abstinence may be practiced for a few days without injury and with decided benefit. In long-continued cases, the patient must, of course, take sufficient nourishment to maintain his strength, or as much as he can digest and assimilate well.

3. During the first paroxysms, only palliative measures should be employed. If the patient has nausea, give him warm water to drink until he vomits. If the time is known at which the chill will begin, do not allow the patient to drink cold water for an hour previous, and be careful to have his hair moistened before the beginning of the chill, as wetting the head during the chill is often very unpleasant. Have the patient in bed when the chill begins, with woolen sheets next the body, and warm bottles, bricks, etc., wrapped in woolen cloths, at his feet, knees, sides, and back. Bags of hot meal, sand, or salt, are excellent means of applying dry heat. A warm application to the stomach will often

give great relief. But in spite of all this the teeth will chatter, and the skin will continue to give the "goose-flesh" appearance until the chill is over; it is thought, however, that the severity of the chill is thus lessened, and its duration shortened. There is danger of carrying this heating process too far; and the pulse of the patient should be carefully watched, as well as his sensations, and the warm applications should be promptly removed upon the first indications of the beginning of the hot stage. Hot drinks may be given freely during the chill, but should also be discontinued upon the approach of the fever. Neglect of these precautions will sometimes cause the fever to rise so high as to occasion delirium.

4. As the chill gives place to the fever, remove in succession one cover after another as the fever increases. Replace the woolen sheets with cotton ones. The best plan is to have the cotton sheets in place, with the woolen sheets between them, so that nothing is required but the removal of the latter. Now keep the head wet with cool water. If a head cap or compress is used, it must be changed as often as once in five minutes. When the fever is at its hight, the whole body may be sponged with tepid water, or the patient may be placed in a cool pack for ten minutes. If necessary, the sheet may be wrung out of cool water and re-applied at the end of ten minutes for another like period. This treatment will give great relief from the burning heat and thirst of the hot stage. Cooling drinks, lemonade, tamarind water, and drinks made with other acid fruits may be given freely to the patient as he may desire.

5. During the sweating stage the body should be frequently wiped with soft flannel. A tepid full-bath, or a half-bath for ten or fifteen minutes, will shorten this stage. At the conclusion of the sweating stage, a thorough sponge-bath should be administered, and then the clothing should be entirely changed for that which is clean and dry.

6. In the interval between the paroxysms the most vigorous treatment should be administered; it should be directed toward the elimination of the disturbing poison from the system. The following is a very good form of treatment adapted to most cases: A sitz-bath and foot-bath combined, the former at 100°, the latter at 105°, for fifteen minutes, or until a slight perspiration is induced. The patient should be well surrounded with blankets to retain the heat. The temperature may be elevated a little at the end of ten minutes if perspiration is not readily induced. The object is not to produce profuse sweating, but only to induce activity of the perspiratory glands. When this is secured, place the patient at once in a wet-sheet-pack, wringing the sheet from water at 90°. The pack may be continued for an hour if the patient is comfortable. After the pack, administer a rubbing-wet-sheet-bath at 90° and 85°. The best time for this treatment, in the tertiary form of ague, is in the forenoon of the well day at about 10 A. M. If a paroxysm occurs every day, it may be administered at four or five o'clock in the afternoon.

A large fomentation should be applied to the abdomen, and especially over the spleen and the liver, every day. The abdominal girdle should be worn constantly, except during the paroxysm. The bowels should be kept free by an enema every day or every other day, as necessary; but it is preferable to secure a natural passage by the use of proper diet, and by fomentations, the abdominal bandage, and thorough kneading of the abdomen, as great harm may result from continuous daily resort to the enema, as well as from the prolonged use of cathartics.

If this treatment is continued faithfully for a week or two, the cases of intermittent fever which will not recover within that period will be found very rare indeed; yet such cases will occur, and what shall then be done? After two weeks of faithful treatment, it may be reasonably concluded that the malarial poison has been pretty well eliminated from the system. If the paroxysms still continue, they may be regarded as the result of a perverted habit formed by the vital organs, rather than as a necessary remedial effort. There can be no harm, then, in cutting them short as quickly as possible. How shall this be done? The following methods are usually successful:—

Ascertain the precise hour at which the beginning of the chill may be expected. Half an hour before this time, place the patient in bed and make the same preparations as for palliative treatment already described, only on a more thorough plan. Heat porous bricks very hot, dip them in hot water for a few seconds, and then after wrapping them in woolen cloths, apply them to the patient. Place them at the feet, between the knees, at the side of the thighs, between the arms and the sides of the chest, at the back, and over the stomach. Ears of corn, boiled for fifteen minutes and then placed end to end in a long, narrow bag, may be applied the whole length of the spine. In addition to these external applications, give the patient copious draughts of hot water, hot lemonade, or any agreeable and harmless hot drink. The object is to forestall the chill by establishing such an activity of the skin as will prevent the spas-

modic contraction of its blood-vessels which occasions it. The treatment described will generally effect this; and by preventing the chill, the fever will also be prevented, as it is largely the result of reaction from the chill.

Another mode of effecting the same thing is to place the patient in a hot-air or a vapor-bath just before the time for the chill. The temperature of the hot-air-bath may be raised to 160°; that of the vapor-bath to 115°. In giving this hot treatment, great care must be used that it is not continued too long, and that the temperature is not raised too high. We have known cases of violent delirium produced by neglect of this precaution.

It was an old notion that relapses would be prevented if the disease was allowed to "wear itself out." In acting in accordance with this idea, many ague patients have found themselves worn out instead of the disease. Experience has shown that the theory was not well founded; and some eminent medical men of large experience with this disease assert that relapses are much more frequent in those who have had the disease a long time than in others. It is quite certain that consumption, dropsy, enlargement of the spleen, and other serious diseases are often occasioned by long-continued intermittent fever.

With the consideration of one more question relating to this disease, we will conclude this article. We are often asked, Are there no circumstances under which a person would be justified in using medicine, even quinine, in this disease? From a careful consideration of the different phases of the question, we are compelled to conclude that such circumstances do occur. Occasionally it happens that all the resources of water treatment available in a particular case fail to accomplish the desired result. The paroxysms continue with unmitigated severity week after week. The patient grows constantly weaker, until vigorous treatment is no longer judicious. What shall be done? Shall we do as one fanatical hygienist advised, let the patient die rather than take a poison? It seems to us that a wiser plan would be to make a choice of evils, and choose the less. The system has been so thoroughly cleansed by treatment and profuse prespiration that it is hardly supposable that any considerable proportion of the malarial poison which induced the disease is still retained in it. The paroxysms are now the result of a condition of the system analagous to that which occasions similar paroxysms in consumption, and are of a nervous character. In these cases, the system seems to form a habit of producing a paroxysm at regular intervals. If this habit can be broken in any way, the disease will be at an end. Quinia will do this in nineteen cases out of twenty; and after such treatment as has been already described, a very small dose will be found sufficient. The poisonous quinia excites vital resistance, and so expends vitality. But still more vitality will be lost by the continuance of the disease. Hence, we conceive that in such cases the occasional use of the drug may be wise; but the cases for such use will be exceedingly rare if other methods are faithfully tried.

If any dissent from these views, they have a perfect right to do so. Every man has a right to his own opinion, and must think and reason for himself from the data given him.

## Physical Decline of American Women.

BY A. K. GARDNER, A. M., M. D.

In the present article we shall depart from the beaten track worn by the measured feet of fervid orators never weary in praising the charms of lovely woman, her grace of form, her springing step, her glowing cheek, her sparkling eye, her sweet smile irradiating every action. We shall leave poetry for fact, and shall forget woman as she was; and in no sounding periods shall attempt to tell why woman, instead of being as above described, is a haggard creature, dull-eyed and sallow, pinched in form, an unfit mother, not a help-meet, but a drag on the energy, spirits, and resolution of her partner in life. We shall not attempt to consider woman as an angel, and to solve the great *questio vexata*, "why she was born without wings." We shall not even consider her in her æsthetic and intellectual sphere, but in the most ungallant manner we shall class her among ichthyosauri and pachydermata, among bovine and feline, among milleped, polyped and quadruped, and proceed to hold her up for inspection as a simple biped, an animal, and shall then leave the theme for individual reflection.

Our theme, then, is the "Causes of the Present Physical Decline of Woman." We read in the Old Testament, in the fifth chapter of Genesis, "In the day that God created man, in the likeness of God made he him; male and female created he them, and blessed them, and called their name Adam, in the day when they were created." With the exception of the biblical account of the construction of woman out of the rib of Adam, taken from him when asleep—certainly not easily to be comprehended in its full meaning—we have no statement respecting the early character of woman. "Male and female created he

them," does not imply that any physical difference existed between the sexes as regards strength, endurance, or capacity, either bodily or mentally. We surely cannot infer that any such difference should or does exist naturally. True, indeed, it is, that in man and many animals, birds, and perhaps other specimens of animated life, the male is larger than the female, but in proportion to its size we do not recognize any diversity of physical force. In the want of any statement to that effect respecting man, we have undoubtedly a just right to reason by analogy, and we can find no lack of comparative vigor in the sexes of any animals. The lioness, the tigress, the female bear, etc., are in nowise inferior in vigor to the male, save as they may or not be different in size. The cow is, in many lands, worked like the ox, with no marked contrast when of equal size and weight. The mare is not judged one whit less muscular or robust than the horse. Why, then, is it that the woman is physically inferior to the man?

To this we answer, She is not inferior, naturally. We will prove this by the females of past days, by the women of Jerusalem, Rome, Greece, concerning whom history gives us abundant details respecting their life, manners, dress, and the like. Is it possible that where these matters are spoken of with so much minuteness, by so astute a sanitary lawgiver as Moses, by so thoroughly educated physicians as Hippocrates or Galen, such philosophers as Aristotle and Pliny, any such difference would have been forgotten? Is it probable that Sophocles, Euripides, Catullus, Juvenal, Ovid, and other painters of the domestic manners of their times, should have neglected such great diversities in the physical capacities of the sexes as we now observe, if they actually existed?

Neither do we find any such record of the physical inferiority of woman to her lord and master recorded in the writings of later days. Pope—who loved to have his fling at the pampered women of the court and the licentious women of the town, no more than the writers of any other stamp of the same period—makes no charges of a natural weakness of the animal woman. No record of this kind is made by the historians of the colonists of the various settlements of America, whether Dutch, English, French, or Spanish.

Finally, the Indian woman of this country, when unexposed to the damning influences of civilization upon the animal economy, is, *pari passu*, equal to the man, enduring cold, hardships, and more labor than the man, with equal results. Dr. Livingstone, in his travels in South Africa, while he recognizes the existence of female diseases among the women, does not note any physical inferiority of the women to the men. I am also informed by gentlemen of extensive experience among the negroes of the South, that the muscular vigor of the men and women among the field-hands is not markedly different, unless when abused while carrying children, or being forced to hard work too speedily after their lying-in.

Now, what is the recognizable difference in the lot of woman from the past to the present, between the savage and the civilized? Her lot is said to be ameliorated. From being considered a pet and inferior to man, she is now considered a pet and equal to man. As a pet, she is carefully guarded and not allowed to do anything, so far as this is possible. The rich being able to effect this end, their women are all sick—the poor, comparatively so. The whole sex are being killed by kindness.

Let us take the actual condition of the rich children of different sexes in this city of New York, and, looking at them, let us see if there is any wonder that they are sickly, miserable, and inferior in physical force to what they should be, and why it is that the female is constantly, after she can walk alone, far below the male even in his imperfect physical development.

So long as children are infants, wearing the same dress, their exposures are the same, but as soon as the boy leaves his cumbersome garments, the swaddling-clothes, which must be kept "fit to be seen," the distinction begins. The right of woman "to be free and equal" with man will come with a Declaration of Independence which shall strip off the fetters of petticoats and the gilded meshes of lace which have so long bound down the gentler sex.

For a short period the rich boy is little benefited by the change of attire. The shape of his garments does, indeed, give liberty to the limbs and play to the muscles, but the exigencies of rich velvet jackets, silken trowsers, and white shirts, with their lace "fret-work" of frills and furbelows, require him to be constantly guarded, and the natural ebullitions of his animal life are restrained by imported bog-trotters, educated to know what dirt is, or by a more fashionable *bonne d' enfant*, who unites to her duties instruction in the freedom of Parisian morals with the restraints of French manners.

Soon the American boy is beyond the demoralizing influences of Hyperion curls which have so long fed the sickly vanity of his enervated mother. His velvet cap, which he so recklessly offered to his friends to be "pegged at" with tops, has given place to one of meaner stuff, and in games of ball, tag,

and the like, he neither "respects his cloth" himself, nor exacts regard for it from others. Witness the impetuosity with which those boys, in yonder retired street, rush in friendly strife after the "shinny ball;" hear their full-mouthed cry! Does not the air permeate the lungs to their farthest cranny, leaving no portion of their tissue full of stagnant blood? Are not the pores of their skins opened to the free out-pouring of the waste of the body?

We may speedily follow the boy in his career through life, and while we find him free from the bad effects of tobacco and alcoholic stimulants, engaged in out-of-door exercise, even while breathing the air of a city thronged by near a million souls, and most imperfectly attended to by the authorities in its sanitary matters, yet we find the man comparatively vigorous. Debility and disease commence with the boy confined over his book in ill-ventilated school-rooms, neglecting healthy exercise for the ambition of literary superiority; or, in our own city, most frequently bent over a ledger. It is worthy of note, that there is scarcely a single well-ventilated private counting-room in New York, and most of the bank-rooms are little better. The New York merchant changes his badly heated house for his worse heated counting-room, not by the healthy walk from one to the other, but by the locomotion of a crowded, shut-up omnibus or car. Is it strange that the health of the business-men of this city is deteriorating; that gout, dyspepsia, and all chronic diseases, in addition to consumptions, erroneously supposed to be the only malady engendered by want of exercise and bad air, are greatly on the increase?

But although the physical stamina of the men is not what it might be, it is far superior to that of the women, to whom we will again turn. We will start with the girl who has kept pace with her brother until the date of his assumption of breeches and their inalienable privileges. We feel that we are treating upon a delicate subject, and we beg our readers to attend to the general idea, rather than to any peculiar form of expression, or to any particular illustration, about which there may be more than one opinion.

So soon as the sex of the child is made evident by any outward manifestation or dress, so soon does the bodily degeneracy commence. The child is then considered as an ornament, in the present or the future. The respectability of the mother is dependent upon the immaculate purity of its worked pantalettes and under-clothing—no mud-pies for you, my dear, after this. "Julia, my dear, or Julia, you awful freckle face, you *must* put on your flat, and be sure and keep out of the sun"—that is, go into the damp shade till you grow up like a potato-sprout in the cellar, white and semi-vitalized. "But, Julia, I see the wind is blowing. Wind is horrible for freckles; you can't go out to-day." To-morrow it is, "Clementina Angelica, it is too damp for you to go out." "But, mother, George is out playing!" "Yes; George is a great boy."

Soon Julia and Clementina Angelica go to a fashionable boarding-school, where they learn to play a polka, or crochet and the like; and for health, walk up and down Broadway twice a week in a procession, the principal use of which is its serving as an advertisement of Madam X———'s school.

Look at the dress of woman. Were man to so direct the fashion of woman's dress, in order to enable him, by physical force, to overcome her and tyrannize over her, he could not more completely fetter her than she shackles herself. Her sleeves are placed so low down upon the waist that she is unable to raise her hands to the top of her head, or use them freely in any direction; her limbs are restrained in their motions by a profusion of flowing skirts, and her breathing interrupted by lacings or corsets, which displace the organs and slowly destroy life. It is in vain, however, to hope for any relief from the tyranny of fashion. Were these injuries caused by any edict of church or state, long ere this they would have been abrogated. Against the decrees of fashion there is no appeal. We must, therefore, seek for other evils more curable.

Hudibras well said of men, what is especially applicable to women of the present time, in their attention to matters of health; they

> "Compound for sins they are inclined to
> By damning those they have no mind to."

They say that the reason of their condition is, that they are the ills consequent upon maternity; that it is the formation of the modern houses; that they are compelled to go up too many flights of stairs; that they are heated with furnaces, etc. They say nothing of late hours, late suppers, improper clothing at parties and public places, of the bad results from the modern dances, or the want of vigorous out-of-door exercise, of ill-ventilated churches, lecture-rooms, ball-rooms, theaters. We will look at their reasons and those just given.

The ills of maternity are great. The curse has come down to the present generation. But why is it magnified during the last half century? Because woman has become a doll, to be decked and draped, and carried out, in-

stead of an active, laborious, working helpmeet to man. We have, within a year, had considerable experience among opera dancers, whose occupation, indeed, is unfortunately not so much in the open air as might be desired, but which, in its daily study and subsequent practice requires an amount of long-continued muscular energy of the severest character, little recognized or understood by the community. Hard and protracted as this is, it was not intermitted by some, except two weeks before their lying-in, and the pains of labor were, in every case, most notably diminished in such a manner as could be attributed solely to their peculiar labor, which gives great suppleness of limb, free play of muscle, and that happy union of power and pliability most to be desired. There is reason why the necessities of maternity in all its bearings should make woman less reliable than man for certain duties—but why exercise of these functions in the nineteenth century should be different from the same actions in the sixteenth or eighteenth century, is the question to be solved.

Does it depend upon any peculiar feature in our domestic architecture? Do all these maladies spring from the fact that our houses contain five or six flights of stairs, one above another?

As this reason is urged by many, in all seriousness, it behooves us to answer it without any of the feelings which perhaps so preposterous a reason might excite.

First, we are willing to allow that to frequently ascend a series of flights of stairs may very probably be inconvenient and painful, and even impossible, to any one feeble or diseased in any serious manner; but it should be remembered that the old-fashioned houses had double flights of stairs, while the modern ones have the same number, but placed one above another. Then, owing to the modern conveniences for warming, lighting, watering, and the less necessities for cleaning in consequence, we do not believe that there is so much running over the house as formerly.

Next, we do not imagine that any such exercise could produce, without other ulterior causes, the local diseases complained of, for various reasons. The present women of Switzerland, who are engaged in tending sheep and goats, who follow them day after day, up one mountain-side and down another, jumping from rock to rock, running down the declivities and up the opposite steeps, are not distinguished for peculiar ills, but rather for their robustness. Neither are the German market women of Europe, who walk long distances over uneven ground, where no roads are laid out, with heavy burdens upon their heads or backs, alike when pregnant as otherwise. Nor are the servants in the very houses alluded to affected by the diseases of their mistresses, yet, they run over the same stairs many times to their mistress's once.

That the great blessing of furnaces is often abused, we are ready to admit; that when improperly used they do burn up the oxygen of the air to be breathed, we know. But when properly constructed and properly managed, we believe that in no manner can a house be so healthfully heated, to say nothing of cheapness, cleanliness, and convenience.

It is among females of the cities and large towns, imbued with city manners and customs, that these maladies are most rife, and they are found only in exceptional cases among our poorer classes, who are not exposed to fashionable follies. In cities, all of the better classes of the population live not so much for themselves as for other people; more solicitous as to what Mrs. Grundy may say than for their own comfort and health. They are constantly going somewhere at improper times, and seasons, and hours. So delicate in health that they cannot go out to perform any duty if the sky be a little overcast; in fact, accustomed to spend the most of the time cooped up in the house, dressed, perhaps, too warmly; yet in the evening, no matter how stormy, freezing, or tempestuous, they can ride in a coach, with head and shoulders uncovered; or with clothes well tucked up under their arms, they can walk through slush and mire to sit for hours in a cold theater, an ill-ventilated vestry or lecture-room, or, worse still, in an over-heated, over-crowded ball-room.

But this is not bad enough; no matter whether it is at the time of the periodic functions or not, the young girl whose constitution is yet in process of formation, or the young matron engaged in the great work for which the division into sexes was created, spends hours in the most outrageous muscular exertions, in dances which would seem to have been invented by some arch enemy of woman, so effectually do they, aided by a too great weight of clothing, shake up the whole frame and dislocate every internal organ pertaining to womanhood.

We must be allowed to dwell upon this branch of the subject. Just think of the young woman who spends her days with a book or with her needle in the quiet of her own house, not even going out for a walk, save semi-occasionally, when she takes an omnibus at the end of the first block from fatigue. Think of this fragile creature overcoming this chronic habit, and the languor which her periodic condition imparts, with organs excited, turgid, and enlarged, dancing these muscular dances (so dif-

ferent from the gliding graces of the mazy waltz) then stimulating and aggravating the difficulties by libations of champagne. Think, too, of the cream, ices, oysters, and jellies indulged in at this unseasonable hour, and in what quantities. And then, when every pore is streaming, when the pulse is beating wildly, half-clad, to seek her home through the sleet and frost. Perhaps our lady lives so near that a carriage is not deemed necessary, and what a chill strikes through the India-rubbers in the walk of half-a-dozen houses; and then to bed in the small hours, perhaps to repeat the same thing every night or two for the season.

This is no fancy picture. You know it, yet you ask me, Why is it that this young creature has this and that malady? All the women of New York, and of the United States (the only country in the world where young girls of sixteen are indulged in that way), are doing the same foolish thing the whole season through, and you say, "Is it not wonderful that all the women are complaining of this and that; and it must be the English basement houses."

What Fifth Avenue does, the girls who earn their living by dress-making, book-folding, shop-keeping, and the like—factory-girls in the country and the country aristocracy—imitate as far as they are able.

Is not this a suicidal epidemic?

Although the words of eloquent warning so forcibly uttered by Miss Catherine Sedgwick have had so little effect upon her countrywomen in introducing the general wearing of skirts held up by the shoulders, we will reiterate the cry of "Shoulder-straps, shoulder-straps!" till it shall awaken every mother to the dangers hanging over her own child, every woman to the oppressive cincture hanging around her own waist, pressing upon vital organs till they are forced into unnatural situations, destroying the capillary circulation in the skin and external layers of vessels; creating deep-seated congestions, resulting in chronic if not life-long weaknesses, which make life wearisome and its duties impossible. —*Knickerbocker Magazine.*

*(To be Continued.)*

## Perspiration.

THE normal temperature of the body never varies far from 100° winter or summer. This equalizing of the heat of the body, keeping it at a uniform standard, is due, in a great measure, to perspiration, or sweating, which is carried on over the entire surface of the body.

Situated underneath the skin, are found a multitude of minute tubular bodies called "perspiratory" or "sweat glands." The apertures of these glands present themselves at the surface of the body. These apertures are the termini of very minute canals, the diameter of one of which is about 1-300th of an inch. Tracing one of these ducts, or canals, inward, we find that it ends in a globular coil, or knot, presenting very much the appearance of a mass of small intestines in miniature. The only opening of these glands is at the external end, the inner end being blind, or closed.

Closely interlaced with the coil of the gland, is a mesh-work of capillary vessels; consequently, the blood is separated from the cavity of the gland only by the walls of the capillaries and of the glandular tube, which constitutes but a very thin partition. Thus it is that the blood is exposed to a large, and comparatively free, surface, by which certain of its contents are ejected.

Perhaps nearly all, if not all, have observed that a person sweats more profusely in some parts than in other parts of the body. The variation of the number of the glands in different parts of the body may account for this. They are found largely more numerous in the regions of the hands and feet, where they number from two to three thousand to the square inch. The smallest number is found on the back and neck—about four hundred per square inch.

The anatomist, Wilson, gives 7,000,000 as his estimate of the whole number of sweat glands of the body. Allowing $\frac{1}{4}$th of an inch as the length of each gland, if unraveled, this would make, in an estimate, the aggregate length of the whole number of glands to be nearly 28 miles.

The estimate has been made that in twenty-four hours an adult will give off about two pounds of perspired matter.

The perspiration, some persons suppose, consists of nothing but water; if they will consider it to be *dirty water*, they will be more nearly correct; and then, perhaps, they will be enabled to see a more close connection between a *frequent* bathing of the whole body, and cleanliness of person.

Water is capable of holding in solution much foreign matter, which fact every washerwoman practically applies in removing dirt from our clothing.

Water is the agent employed by which the human system is enabled to get rid of some of its waste products. Reducing them to solubility, the water is transuded to the surface of the body by means of the sweat glands. There, the outside air will absorb the greater part of the water, but the solid matter will

be left as a deposit on the skin; and thus it will be continued, accumulating, layer upon layer, much to the injury of the health of the person, unless frequent bathing in pure water is employed. During the hot season of the year, when perspiration is more profuse, a daily bath is indispensable to cleanliness, and greatly conducive to health.

It is by being fully acquainted with the laws of our being, and by our harmonious co-operation in fulfilling those laws, that we can hope to enjoy comparatively perfect health.

"Know Thyself," which was an inscription over the entrance of a famous health temple of the ancients, is an injunction that is capable of being carried much farther in this age of enlightenment and reason than it was in any prior age. W. J. F.

## Feeling and Principle.

In almost any of our communities you may set ten persons to inquire into the religious state of their neighbors, and in nine cases out of the ten the first question will be about feelings, not, What are your convictions of truth, your principles of conduct, the root and ground of your faith in God, or in the solid and fixed facts of a revealed gospel and historical kingdom of our Lord? but what is your feeling? Not, What are you standing on? not whether a holy Christ has your loyal and unflinching obedience; not how far you are practically pledged to a righteous Master —which are certainly the chief matters now, as they were in the days and the preaching of the apostles—but rather whether the sensibilities are lively, and the devout emotions enthusiastic.

Religious feeling is one of the fruits of the Spirit; it has much to do in kindling and sustaining religious exertion. But feeling is certainly the most irregular element in our composition, and it so far depends on outward conditions that it makes one of the least trustworthy tests of the actual frame of a Christian soul before God. Feeling belongs to the passive part of our nature; principle to the active part. Feeling depends on a sensitive surface; principle on the depths of moral purity. We feel spontaneously, and often whether we would or not; there is no principle and no duty without a direct exertion of the will. Feeling may be sudden; duty is deliberate. Feeling may be transient; duty is constant. Feeling changes with temperament, with states of health and nerves, with a thousand fickle external influences. Principle is independent of all physical or alterable circumstances, moves straight on through all the moods and climates, sails by fixed stars, and is the same secure and glorious thing through all the shifting seasons, though the mountains of prosperity were torn up and cast into the sea.—*Dr. Huntington.*

**Eccentric People.**—The French regard all peculiar people as being in a certain degree insane, and impose upon those reckless folk described as prodigals the restraint of a guardian, or rather a curator, and thus protect them and their families from the mischief which their own folly would entail. Our laws are less paternal, and the free-born American may squander the finest fortune by his absurd and wicked conduct, while his relatives are powerless to interfere unless the mind of the squanderer is actually suffering from a legally recognized disease as well as from recklessness, however blind and hopeless. On a somewhat similar principle a testator may dispose of his fortune in a preposterous and cruel manner, and his will is upheld, unless other convincing evidence is given of his unsoundness of mind. Nay, a man may even be a complete maniac in one or more respects, yet if in the matter of disposing he retains his faculties, it will be extremely difficult to set aside his will. Few people understand how to deal with those unfortunates, who, while not being actually insane, are weak-minded or eccentric. Just as a sick person obtains no consideration and excites no sympathy until his complaint has become developed into a serious malady, so the weak-minded creature is disregarded or even ridiculed until his affliction has reached a stage in which it no longer excites laughter, but horror and dismay. Parents are greatly to blame who pooh-pooh the warnings which nature almost always has thrown out, and who send to school children suspected even in the faintest degree of mental feebleness, either hereditary or otherwise. The boy genius is most usually withheld by his feelings of humanity or good taste from ridiculing absolute lunatics. But when the malady is only one of the slighter description he considers the victim a natural and admirable object for unlimited and merciless chaff. There is not a doubt that this mode of treatment is the most efficient in aggravating a latent disorder of the mind, and that by it many a boy, and many a man, too, has been forced into the very malady from which the greatest care should have been taken to guard him.

# LITERARY MISCELLANY

Devoted to Natural History, Mental and Moral Culture, Social Science, and other Interesting Topics.

## Centennial Exhibition Sketches.

THE attendance at the great show has continued to increase until it seems certain that the enterprise will be a financial success, notwithstanding the prodigious cost of the buildings, most of which will be torn down as soon as the exhibition closes, and the enormous running expenses. Even the oppressive heat, which has been so great during the last two or three weeks as to be nearly unbearable, has not very greatly reduced the daily attendance. Perhaps this may be due to the fact that such admirable means have been provided for ventilation, while the floors of the buildings are kept sprinkled with water, that the exhibition is about the coolest place to be found when the thermometer ranges between ninety and one hundred and two degrees in the shade. It must certainly be refreshing to people with sensitive olfactories to escape from the smells of sewer gas, coal smoke, tanneries, and rendering establishments, which abound in most portions of the city, into the park enclosure, where pure air is generally attainable.

This month we shall glance at the two large buildings nearest the Main Building, the Art Gallery, or Memorial Hall, and Machinery Hall.

### THE ART GALLERY.

Memorial Hall is a fire-proof structure of iron and granite. It covers an acre and a half, and cost $1,500,000.00. Its dome rises one hundred and fifty feet above the ground, and is surmounted by a mammoth ball, supporting the figure of Columbia. The number of applications for space was so much greater than anticipated that it became necessary to erect an additional structure even more spacious than the one described, in the rear of the latter. These two buildings afford 135,000 square feet of wall space, and more than one-third as much available floor space, which is all occupied with the various styles of paintings, sculpture, mosaics, and other works of art.

Upon entering this grand display of the works of the most talented artists of all nations, one is very soon bewildered by the endless variety of beautiful subjects which meet his eye, and he soon finds himself staring vacantly at some exquisite production, vainly trying to grasp the idea of the artist in the work of art before him.

As in most collections of this kind, the great majority of the pieces are mere caricatures of nature. The delicate softness with which nature blends her coloring is represented on canvas by startling contrasts of brilliant hues, which, though gorgeous and glittering, are not beautiful. But now and then one meets the product of a master-hand, which pictures nature with most wondrous truthfulness. Before such works he loves to linger, continually detecting new beauties as he looks, and with regret he hastens on, taking one lingering look as he crowds his way along in quest of another "gem."

There has been some complaint that many of the exhibits in this department savor too much of voluptuousness, which may not have been entirely without cause. The commissioners have removed some of the most objectionable objects which occupied conspicuous places; and it is possible that some further improvements of the same kind would not be unacceptable to many people of delicate tastes.

Although this department is one which the lover of art may spend much time in admiring without exhausting its riches of interest, it must be seen to be appreciated; and so we must leave the reader almost as much in ignorance of the many attractive features which it presents as when we began this very inadequate sketch.

### MACHINERY HALL.

This mammoth structure is just opposite the main entrance of the Main Building, to which it is next in size, being 1402 feet long and 360 feet wide. Its name indicates the class of exhibits to which it is devoted. To many people it is one of the most interesting features of the Exhibition. It is not often so densely thronged as the Main Building or the Art Gallery, however, which may be partially on account of the almost deafening noise caused by the continual clatter of so many thousands of machines of every description.

A large share of the machinery is driven by a single colossal engine in the center of the building, which propels seven miles of

shafting. The objects of interest are so many that we hardly know where to begin our description of the few to which we must limit this article. Perhaps we cannot do better than to begin in the middle, with the great Corliss engine, the motive power of this busy scene. While it is the most gigantic object in the whole exhibition, it is a marvel of simplicity, and its movements are almost noiseless. One is tempted to query, What would old Archimedes think could he rise from his dusty bed and take a glance at this marvel of modern mechanical skill? Not far away from this massive engine is another engine of much less imposing size, but equally interesting on account of the peculiar manner in which its motive force is generated. Neither steam nor water is used in running it. Its motive power is developed by the explosion of a gas composed of air and a volatile oil. The arrangement is such that an explosion occurs once in about five seconds, beneath the piston head, which is driven outward by the expansive force of the heated gases, and is driven back again by the pressure of the atmosphere as the gas condenses, which occurs very quickly.

The object next to the Corliss engine in size is an enormous machine for manufacturing sugar. Its capacity is so great that it is capable of turning out fifteen hogsheads of sugar in three hours.

In different parts of the building may be seen all the different processes of spinning, weaving, and knitting, by machinery, cotton, wool, and silk. All kinds of fabrics, from delicate silk book-marks to Brussels carpets, may be seen in process of manufacture. Paper mills, machinery for printing wall paper, for making envelopes and almost every imaginary manufacture, are in full operation at certain hours of the day.

Another monstrous object, is the 61-ton Krupp gun, which was put in place by immense labor. It is a most formidable weapon, and it does not seem possible that any structure could resist the shock of the ponderous mass of steel which is hurled from its gaping mouth when in use. We wondered, as we looked at it, if the Germans had not sent this object over to intimidate us.

An exhibit which suggests comfort for inexperienced sea voyagers is a model of a steam-ship with a swinging cabin, so arranged as to counteract in a great measure the unpleasant rolling of the vessel on a rough sea, and thus prevent seasickness. Another novelty in navigation is an ice yacht. The vessel is of full size, and fully rigged for use. It is said to attain a speed of a mile a minute, and to travel faster than the wind which drives it, a paradox which one is rather loth to believe.

Perhaps no single one of all the multitudes of curious mechanisms which fill this vast hall so fully represents the advanced civilization of the nineteenth century as the great printing press upon which the New York *Times* is printed at the rate of 12,000 copies in a single hour. The press is automatic, the paper being supplied from a ponderous roll which spins around at one end of the press, while the separate papers are chopped off and piled up at the other end. But even this astonishing speed is exceeded by the lightning rapidity of the press which prints the New York *Herald* at a short distance from the above, which completes and folds 30,000 papers in a single hour.

A miniature Niagara attracts a great many visitors to a structure built out from the main hall upon one side. The fall is forty feet in hight, and pours down at the rate of 18,000 gallons a minute in a sheet forty feet wide. The water is received into a tank 160 feet by 80 feet in size. In the large artificial pond thus formed, a man daily exhibits the swimming suit in which Boynton swam—or rather floated and sailed—across the English Channel. It is a rubber suit made so as to completely envelop the body, with the exception of the face. It is air-tight, and being inflated, it enables the wearer to float upon the surface with perfect ease. By means of a double paddle, he can propel himself with considerable rapidity in either direction; and by hoisting a sail, he can lie at ease upon the water and glide along toward shore.

We were especially interested in the exhibit of the machinery used in the Mechanico-Therapeutical Institution of Stockholm, Sweden. This institution employs some fifty different machines in the treatment of the sick and the training of athletes; but only about a dozen of the principal machines are shown here. The apparatus is run by steam, and to the uninitiated looks as though it were intended to shake one to pieces, or to represent the horrors of the Roman Inquisition. Here are machines for applying a rapid vibratory motion to different parts of the body. Though the operation appears to be such a violent one, upon trial it is found to be not at all disagreeable, and the effects are certainly remarkably soothing. Here are other machines for the purpose of exercising the wrist and the ankle. Another apparatus consists of a number of padded arms, which are made to play alternately upon any portion of the body. Applied to the back, they are said to be very efficient in drumming out wandering pains between the shoulders and about the

spine. A large wheel is covered upon its rim with transverse ridges which give it something of the appearance of a Western corduroy road. This is for rubbing the palms of the hands and the soles of the feet, and is certainly a very effectual means of exciting a vigorous circulation in these parts.

The most curious of all these machines is one which closely resembles a saddle. As soon as the patient mounts and is well fixed in position, the attendant shifts the belt, and instantly he finds himself going through a series of movements such as he would experience upon a knock-kneed horse going at a rapid pace. The object of this apparatus is to strengthen the muscles of the loins.

The novel contrivances shown in this exhibit are no doubt most excellent means for administering exercise to lazy people, and invalids too weak to walk for exercise.

But time and space both fail us, and we despair of being able to convey anything like an adequate idea of the many curious and interesting objects which are shown in this department. We wish our readers might each have the privilege of seeing for himself.

## Examples of Reason in Animals.

[THE following interesting anecdotes we quote from "Man and Beast," by Rev. J. G. Wood, A. M., F. L. S.—ED.]

Reason differs from instinct in the widest possible manner, the former being an exercise of the will, and the latter independent of it. Instinct is implanted at birth, while reason is an after-growth of the mind. Instinct requires no exercise of thought, while reasoning may be briefly defined as a *deduction of a conclusion from premises.* This power is possessed by animals in common with ourselves, although not to the same extent; and it is by the superiority of our reason over that of the animals that we maintain our supremacy. Very often their deduction is insufficient, or their premises false; but the process is still one of pure reason, and has no connection with instinct.

With them, as well as with ourselves, reason often conquers instinct, especially in the case of those animals which are domesticated, and so develop their reasoning powers by contact with reason of a higher quality than their own. For example, if a hungry dog or cat be in a room where food is left unguarded, their instincts urge them to jump upon the table and satisfy their hunger; if properly trained, however, their reason restrains their instinct, and, no matter how hungry they may be, they will not touch the food until it is given to them.

I had scarcely written these words when I received the following anecdote, which shows the power of reason over instinct in exactly the manner which I have mentioned:—

"A cat of ours once showed great self-denial. She was a terrible eater of small birds, chickens, etc., and therefore, when on one occasion she was found to have passed the night in our aviary of doves, great was the alarm. However, on inspection, not one dove was missing; and though she was asleep in an inner cage, close to a nest of young doves, she had not touched a feather. What made her conduct the more remarkable was the fact that on being released she ate ravenously."

It is just the same with ourselves. A child that has been well brought up can be left with perfect safety alone with any kind of dainties, the parents having taught its reason to conquer its instincts; whereas a spoiled or ill-bred child, which has been suffered to allow its instincts to be paramount, will be sure to fall upon the coveted dainties as soon as it is left alone, and probably to make itself very ill. Surely the conduct of both the animal and the child is identical.

Fishes are not supposed to be possessed of much reason; yet every angler knows that all the powers of his mind are taxed before he can induce an old and wary trout to take his bait, or, when he has succeeded in hooking the fish, to prevent it from breaking his line.

The natural instinct of a fish teaches it to fly from man, and we all know that even our shadows on the water will frighten away the fish and destroy the angler's hopes of success. Yet I know a pond full of gold-fish which are quite tame, and which, when they see a human being at the side of the pond, come toward him instead of being alarmed. If a little rippling be made on the surface of the water, they come crowding to the spot, that being the signal for food; and so perfectly confiding are they that they will take bread or biscuit out of the hand, and if the hand be kept under the water, one or two of the fishes will presently be nibbling at each finger.

Here, then, is an example of the instinct which urges them to flee from man, being overcome by the reason which tells them to approach him. I have seen an electric eel fed in just the same manner. The creature was blind; but it at once recognized the ripple, coiled itself around the spot where the water was agitated, and with a shock killed a fish which the keeper had placed there. At the British Museum there are now some axolotls kept alive in a glass vessel. They are sluggish creatures, mostly lying at the bottom of

the vessel; but if the water be agitated, up they come with open mouths, expecting the strip of meat with which they are fed.

This conduct is a distinct deduction of a conclusion from premises, and so far from being dictated by instinct, is absolutely opposed to it.

"The 'Horned Toad,' so called by the people of the regions inhabited by this curious reptile, is a very oddly shaped lizard, measuring when full grown about six inches in length, of which the tail occupies one and a half inches, and three inches across the back, which is enormously wide and flat when compared with the little and elegant forms of the lizards in general.

"The head, back, and tail are thickly planted with spines, which in the full-grown animal look exactly like those of the blackthorn. The head from behind the eyes radiates spines; the back is covered with them, some large and some small. The two edges of the belly are set like the teeth of a saw, as is also the tail, which appendage is short for the size of the animal, and tapers from three-quarters of an inch at the base to a point at the extremity, being a distance of only an inch and a half.

"This lizard, probably from its form, is not nearly so active as its race generally are —even when disturbed seldom running more than three or four feet, and then stopping close to some stone or root, to which instinct teaches it it bears a close resemblance, and trusts to that resemblance to escape detection, in which it often succeeds, as in such cases none but an eye educated in observation can trace the fugitive, or detect in the apparent root or stone a living reptile; on these occasions a quick grasp of the hand will mostly secure it alive.

"The facility with which these strange creatures are tamed is almost ludicrous in its effects. When seized in the hand, it endeavors to escape by repeatedly pressing its head against the detaining fingers of its captor, in hope that the spikes with which it is armed will effect its deliverance; but then if the head is allowed to protrude from the hand and gently stroked, and the under-jaw treated in like manner, in less than a minute the eyes close and the creature is asleep; and it will be found, upon awakening, that the timid, shy lizard is completely tamed. This curious process I have tried on some eight or nine specimens without a single failure.

"When thus tamed, these lizards make the most engaging pets possible, their forms are so strange, and their actions so quaint and old-fashioned in the extreme. They are very chilly creatures, reveling in the mid-day sun, and hiding away in some warm corner when the sun goes down; in the wild state they scrape a small hole in the sand, heated by an almost tropical sun, and lie there during the night, until the warm rays of the morning sun again arouse them into activity.

"I have had one very large specimen living at large in my bedroom for the past six weeks; during this time he has on several occasions gone out of doors on fly-catching expeditions, but always returned to sleep under an old piece of cloth in one corner of the room; and even when outside, where a run of a couple of yard would give him liberty, he has always allowed me to pick him up without trying to escape. But of all the amusing proceedings on his part is his way of catching flies in the room.

"During the latter part of the day the sun shines through a hole in the shutter of my bedroom, and makes a nice warm spot on the floor along-side one of my portmanteaus, and on this spot the flies 'most do congregate;' so my little pet, who is not quick enough to catch the flies in fair chase, climbs on the top of the portmanteau, and, lying half on and half off, watches his opportunity, and woe to the unfortunate fly that settles below him; the instant the fly is quiet the lizard gives a few preliminary curls to the tip of his tail, just as a cat does when watching a mouse, and then tumbles down bodily upon the heedless fly, cuddles his prey between his fore legs and chest, and then, bending down his head as far as possible, allows the fly to struggle out of his embrace, when with one quick motion of his tongue the poor fly has disappeared. After a moment's rest, up he climbs again, and is ready to repeat the process.

"I have once counted seven flies caught in this manner within an hour, and, during the whole of the time that I have had him, I have only seen him miss twice in catching the prey upon which he had fixed his eye.

"As the nights are getting colder, I notice my pet is daily becoming more lethargic in the morning, and from this assume, in all probability, this species hibernates during the winter."

The reader will probably have observed that in this mode of catching prey the creature was guided by reason rather than by instinct. It had observed that the flies were in the habit of settling on the spot which had been warmed by the sunbeam, and so took advantage of the portmanteau as a post of vantage whence he would leap, or rather fall, upon his prey.

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A MAN who is in health is not morally entitled to anything which he does not earn.

# DIETETICS.

"Eat ye that which Is Good." As a Man Eateth, so Is he.

**Iced Cream and Iced Water.**—Often, in warm weather, we are asked the question, Is there any harm in taking iced cream and iced water? Candidly, we think there is some harm, and here are our reasons for so thinking:

1. These articles are often taken when the body is very warm. Introducing a quantity of cold fluid or ice into the stomach under such circumstances is injurious, and sometimes is productive of very great injury.

2. The use of these articles does not so effectually allay thirst as drinks which are less cold. Cool well or spring water in small quantities will readily allay thirst, while the use of iced water seems rather to increase thirst and create a demand for more. This is probably owing to the reaction which always follows the temporary application of extreme cold.

3. By disturbing the circulation, it is probable that the use of iced cream and iced water favors the occurrence of sun-stroke. It certainly weakens the stomach, and may thus predispose to bowel diseases.

4. When taken with meals, as is frequently the case, digestion is hindered by the lowering of the natural temperature of the stomach. Iced cream, taken at other times, occasions, in addition to the effects of cold, those disorders of the digestive function which always arise from eating between meals, or at late hours.

5. In the case of iced water, there is more or less danger of injury by the reception into the system of impurities derived from the ice. It is a generally received opinion that water "freezes pure," so that pure ice may be obtained from the foulest water. Acting upon this principle, ice men are very indifferent about the quality of the water from which they obtain their supplies. Many cities are supplied from stagnant ponds, the water of which is, in summer, very offensive. The matter dissolved in this foul water, with much dirt held in suspension, is often retained in the ice in sufficient quantities to produce serious disease. Sometimes these impurities may be distinctly detected by the taste; but often they are so disguised as to be undetected in their mischievous work.

However, iced water from pure ice may be employed in small quantities, being taken only in small sips and never when very warm, without very material injury. It is not necessary to drink *warm* water, if iced water is wholly discarded. If cool spring or well water cannot be procured, water may be slightly cooled with ice, or by keeping it in a stone jar or jug which is enveloped in a wet blanket. By the latter means, evaporation is promoted and so a low temperature is produced.

Iced cream is decidedly unhygienic; but if people never transgressed the laws of life and health more seriously than by occasional indulgence in this article, it is not probable that they would suffer greatly from ill health. It should be suggested, however, that the wisest policy, as well as the only consistent course for an individual to pursue, is to avoid every unnecessary violation of nature's laws, and conserve vitality in every manner possible, since there are so many unavoidable expenditures.

**Danger of Eating "High" Meat.**—We have occasionally referred to the English custom—not a general one, we hope—of keeping meat until putrefaction had advanced to a considerable degree before eating it, meat in this condition being called "high." Some very intelligent English people have denied that such was an English custom. The statement is based upon pretty good authority, however, and is somewhat confirmed by the following paragraph from a recent work by an eminent English physician, which also shows the dangerous effects which sometimes result from allowing the flesh to become a little too "high":—

"The person who was subjected to the poison partook of jugged hare, the flesh of the hare having, prior to the eating of it, been kept until it had become high. Beneath the tongue of the man was an abraded, ulcerated surface, caused by friction from the stump of a broken tooth. Unfortunately, a portion of the decomposed animal food was lodged in this ulcer, and within twenty-four hours symptoms of septinous poisoning, local and general, set in. The tongue was enormously swollen, the attendant fever which accompanies septinous disease was marked, and prostration succeeded. The offending matter was sought for and was removed from the place where it had been lodged. The removal,

however, and all the care, medical and surgical, which I and one of my learned brethren, Dr. Edmunds, could bestow on the patient proved unavailing. He succumbed in a few hours."

Animal decomposition begins almost immediately upon the death of the animal, and though the eating of flesh less advanced in decomposition may not occasion the same effects noted in this case, the injury may still be very great from the reception of partially decomposed particles into the system. Let us have the *best* food, which will undoubtedly be the purest. The vegetable kingdom alone furnishes it. Meat is only vegetable food at second-hand, and greatly damaged by use.

**Dietetics for Infants.**—Many people who have learned the important relation existing between food and their own stomachs or bodily health seem to have entirely overlooked the fact that the same great principles govern the diet of children and infants as well as that of adults. Mothers who discard fine-flour bread and similar foods for themselves, will sometimes erroneously reason that the digestive organs of infants are so very delicate that such coarse foods as graham and oatmeal are unfit for them! overlooking the fact that babies need, even more than adults, the very elements which starch, fine flour, and similar foods do not contain. The following article from the pen of Dr. McCormac in the *Sanitary Record* calls attention to this fact in a forcible manner, and should receive attention. The doctor's remarks about the Irish children embody a significant fact which we hope will not escape the attention of those parents who think meat so essential to the development of human beings:—

"The nurse or the fond mother boils a quantity of some starchy matter, previously well blended with the spoon, and pleased with its bland flavor and slab aspect, administers it forthwith to her darling baby. She wonders why the baby does not thrive better, but is unaware that the very commonest and coarsest food would, in all essentials, be preferable. Arrowroot, any kind of starch, cornflour so-named, but in fact, starch, is inferior in all respects to well-boiled oatmeal porridge or groat gruel. It cannot compare with wheaten meal, or even rice porridge; it is inferior to boiled barley or any of the preparations of Indian corn, and also to the common potato. What beautiful children have I not seen, again and again, in Irish cabins, whose food was the potato, with possibly a little oatmeal porridge and buttermilk. The coarsest, plainest substance, if only coupled with fresh air by night, plenty of out-door exercise by day, cleanliness, and warmth, is preferable to the richest fare without.

"Starches of any kind are bereft of the ingredients essential to animal life. In strictness, a portion of those ingredients is present; but where are the phosphates, for example, without which the bones cannot be framed? If it were not for the milk, which happily proves the vehicle of the starch or fecula, the infant would inevitably perish.

"Once for all, starch food, though it may answer very well as food for adults, as a portion of mixed diet, is quite unfit *per se*, as an exclusive infant diet. It is not worth belly room, and ought invariably to give place to the foods I have named."

**Summer Diet.**—The following advice, given to a correspondent of the N. Y. *Tribune* by that journal, is as wise instruction as the wisest of orthodox hygienists could give, and if people generally would follow it, such diseases as cholera, diarrhea, cholera morbus, cholera infantum, and kindred diseases would be wiped out of existence:—

"Nature herself teaches us what we should eat in summer. She provides cooling, delicious fruits, juicy and tempting vegetables; she inspires the normal appetite with a loathing of rich pastries, heavy puddings, hot bread, fat meats, and invites us to refresh ourselves with muscle-making rather than heat-producing foods. A correspondent complains of biliousness, has the bilious headache two or three times a week. Now, if he will diet himself, live on graham bread, fruits, and vegetables, bathe freely every day, avoid Sunday dinners as he would shun the plague, and dispense with condiments, in all probability his headaches will leave him."

The query naturally arises, Does nature *ever* call for those "rich pastries, heavy puddings, fat meats," etc., which she evidently loathes in the summer season? We think not.

**Beet Bread.**—The garden beet is a very wholesome article of food, and is quite nutritious. Vinegar spoils its flavor, and makes it less digestible. Dr. Lyon Playfair, an English authority, says that good brown bread may be made by mixing the grated root with an equal quantity of wheat flour. Perhaps some of our hygienic cooks will try it.

TRUE wisdom lies in the moderate use of all the good things of this life.

THE

# HEALTH REFORMER.

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J. H. KELLOGG, M. D., EDITOR. TERMS, $1.00 A YEAR.

## Animal Food and Consumption.

IT has long been known that consumption, or phthisis, is always attended by a morbid formation known as tubercle. Whether or not this diseased product partakes of the character of a virus—in other words, the question, Is consumption contagious—has been the subject of considerable discussion. It now seems to be conclusively settled by the experiments detailed below, the account of which, as we give it, appeared in the *Medical and Surgical Reporter*. The practical conclusions are very obvious, and one of the numerous dangers to which meat-eaters are exposed will be appreciated by the thoughtful. One year ago, we examined the vital organs of a sheep which was purchased, for the purpose, of a farmer who was fattening it with others for the market. Though apparently healthy, we found its whole lymphatic system filled with tuberculous matter. It is a well-known fact that cows and horses, as well as sheep, are very subject to consumption; this is especially true of those which are confined in close stalls, as are the cows which furnish milk to our cities, and, in fact, most cows during the winter season. Who can tell how much consumption has originated from the use of the milk of these diseased animals? This subject might be investigated with profit by our State Boards of Health. It would also be wise for those Parisians who regale their palates with the tuberculous flesh of old horses to examine into the matter. One of the most alarming features of this subject is the fact that ordinary cooking will not destroy the poisonous matter; and, further, it will be remembered that milk is almost always eaten without cooking at all.

"The Edinburgh *Medical Journal* states that Prof. Gerlach, of Berlin, details an elaborate experimental research on the question whether tubercular matter, or the flesh of tubercular animals, can communicate or excite tubercular disease if taken as food. The conclusions arrived at by Prof. Gerlach may be summarized as follows: 1. There is specific virulent material in tubercle, and many of the symptoms of tubercular disease are due to the absorption of this virus. 2. This virus exists in tubercle in all its stages, but apparently in greater intensity in cheesy masses. It is found in recently formed tubercle, and in miliary tubercle. 3. The infection begins first in the mucous membrane of the mouth, and if the tubercular matter be in contact a sufficient length of time with the mucous membrane of the alimentary canal, it may communicate the disease to the whole lymphatic system. 4. While tubercular disease has special characters in different animals, all tubercular matter, when introduced into the alimentary canal from one species to another, is more or less virulent. 5. The tubercular matter of birds, especially that of the common hen, is very virulent, and is identical in its action with that of mammalia. 6. The fibrous tubercle of horses, without a trace of cheesy formation, is just as infectious as the miliary tubercle of cattle. 7. The flesh of tubercular animals is also infectious, though in a much less degree than tubercle itself. 8. Tubercular material cooked for a quarter to half an hour is still infectious, though in a much less degree than that not cooked. 9. The effects of poisoning by tubercular matter taken into the alimentary canal are irritation of the mucous membrane both of the alimentary and respiratory tracts, enlargement and tenderness of the lymphatic glands, enlargement of the bronchial glands, and the formation of tubercle in the lungs and other organs."

## "Errors of Water Cure."

MUCH of the prejudice against the use of water in treating disease has grown out of abuses of the remedy, and the putting forward of absurd claims by ignorant persons professing to understand its use. In order to vindicate the character of this powerful curative agent, it is necessary to expose the errors and ignorance of those who have abused it.

**"Cold Water Doctors."**—In the early days of the modern water-cure practice, which was largely introduced by Priessnitz, cold water was the universal remedy. No matter what the nature of the disease, or the condition or temperament of the patient, the remedy was the same. At the establishment of the Graefenberg doctor, ice-cold douches precipitated from a hight of sixteen to eighteen feet, the plunge directly supplied by the cold mountain springs, the shower-bath of the same temperature, were all administered to patients with little discrimination of modifying circumstances in rooms unwarmed by artificial heat, even in the depths of the coldest mountain winters. As this was the source whence most water doctors of that time drew their knowledge, the same practice was pursued elsewhere. The unreasonableness of such a course was perceived by the more judicious, and thus its influence was prejudicial.

**Heroic Treatment.**—Such treatment as that described in the preceding paragraph could not result otherwise than disastrously in numerous cases. The evil effects were sometimes seen at once, but more frequently they appeared after periods more or less remote. In some cases patients were led to drink twenty or thirty glasses of cold water before breakfast, under the absurd doctrine that the evils of a small excess would be cured by greater indulgence. Hundreds of persons adopted the practice of daily bathing in cold water in a cold room, even in the coldest weather. A few even went so far as to spring from their warm beds on the coldest mornings, run to a neighboring brook in a state of nudity, and plunge into its frigid waters through a hole in the ice. So infatuated were these enthusiasts, they really thought they enjoyed this refrigerating process; but, generally, a few years' continuance of it was sufficient to produce such a "sedative" effect upon their systems that some became the victims of consumption and other constitutional diseases, while others were compelled to discontinue the practice from absolute inability to continue it. A few of the more vigorous were enabled to survive this violent treatment without apparent injury for a long time; but those of weaker vital powers soon showed the results of its evil effects.

By such processes, together with the cold sitz-bath, the dry pack, and other harsh measures, the patient was sometimes brought to the very verge of the grave.

Strange as it may appear, those who have been the strongest opponents of the use of water, themselves afford the best instances of its excessive use. For instance, in a case of low typhus fever, a "regular" physician ordered the patient, a young woman, to be immersed in cold water for half an hour. The attendants attempted to carry out the prescription, but in a few moments her symptoms became so alarming that the patient was removed from the bath. It will not be considered remarkable that she died. A prominent New York physician, a professor of practice in one of the largest medical colleges in America, in a report of a case of remittent fever which he had treated with water, said that he administered thirty-five cold packs in a week. The patient died; but he thought that if he had been more thorough in his treatment, giving more packs and longer ones, he would have lived. Another professor of practice, of a rival college in the same city, cited, in a public lecture, a case of pneumonia which was treated hydropathically by a regular physician of note. The patient, while very feeble, was placed in a cold bath. He was taken out shivering, and died an hour afterward. His conclusion was that water was a very hazardous remedy. We would certainly agree with the professor's conclusion if the case cited were an example of the *proper* use of water. In the preceding case, we will not say that the packs were not ben-

eficial; but if they had been thus used by a professed hydropathist, the treatment would have been pronounced decidedly heroic by "regulars."

**Crises.**—By the violent processes which have been mentioned, together with the cold sitz-bath, prolonged for hours, the dry pack, and other harsh measures, the patient was often brought to the very verge of the grave, much as in the old process of depletion by bleeding, antimony, mercury, and purgatives. Painful skin eruptions, boils, and carbuncles, often covered the whole body. Acute pains racked the body of the patient from head to foot. If he survived this "crisis," he usually got well, which was regarded as an evidence of the salutary effect of the crisis, and so it became an important object to be attained; and the worse a patient felt, the more certain and speedy, he was encouraged to believe, would be his recovery. No account was taken of the immense waste of vital energy during these painful morbid processes.

The use of the abdominal bandage continued for a long time until an eruption is produced, is another means by which some have sought to effect a cure of their patients. This course is pursued under the belief that the discharge occurring from the surface which thus becomes diseased is a vicarious means of removing impurities from the system—an absurd notion, which no one acquainted with the first principles of physiology could entertain for a moment.

**Hydropathic Quacks.** — Unfortunately for the reputation of water as a remedy, its use has been largely in the hands of empirics who have used it largely in a routine manner, and have supposed it to be a cure-all, and the only remedy of any value. At least, such have been the claims made for it. This has served greatly to bring it into disrepute, the disgrace which ought to attach to individuals being applied by an undiscriminating public to the innocent victim of abuse.

**Ignorance.**—The greatest bane of all has been the ignorance of those who have professed to be qualified to administer water as a remedy understandingly. Priessnitz himself was an ignorant peasant. He was innocent of either anatomical or surgical knowledge. His slight acquaintance with physiology was gathered by cursory observations of patients. Of the effects of water he knew more, studying them with a good degree of acuteness. His lamentable want of knowledge allowed him to fall into many errors. It is related of him that he treated hopeless cases of solid anchylosis of joints just as though they were mere cases of stiffness from rheumatism. Cases of hopeless organic disease, he pronounced curable and submitted to long but unavailing treatment, not knowing the real nature of the disease. A young lady died of what he supposed an internal abscess. No abscess was found, upon which he remarked that "she had too short a neck for long life."

It could be no wonder, then, that the disciples of such a master should be sadly lacking in many of those qualifications essential for a successful physician, no matter what the remedies employed. The most lamentable feature of the matter is that the same ignorance has continued to be, with few exceptions, characteristic of those who have employed water as a remedy; this has been especially disastrous because a man with the native shrewdness and acuteness of perception of Priessnitz has rarely appeared in the ranks of hydropathists.

**A Popular Error.**—It is a grievous popular error that any one can apply water as skillfully as the most experienced physician, and that its successful use requires no knowledge of the structure and functions of the human body. No doubt this has grown out of another error, perhaps quite as common; viz., that water is so simple a remedy that it will do no harm if it does no good. Such notions have frequently led to most disastrous results. Water, as already shown, is one of the most powerful remedies. And while it is, undoubtedly, far safer in the hands of the uneducated than blisters, purgatives, diuretics, and such agents as opium, chloral, alcohol, and most other drugs, yet it certainly requires careful usage, and the more scientific knowledge the user possesses, the more skillfully will he be able to apply it. It is, furthermore, true

that a great majority of ordinary diseases are commonly so void of danger under careful nursing and hygienic management that the application of water is a simple matter which any intelligent mother can perform successfully. A case is related by good authority of a person who fell in apoplexy an hour after taking an excessively hot bath. Another patient became a paralytic from the same cause. Water is a remedy which cannot be safely used by one who has not informed himself of its effects, and of the proper modes of application.

**Absurd Claims.**—Sensible people have been rightfully disgusted at the claims which have been made by certain pretentious ones for the use of water. One claims that the bath will dissolve out of the body mineral substances which have been taken into it. Another claims to have been able, by the application of fomentations to a rheumatic knee, to extract in regular order the ointments which had previously been successively applied. Numerous other claims equally preposterous might be related, if it were necessary. They have all tended to excite a feeling of contempt for a means of treating disease which is really worthy of the highest estimation.

**Neglect of other Remedies.**—As previously remarked, many seem to have forgotten that water is not the only remedy for disease, and not only attempt to cure every disease by its application, but use it to the exclusion of all other remedies. In nearly all cases, sunlight, pure air, rest, exercise, proper food, and other hygienic agencies are quite as important as water. Electricity, too, is a remedy which should not be ignored; and skillful surgery is absolutely indispensable in not a small number of cases. Even drugs are sometimes useful auxiliaries, though doubtless more harm has resulted from the employment of drugs in conjunction with water treatment than from their omission.

**Rational hydropathy** leaves room for every other remedy of value. It does not regard water as a specific nor as a panacea, but only as one of the most valuable of numerous excellent remedies. It discards the erroneous and harmful practices of empirics and ignorant charlatans, whether they concern water or other agents, and gives to the aqueous element only its due share of importance.

## Cholera Infantum.

THIS disease is the terror of mothers during the hot months, and it is not unjustly regarded with great apprehension; for it is one of the most frequent of all causes of death in young children. It usually begins with diarrhea, which after a few days increases, and is accompanied by vomiting, swelling and tenderness of the abdomen, emaciation, and fever with great thirst. The discharges are not at first unnatural, but soon become so, appearing of different shades of brown, and finally becoming greenish in severe cases. Blood, mucus, and undigested food not infrequently accompany the discharges. The skin assumes an ashen hue, and the little sufferer presents a most pitiful appearance. Just now one can see plenty of such stricken little ones in their mothers' arms in the narrow alleys of our large cities.

The most important measure in relation to this disease is prevention by avoiding the causes, which are bad air, bad food, bad water, uncleanliness, improper clothing, and the prostration occasioned by excessive heat. If the first-named causes are avoided, there need be no fears of the latter. Daily bathing, the free use of ripe fruits and vegetables—especially the first—thorough ventilation of sleeping-rooms, and the use of only pure soft water to drink, are sure means of preventing the disease.

If the child is nursing, dietetic indiscretions on the part of the mother may be the cause of the disease. Allowing children to run about in the chilly morning air and in the cool evening with unclad feet and limbs is a fruitful predisposing cause of this and other bowel complaints.

*Treatment.* If the child is in the city, it should, if possible, be removed to the country as soon as the symptoms of the disease appear, for pure air is an important means of cure. Regulate the diet most carefully. If the child has been weaned, give it, at regular hours, oatmeal gruel, graham crackers or toast, and ripe fruit. Ripe apples are espe-

cially wholesome. If the child is nursing, and its food is evidently one of the causes of disturbance, being persistently vomited or passed with the discharges undigested, give thin oatmeal gruel, boiled two or three hours and strained through a cloth, adding a small proportion of new milk from a healthy cow. If this food cannot be retained after repeated trials, the following will sometimes be found of great service: To a tumblerful of cool water add the white of an egg, mixing it very thoroughly. Administer this with a teaspoon in very small quantities at first, repeating the dose at the times when the child has been accustomed to take its regular meals. If it is unpalatable, add a very little sugar. Do not heat the mixture, as this will coagulate the egg and make it difficult of digestion. The white of egg added to very thin oatmeal gruel—strained—or to the water in which oatmeal has been allowed to stand overnight, makes an admirable food.

Give a daily bath, and repeat the sponge bath during the day as often as necessary to keep the fever down. Be sure to keep the feet and limbs warm, and bathe the head often. Let the child drink freely of pure soft water, but avoid all sorts of teas, syrups, cordials, and patent medicines, no matter how highly recommended. Nature will work a speedy cure if she has a chance. Free the bowels by the use of the enema once or twice a day. Keep upon the abdomen a cloth folded several times and wet in cool water. Change every few minutes, as often as it becomes warm. If the pain and tenderness become very severe, apply fomentations occasionally in place of the wet compress, or bandage, renewing the compress after the fomentation is removed. Or, instead of fomentations, or in addition to them, administer a hot sitz-bath.

With quiet, careful nursing, proper diet, and the treatment described, the disease will usually last but three or four days, at most. Nature is the best of all physicians when she has a chance to work.

**A Case of Hydrophobia.**—An exchange discourses rather severely about the doctors who had charge of a case of supposed hydrophobia in Jersey City recently. The fact that the man got well soon enough when let alone is rather hard on the doctors, without dispute; and it reminds us of the case of a gentleman whom we chanced to meet in a Philadelphia bookstore a few days ago. He was the proprietor of the store, and was suffering with spinal disease which threatened paralysis of the lower limbs. He assured us that he had lost all confidence in drugs, for after being under treatment by one of the most eminent physicians in America for nearly a year, he was no better, but steadily continued to decline in health. A few weeks ago he abandoned all drugs, being fearful that he should become entirely helpless unless he did so, and has been improving in health ever since in spite of the unprecedented hot weather.

But now let us hear about that case of hydrophobia. We quote as follows:—

"A rather curious case, which may be a useful lesson to persons affected with a morbid fear of hydrophobia, has just transpired over in Jersey City. A servant girl was taken sick, and the doctor summoned to attend her, learning that a dog had scratched her some time before, said she had hydrophobia. She was treated for that, and died. Then her employer was taken sick, and the same doctor said he too had hydrophobia. Several other doctors were called in, and, although the patient had no sign of the dreaded disease, professional etiquette compelled them to agree with the first. So they poured large quantities of strychnine into the man, and then they squirted curare under his skin to neutralize the strychnine, and they kept the room so hot that he almost suffocated, and, finally, they told him to make his peace with God and prepare to die. Just how they proposed to kill him is not yet known, for at this point an energetic brother-in-law 'fired out' all the doctors, and straightway the sick man got well. Now all concede that he never did have any hydrophobia, but was simply scared almost to death. So much for doctors."

**Summary Justice.**—The quack doctor has a hard time among the Utes. He poisoned two Indians and a squaw lately while pursuing his practice among the Middle Park Utes, and the chief put nine separate and distinct rifle balls into him, whereof he perished and was known as a "medicine man" no more.

[If all quacks who poison their patients were disposed of in as summary a manner, how rapidly would their numbers grow beautifully less.]

# Questions and Answers.

**Home Prescriptions.**—We are daily in receipt of letters asking medical advice. In many cases we are requested to prescribe for the home treatment of a person suffering from some chronic disease or a complication of chronic maladies, through the columns of the HEALTH REFORMER. A little consideration will show that this would be quite impossible. In this department the most that can be done is to give brief, concise answers to as brief and concise questions. In order for a home prescription to be of value, it must be much more minute in detail than our space would possibly allow. Such should send for a printed list of questions and terms for home prescription by letter, if it is impossible for them to go to a first-class health institution, which would be the wisest course in most cases.

**Two Meals—Beets—Bread, etc.**—G. W. D., of Missouri, asks: 1. Is it better for a farm laborer who labors very hard to eat two or three meals a day? 2. Are beets and radishes wholesome? 3. Is bread made of fine flour and bran mixed as wholesome as that made of graham flour?

*Ans.* 1. It has been repeatedly proven that farmers can enjoy good health and endure severe labor on two meals a day; and it cannot be doubted that in some respects two meals are better than three. If farmers find themselves so exhausted at night that they think they need a third meal "to sleep on," they should be admonished that they are working too hard; and the difficulty should be remedied by lessening the hours of labor. However, a third meal, taken at least four hours before retiring, is not the worst violation of the laws of health in which most people indulge. If taken at all, the meal should be very light, preferably of fruits and grains. We would not advise a farmer who has been accustomed to eating three meals a day to attempt to make a change at this season of the year, when his work is necessarily the most taxing, as the attempt would probably end in failure. Many people think they need supper when they only need rest, the "faintness" of which they complain being the result of exhaustion rather than of lack of food.

2. Beets are wholesome, if properly cooked. Boiled or baked, they are excellent and nutritious; but they should be eaten without vinegar. If an acid is required, use lemon juice. Radishes are not very wholesome at the best. They may be let alone with advantage.

3. It is quite a common practice with millers who do not have facilities for making good graham flour, or who do not care to take the trouble, to make a substitute by mixing the coarse bran with fine flour. This mixture they sell for graham flour; but it has no claim to the name. Graham flour contains the whole grain; this mixture contains only the starchy inner portion of the grain and the woody outer portion; the former being of little account as food, and the latter being wholly innutritious. Thus the most valuable portion of the grain, that which lies between the outer shell or bran and the starchy interior, is lost. If the miller would mix together in proper proportions all the ingredients into which the meal is separated in the process of bolting, he would produce a real graham flour as good, or nearly as good, as that made in the regular way. Fine middlings alone is preferable to fine flour, and makes a very palatable and wholesome bread.

**Dandruff.**—J. O'C., N. Y., writes: Please tell me what to do, to get rid of dandruff, as I am troubled with it. I have used sulphur water, but it did me no good. I also try to eat the right kind of food.

*Ans.* Avoid carefully *all condiments* and stimulating food. Take a daily bath upon rising in the morning, and a wet-sheet-pack for an hour once a week. Twice a day, rub the head thoroughly with a hair-brush and soft water. Cleanse it once or twice a week with white of egg or fine toilet soap. Use no oil or other unguent upon it. If it continues to itch considerably, add a little soda, chlorinated soda, or chloride of lime to the water with which it is rubbed once a day. Improve the general health in every possible way. Do not expect to get well without long patience, but persevere.

**Discarding Tobacco not Dangerous.**—C. M., Minn., aged sixty years, has been addicted to the use of tobacco for many years. For twenty years he has been greatly troubled with his lungs and liver; expectorates very freely. Recently he has several times attempted to discontinue the use of tobacco, but says that every time he makes the attempt he suffers greatly with his lungs, which become very sore and swollen, and filled with mucus, as he expectorates very little when not using tobacco. Several doctors have told him that he cannot live if he does not con-

tinue the use of the weed. He wishes to know if there is not some substitute which he can use, as he is convinced that tobacco-using is a bad habit.

*Ans.* With all due respect for the doctors referred to, we are of the opinion that the gentleman can better live without the filthy weed than with it. His diseased lungs and liver attest the injury which he has suffered and is still suffering. He may reform without fear of dying, though a few precautions may be necessary to aid nature in freeing herself after such a long slavery. If possible, he should put himself under the care of an intelligent hygienic physician while making the change. If this is impossible, let him take a daily sponge-bath, one or two packs a week, or one vapor-bath and one pack, and wear the chest wrapper continually for two weeks, changing several times a day. Drink an abundance of pure soft water; eight or ten glasses a day will be none too much for a few days. The object of this treatment is to eliminate the poison from the system as speedily as possible.

**Felon.**—J. G. K. inquires for the best remedy for felon.

*Ans.*—If the felon is well advanced, and occasions continual throbbing pain, lance it to the bone with a sharp intrument, being careful to lay it open freely. If the felon is located almost anywhere else than in the palm of the hand, no danger attends the operation. If in the latter situation, no one but a surgeon should attempt it, as important blood vessels may be wounded. In the early stages, apply ice or iced water. If the pain extends toward the arm, immerse the arm to the elbow in ice-cold water, or keep it wrapped in a cold compress. After the felon opens, or is lanced, apply warm poultices of bread and milk, Indian meal, linseed, or slippery elm. Hot fomentations are also appropriate.

**For what Were Animals Created?**—A person who signs himself "Reformer," asks the following questions:— 1. If flesh-meat is not the proper food for man, what part do animals play in the great economy of nature? What was the hog created for? Why do the fish swarm our rivers? 2. As your teachings are against milk, why were cows created, and for what purpose?

*Ans.* Though we have repeatedly answered questions similar to these, we will give them brief attention. 1. Every different class of animals has its particular function to perform in the great laboratory of nature. Some aid in the production of seeds and other fruits, by fertilizing the flowers; others aid man in tilling the soil, or in traveling from place to place; others minister to his wants in other ways; some seem to have nothing to do but to enjoy themselves, and, with all the rest, exhibit the infinite wisdom of the Creator; a very large class of animals are scavengers, their duty being to consume decaying substances which are sources of filth and disease. The hog belongs to the latter class. The fish that "swarm in our rivers," and in the lakes and oceans as well, keep these bodies of water from becoming putrescent, seething, stinking accumulations of filth. Fish are scavengers.

2. We might ask, What were the females of all the different species of animals created for? Female horses, goats, dogs, lions, and whales give milk as well as cows.

We confess that we sometimes almost lose patience with arguments so evidently devoid of weight as these. We suspect our correspondent had not much confidence in them himself, but was merely asking for the benefit of some friend who had.

A. C., Ill.: Animals are rarely killed for market without first undergoing a process of fattening, which is productive of disease, tallow being one of the results. A healthy animal has some fat, but few animals are entirely healthy when killed. We did not quite say that all tender beef is diseased, as you will probably see by perusing the article again. Even the flesh of a young heifer would be found to be tough if eaten the same hour the animal was killed. Tallow and lard differ only in the circumstance that one contains a larger proportion of oleine than the other.

R. W. T., Minn.: Your difficulty is probably bronchitis; it may be of a more serious nature. You ought to visit a health institution and learn to treat yourself by a home prescription, if you could not remain long enough to be permanently benefited. A daily morning bath, the chest wrapper worn nights, and light exercise out-of-doors are proper measures for you to adopt in addition to carefully conforming to the laws of health in all possible ways. Treat your child according to the directions given to J. O'C., in this number, omitting the rubbing with brush. Keep the diseased surface moist. A thin compress often changed is a good application.

Mrs. S. S.: Your symptoms are those of threatened paralysis.

L. H.: Your little girl probably has bronchitis.

# FARM AND HOUSEHOLD.

Devoted to Brief Hints for the Management of the Farm and Household.

**To Prevent Frosts by Fire.**—The Amador (Cal.) *Ledger* says: "Wm. Avala, who owns perhaps the largest orchard around here, has this year adopted the plan of keeping fires burning on the windward side, the wind carrying the smoke and heated air over the trees, and preventing the formation of frost. On Monday morning we were favored with a nipping frost, which we are informed has inflicted serious damage upon the fruit. Avala that morning had 120 fires burning on his garden of 50 acres, and he reports his fruit uninjured. The cost of the experiment is inconsiderable. It is rarely necessary to light up more than three or four times in a season, and the cuttings from the vines and trees are about sufficient for the purpose. He calculates that this simple precautionary measure will save him something like $1,000."

The importance of this safeguard against loss by frost is vital to our fruit interest in many parts of the State. The cost of saving the fruit cannot be compared with loss which is occasioned when it is ruined. It is of special value that the remedy is so cheap and so easily applied. We trust that our fruit-growing readers in exposed situations will save up their rubbish during the coming season and be prepared to give the frost a warm reception next spring. There is money in saving a crop just at a time when negligent husbandmen are cropless.

**Garden Work.**—No one should take more interest in the cultivation of fruits and vegetables than the hygienic farmer. Small fruits should receive special attention, as they make such liberal returns for so slight an outlay of labor. A little well-directed work at the proper season will accomplish more than much labor at some other time. Here are a few timely hints from the *American Agriculturist*:—

"*Strawberries.* After the plants are through bearing, the mulch should be removed, and the soil between the rows stirred, and weeded, and manured; if fine manure is not to be had, apply a good dressing of ground bone or other fertilizer. If new beds are to be set, let enough runners grow to furnish plants, and remove the rest.

"*Grape-Vines.* Tie up the young growth before it becomes too long, and gets broken by the wind; rub off all useless shoots that start. For mildew, apply sulphur with a bellows made for that purpose. Hand-pick the beetles and caterpillars which infest the vines. Make layers by burying the shoots in the soil when they become firm and woody, allowing the upper part to remain uncovered.

*Raspberries.* As soon as through bearing, cut out the old canes and tie up the new growth. Three or four new canes to a plant are enough.

*Currants and Gooseberries* usually throw up vigorous shoots from the base of the plants; these, if not needed to take the place of old ones, should be cut out. Use powdered white hellebore for the worm which destroys the leaves.

**Insects.**—A Virginia correspondent asks how to remove flies and other troublesome insects from the premises. To exclude flies, put wire netting or mosquito net into the doors and windows. Be careful to cover with abundance of dry earth everything in the neighborhood of the house that will serve them for breeding places. To drive away and destroy insects that haunt the house, various remedies are used. Bedsteads should be washed in hot, strong alum water, and rubbed over with kerosene oil, or corrosive sublimate, or a solution of oxalic acid, then sprinkled in all the cracks and crevices with borax. The same cleansing agents should be applied whenever bugs are found. The process may need repetition, but when the pest is once thoroughly exterminated perfect cleanliness will prevent a return.

**How to Get Rid of Stumps.**—General Colquitt, of Georgia, in a recent address, said: "To remove stumps from a field, all that is necessary is to have two or more sheet-iron chimneys, some four or five feet high. Set fire to the stump, and place the chimney over it, so as to give the requisite draft at the bottom. It will draw like a stove. The stump will soon be consumed. With several such chimneys of different sizes, the removal of stumps may be accomplished at nearly nominal labor and expense."—*Maryland Farmer.*

## Recipes for the Season.

**Gooseberry Pudding.**—Boil one cup of rice in six of water for half an hour. Prepare two cups of gooseberries and mix with an equal quantity of graham flour. Add the boiling rice, mix quickly, and steam three-quarters of an hour. Serve with some sweet sauce.

**Tomato Pudding.**—No. 1. Slice thin good graham bread or gems. Place in a baking dish with an abundance of sliced tomatoes, arranging in alternate layers. Cover close and bake an hour. Serve with sweet sauce.

No. 2. Peel and slice thin fine, ripe tomatoes. Place in a baking dish in layers, strewing between the layers equal parts of rice and chopped dates. Cover closely and bake in a moderate oven for two or three hours. Serve as preferred.

**Green Corn Pudding.**—To one quart of grated ears of sweet corn, add a teacupful of cream, one gill of milk, a table-spoonful of flour, and two ounces of sugar; mix all together, and bake an hour and a half.

**Green Corn Cream.**—Equal parts of grated green corn and water, strained through a sieve or cloth, make a fluid which very much resembles cream, and which may be used for many of the purposes for which cream is usually employed. It makes a very excellent dressing for puddings, vegetables of various sorts, and even for peaches, and similar fruits. Two parts of water to one of corn make a thinner fluid which might be called green corn milk.

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**Care of Privies.**—As ordinarily constructed and managed, these necessary institutions are most prolific sources of disease. The animal excretions which are left to accumulate in them undergo still further putrefactive changes, which result in the development of the most pestilential germs and gases. Here is where the terrible typhoid poison originates. Deep vaults should never be allowed under any circumstances.

The best way to manage a privy is this: Early in the spring fill up the old vault, if there is one, even with the surface. Raise the building a little. Have made at the tin shop a sufficient number of pans of thick sheet iron. The pans should be about two feet square and two inches and a half deep. Each should be furnished with a long bail, and a strong handle at one side about a foot in length. In using these pans, fill each half full of fine, dry dirt—not sand—or ashes, and shove it into position, allowing the bail to fall back upon the handle behind. By the addition of a little dry dirt several times a day, all foul odors will be prevented. The contents of the pans ought to be removed every night in the warmest weather of summer, the pans being replaced with a fresh supply of dry earth. During cooler weather, if little used, the pans will require emptying but once a week, if they are kept well supplied with dry earth. The contents of the pans may be buried or removed to a proper place at a distance from any dwelling.

For convenience, it is found to be an excellent plan to hire a scavenger to attend to the pans at regular, stated times. Fifteen or twenty in a community can unite on the same plan, and thus make the expense very slight for each.

About the first of December, the pans may be removed and a shallow vault dug. The vault should not exceed two feet in depth, and it should not be tightly inclosed. This will allow the contents of the vault to freeze. They may be removed several times during the winter, and should be kept covered with dry dirt, which should be procured in sufficient quantity in the fall.—*Household Manual.*

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**Ants in the House.**—In some localities, small, black ants are very troublesome early in the summer. They get into every sweet and sweetened thing to which they can find access, and though they tumble into the syrup and commit suicide, in droves as it were, by droves are their lessening numbers reinforced. Do they smell out the sugar, molasses, and preserves? Give them something else to smell. Lay sage leaves or tansy leaves upon your pantry shelves, or in the cupboard, where the sweet things stand, and the fastidious invaders of your sugar-bowl will prefer to go elsewhere in search of food. Only the tightest fitting covers can keep them out. But I am told by one who says she has tried it, that a line drawn with chalk on the shelf around an open sugar-bowl proves an impassable barrier to the ants. A dish set into a saucer or plate of water is protected from ants.

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**Sun-stroke.**—Carry the patient at once to a cool, shady place, remove his clothing, and dash cold water upon his body, especially the head and chest. Rubbing the spine with ice is an excellent remedy. Continue the cold application until the unnatural heat is materially decreased. Artificial respiration should be practiced at the same time. No stimulants should be given to the patient.

# POPULAR SCIENCE.

In this Department Will Be Noted the Progress of Science, New Discoveries and Inventions.

**Cutting Hard Steel with Soft Iron.**—Mr. Jacob Reese of Pittsburgh had been endeavoring to construct a machine to cut hardened cold steel. He accomplished it at length by means of a saw of soft wrought iron—merely a disc—rotating at high velocity. With low speed this would not cut at all; but when running at about 25,000 feet per minute the disc cut through steel rapidly, giving out an immense cascade of sparks in the operation. It was found on examining the debris beneath the disc that the particles of steel were not simply rubbed off. They were welded together in a pyramid like a stalagmite or the snow icicles formed on the top of Mount Washington. Prof. Hedrick ascertained that real fusion had taken place among the particles of steel. The disc is very little heated, but the steel actually melts and drops down. Yet the bar on each side of the cut is not heated enough to draw the temper or oxidize the metal. Solid bars of steel of two inches or three inches in diameter are thus cut through in as many minutes. The soft metal disc is about forty-two inches in diameter. The naked hand may be passed through the jet or stream of flying sparks during the operation without being burned, since the particles of melted metal are in the condition known as the spheroidal state.—*Independent.*

**A Shower of Sulphur.**—During the late wet weather the strange phenomenon known as a shower of sulphur was observed in some parts of the Hérault. After the rain the leaves of the trees and the sides of the road were covered with a yellowish powder resembling sulphur. This curious occurrence happens very rarely in the south of France, and is very easily explained. The yellow matter which causes the appearance is only the pollen of conifers carried off by the wind from some pine forest. —*Galignani.*

**Photography as an Aid to Diagnosis.**—The Lyon *Medicale* remarks that photography oftentimes presents so high a degree of sensibility that it renders certain defects distinctly visible that the eye could not discern. The portrait of a lady taken by photography was observed to be covered with spots, while the original did not present the slightest trace of them. Shortly after, however, they appeared distinctly enough, and the lady died with the small-pox. Photography had thus anticipated sight, and had recognized spots of a very pale yellow before the latter did.

**Kentucky Meat Shower.**—The curious phenomenon which occurred in Kentucky last year is still the subject of discussion. The latest theory advanced is that a flock of buzzards devoured the dead carcass of some animal and while flying over the locality in which the shower occurred, one of them that had eaten to repletion relieved his stomach by a vomit, when all the rest followed suit out of a natural propensity for imitation. It is stated that such occurrences have been actually witnessed. Numerous microscopists who have examined the specimens obtained and preserved in alcohol agree in pronouncing them of animal origin. Some present, under the miscroscope, the characteristic appearance of muscle, others of cartilage, and still others of lung tissue.

**Spiders.**—According to Prof. Morse, the female spiders do all the work and hold the reins of government in spider communities. "They own all the real estate, and the males have to live a vagabond life under stones and in other obscure hiding-places. If they come about the house so often as to bore the ruling sex, they are mercilessly killed and eaten. The spider's skin is unyielding as the shells of lobsters and crabs, and is shed from time to time in the same way, to accommodate the animal's growth. If you poke over the rubbish in a female spider's back yard, among her cast-off corsets you will find the jackets of the males who have paid for their sociality with their lives—trophies of her barbarism as truly as scalps show the savage nature of the red man."

—The cells in a large mushroom, weighing four and a half pounds, were found by Worthington G. Smith to number 106,596,000,000,000. Each of these is furnished with a coat or cell-wall, and contains within itself protoplasm, water, and other materials. These cells are so extremely light that in one species of fungus it takes 1,624,320,000,000 to weigh an ounce troy.

# NEWS AND MISCELLANY.

**In this Department Will Be Summarized the Most Important of the Events of the Day.**

—Crops in Kansas are the best that they have been for a number of years.

—The Cubans continue to maintain their position.

—Tilden and Hendricks are the democratic candidates for president and vice-president.

—The plague which has been raging in Mesopotamia has decreased somewhat.

—A severe shock of earthquake recently occurred at Vienna.

—It is rumored that the new Turkish sultan is in very ill health, and may be expected to abdicate at any moment in favor of his brother.

—The Chinese government announce a determination to suppress the practice of exporting coolies to Cuba.

—Castle Garden, one of the oldest structures in New York City, was recently consumed by fire.

—A propeller was recently burned on Lake Superior. The fire spread so rapidly that only one boat was launched. Twenty-seven lives were lost.

—Postmaster-General Jewell has resigned his office in obedience to the demand of the president, no reason being assigned.

—An instrument is at work in connection with a telegraph line between Paris and Lyons which sends six messages simultaneously.

—The Turkish government owns about four-fifths of the land. A Frenchman has proposed to the State to pay off its enormous debt in farms.

—It appears that we are soon to be informed whether or not the center of the globe is in a molten state; for the Smithsonian Institute is about to investigate the subject.

—On the night of July 7th, a railroad train was stopped in Western Missouri by a gang of robbers who obtained spoils to the amount of $16,000.

—The running expenses of the Centennial Exhibition are computed at nearly $10,000 a day, which is nearly as much as the average receipts, so that no great dividends can be expected by the stockholders.

—The Indian war has been very disastrous thus far. In the first battle, a body of troops commanded by Gen. Custer was totally annihilated. Not a soldier escaped. The Indians engaged in the battle numbered several thousands.

—The Supreme Court has reversed the decision rendered by Judge Dykeman in Moulton's suit against Mr. Beecher, so that the case now stands in Moulton's favor. Another committee, consisting of five lay members, three of them judges, has been appointed to investigate the merits of the scandal. At a recent meeting of Plymouth church, Mr. Beecher's salary was reduced to $20,000, having been raised to $100,000 during the last year on account of the expenses of the scandal suit.

—An experimental railway has been constructed in China for the purpose of showing the natives what a railroad is like, so as to remove their opposition, which has been very bitter. It is only nine miles long, and employs an engine of only two or three horse-power.

—It is reported that Don Carlos is in Mexico. It is intimated that he expects to become emperor of that country, and will perhaps attempt to establish himself as king of Cuba. It is stated that his reception by the Mexicans is very flattering.

—An interesting feature of the public celebration at Philadelphia on the Fourth of July was the reading of the Declaration of Independence from the original manuscript by the grandson of Richard Henry Lee, and within a few rods of the house where it was penned by Jefferson.

—Reports from Shanghai state that considerable anxiety prevails respecting the relations between China and England, which are so unpleasant as to lead to the conclusion that war between these two nations is not very improbable. The British minister has refused to hold friendly relations with Pekin officials.

—Turkey is defending herself against both Servia and Montenegro, which are carrying on independent campaigns against the sultan's government. Recent accounts are published of Servian repulses. The Turkish troops commit the most horrible barbarities whenever they have an opportunity.

—A fatal disease known as "charbon" is raging among the cattle of Ireland. The animals die very suddenly; and their flesh is so poisoned by the disease that ducks and geese to which a portion was fed fell dead in five minutes after eating. The cattle plague has also appeared at St. Petersburgh, Russia.

—For the three weeks including the last of June and the first weeks of July, the highest daily heat indicated by the thermometer averaged 97°, or only one degree less than blood heat. Several times the mercury stood above 100° in the shade. A great many persons have been sun-struck in Philadelphia, and many more in New York. Cases of sun-stroke are not infrequent in the country.

—American postal cards may be sent for an additional one cent stamp to the following countries: Netherlands, Moldavia, Newfoundland, Norway, Poland, Portugal, Roumania, Russia,

Servia, Spain, Sweden, Switzerland, Austria, Belgium, Denmark, Egypt, Germany, Great Britain and Ireland, Greece, Greenland, Holland, France, Italy, Turkey, Montenegro, and Wallachia.

It will be seen that the introduction of postal cards and the completion of postal treaties with foreign nations has now made it possible to send a note to almost any country in the world for two cents. A decided contrast this from the days of stage-coaches and postboys, when poor people were often obliged to beg their friends not to write to them, as they were unable to pay postage.

—On the night of the Fourth of July a terrible storm swept over a portion of Iowa, doing great damage to crops, bridges, and buildings. One village was inundated and entirely destroyed. More than two hundred houses were demolished by the wind and carried away by the flood, and about fifty persons were drowned. The survivors are left without houses, and penniless. The suddenness of the flood, and its occurrence at midnight, made it one of the most terrible affairs recently recorded.

## Literary Notices.

MICRO-PHOTOGRAPHS IN HISTOLOGY. Philadelphia: J. H. Coates & Co.

We have received the first two numbers of this new monthly which promises to be a valuable addition to scientific, and especially medical, literature. We cannot better indicate the aim and scope of this publication than by quoting the following paragraphs from its prospectus:—

"This publication is intended to replace the microscope, as far as possible, for those physicians who have neither opportunity nor leisure to make observations with the instrument for themselves, and also to furnish microscopists, for comparison, correct representations of typical specimens in the domain of normal and pathological histology.

"As the pictures are obtained directly from the microscopic objects by means of photography, and printed from the negative by a reliable mechanical process, they have the great advantage of being faithful copies of the pictures formed by the lens, and there is nothing produced that is not actually visible in the instrument, thus avoiding the diagramatic character and the subjective coloring which are so frequently found in drawings made by means of the camera lucida."

"It is purposed to give in each monthly issue pictures of at least one pathological and three normal specimens to illustrate the difference between healthy and diseased structures."

The necessity for a knowledge of histology by the medical practitioner is daily becoming more apparent. The numerous parasitic diseases which affect man and animals, together with the various morbid growths, the character of which can be determined only by a careful microscopic examination, are illustrations of the practical utility of this kind of knowledge; yet it is safe to say that not one in a dozen physicians would know the difference between a trichinæ and a fiber of yellow elastic tissue, or between cancerous and healthy tissue. This monthly promises to do much toward enlightening, upon these subjects, those who have not the opportunity of microscopic study under the instruction of experts. It is to be hoped that it will receive a liberal support. The two numbers which we have examined are fully equal to our anticipations from reading the announcement before their appearance.

HYGIENIC TREATMENT; WHAT IS IT? By Dr. Robert Walter.

In this pamphlet Dr. Walter points out in a characteristic manner some very gross errors in the practice and teachings of some of those who have at various times been more or less prominent among the ranks of hygienists. He also exposes the weakness of some of the arguments sometimes used by vegetarians in defense of the practice of abstinence from meat. Nevertheless, the groundwork of the doctrine is in no wise disproved or weakened; and in perusing the work, we were compelled to notice occasional inconsistencies which we will omit to mention, as we do not care to enter into any controversy. The conviction was forced upon us, however, that the author, while rightly condemning one extreme, had unhappily chosen a position perhaps equally extreme in the opposite direction, though professing to have found the moderate mean.

We have no disposition to stigmatize as silly or absurd everything that differs from what we conceive to be the truth. Every man has an undisputed right to believe what seems to him to be in accordance with facts, and to teach what he believes to all who are willing to listen to him. Again, the diet question, and especially that portion of it relating to the use or non-use of animal food, is only one item in the great subject of reform, upon the main principles of which all intelligent hygienists agree, and from the promulgation of which we should not be distracted by controversies over minor questions which often involve disagreeable personalities.

THE ELOCUTIONIST'S MANUAL. Philadelphia: J. W. Daughaday & Co.

A neat little work of 194 pp., in paper cover. It is wholly made up of short selections from the best authors of prose and poetry. Many favorite pieces that have long done service on special occasions in village schools and lyceums will here be found. It will be a valuable addition to the library of any person who is engaged in the study of elocution. Indeed, it is worth the small sum charged for it merely to read; for several of its selections will bear reading many times. On the whole, it is a very good collection, though a few selections might possibly have been replaced by others of greater merit with advantage.

# Items for the Month.

☞ A BLUE cross by this paragraph signifies that the subscription has expired, and that this number is the last that will be sent till the subscription is renewed. A renewal is earnestly solicited.

☞ In our advertising columns will be found notices of five different health institutions, which are all finely located in portions of the country somewhat remote from each other, so that invalids can hardly fail to find in some one of them all the desired inducements to go and be healed of their infirmities by the great physician, Nature, with the co-operation of kind and skillful hearts and hands.

☞ The magnanimous offer of the publishers to supply our health tracts at a very low rate, is evidently appreciated in some quarters. One gentleman sends an order for 10,000 copies of the new temperance tracts. He adds, "They are *just the thing;* short and pithy. These little things accomplish a great deal of good. I could point you to scores of families who have been converted from the use of swine's flesh by that little tract on 'Pork.'"

Large editions of these tracts have been published, and orders can be filled without any delay. The different numbers in the series deal with almost every important subject embraced by health reform. Money cannot be invested to better advantage than in such an enterprise as that of making human beings cleaner, healthier, happier, and better.

**Hygienic Missionaries.**—There never was a cause more deserving of earnest missionary labor than that of health reform. Most of the people of this enlightened, civilized country are in grosser darkness in relation to the laws of life and health than the Hottentots of Cape Colony. Or, if not more ignorant, their habits are certainly more perverted and unnatural. To lead people out of this condition of disobedience to nature's laws, is to help them to take the first step toward the attainment of purity of heart and life. Mental and moral purity are naturally incompatible with physical impurity. Any person who is possessed of an earnest desire to do something for the benefit of humanity, who is really in earnest to work for the good of his fellow-men, will find here an admirable opportunity to engage in a work which will bring him the richest kind of returns.

We are happy to know that there are a few zealous workers already in the field, and we are constantly hearing of the results of their efforts. What a noble work could be done with a thousand faithful missionaries at work! There ought to be a "hygienic missionary" in every county in the United States. Probably, if good wages were offered and expenses paid, we should have plenty of volunteers. "Oh! there's the rub." This kind of work does not generally pay very well, at least not so well as raising corn and wheat, or tobacco, though by carrying for sale a few of our standard health books some have made it pay very well indeed. One gentleman in California has sold seven or eight hundred copies of one bound work, and more than a thousand copies of another, within the last two years.

But if one did not make a cent of money; in fact, if he invested a few dollars in the enterprise which never appeared again in the shape of money, still the business would be profitable. The enlarged views of life, the knowledge of human nature, which would be gained, and, better than all, the pleasure of doing good and of seeing the benefits wrought, the relief of suffering, the restoration of health, the return of happiness to melancholic hearts, all this would be a rich reward. There is plenty of such all ready for those who are willing to secure it.



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**The Bath:** Its Use and Application. A full description of the various baths employed in the hygienic treatment of disease. Pamphlet. Price, 15 cts.

**Proper Diet for Man.** A concise summary of the principal evidences which prove that the natural and proper food for man consists of fruits, grains, and vegetables. Pamphlet. Price, 15 cents.

**The Evils of Fashionable Dress,** and how to dress healthfully. Price, 10 cents.

**Alcoholic Poison,** as a beverage and as a medicine. An exposure of the fallacies of alcoholic medication, moderate drinking, and of the pretended Biblical support of the use of wine. 20 cts.

**Health and Diseases of Woman.** By R. T. TRALL, M. D. Price, 15 cts.

**The Hygienic System.** By R. T. Trall, M. D. Price, 15 cents.

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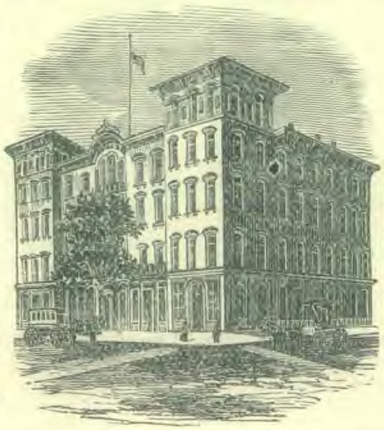

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