

The Health Reformer.

OUR PHYSICIAN, NATURE: OBEY AND LIVE.

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SPEAK NO ILL.

NAY, speak no ill, a kindly word
Can never leave a sting behind;
And oh! to breathe each tale we've heard,
Is far beneath a noble mind.
Full oft a better seed is sown,
By choosing thus a kinder plan;
For if but little good we know,
Let's speak of all the good we can.

Give me the heart that fain would hide,
Would fain another's faults efface;
How can it pleasure human pride
To prove humanity but base?
No, let it reach a higher mode,
A nobler estimate of man;
Be earnest in the search of good,
And speak of all the best we can.

Then speak no ill, but lenient be
To others' failings as your own;
If you're the first a fault to see,
Be not the first to make it known.
For life is but a passing day,
No lips may tell how brief the span;
Be earnest in the search of good,
And speak of all the best we can.

Diet for Infants.

HINTS TO MOTHERS AND NURSES.

At a recent meeting of the Public Health Association of New York, a resolution was passed in which the Association called for a schedule of directions concerning infantile diet in summer. The fearful mortality among babies in New York and other large cities was the reason for making the call. The following is offered with the assurance to mothers and nurses that, if carefully adhered to, it will save their babies much suffering and their own hearts much sorrow:—

Many mothers who nurse their infants furnish them with very poor milk, and thus cause them much suffering. They see their dear little ones

suffering with colic or diarrhea, or with convulsions, fever, or cholera infantum, and they, in sorrow, wonder what can have caused the disease, little dreaming that the babe has drawn the cause of its sickness from its mother's breast.

A woman who nurses a child should never heat her blood by exercise; for if she does, her milk will be "feverish," and the child will have colic as the result. She should not make any sudden change in her food, nor eat freely of any unusual substance, as onions, horseradish, cabbage, or boiled vegetables to which she is unaccustomed, and should avoid the use of superfine-flour bread and all irritating or pungent condiments or spices. Otherwise she will hear from them in the cries of her babe. She should not drink either tea or coffee for the same reason. Many mothers think they must use these drinks, or beer, or all three, to make nurse for their infants; but all such slops are worse than useless. If the mother would drink a bowl of gruel for that purpose, there would be some sense in it. But tea, coffee, beer, ale, and all stimulating drinks taken by the mother are liable to, and often do, cause the immediate sickness of the babe, and they always occasion difficulties that affect them through life. A child whose mother uses these articles cannot have as good a nervous organism as can one who employs a proper diet. Many parents who use tobacco, whisky, wine, beer, tea and coffee, wonder why their children are so dull and stupid; why they are not so bright, and do not have so sharp intellects and keen moral sensibilities as the children of some of their neighbors. The reason is this: The child's nerves were injured, and its brain kept in a partially narcotized condition, by stimulating and narcotizing substances which it received through its mother.

Every woman who nurses a babe should keep her feet and limbs dry and warm. She should keep her head cool, and should breathe freely of pure air. Nervines, stimulants, and all kinds of medicines, should be entirely discarded. She should keep the bowels free by proper diet, or if this fail, by the use of enemas. All sudden changes in her system and all nervous shocks should be carefully avoided. She should not take anything into the stomach that she knows would hurt her if she were not nursing a child. In fine, she should take the very best care of her own

health, for whatever affects it will probably affect the health of the child twice as seriously.

A babe under two months should be nursed or fed once in three hours in the daytime, and once in the night, if restless. If the child is between two and six months old, it should be fed every three and a half or four hours in the daytime, and no oftener; and if of fair health and strength, it should not be fed during the night.

When a babe gets thirsty between its meals, give it a drink of water. Many infants cry half their time, when all they want is simply a little cool water.

If for any cause the child cannot have its mother's milk, it may be fed on the fresh milk of a young, healthy, new-milch cow. The milk should be warm when fed to the child, and should never be given to it after it has stood twelve or fourteen hours if new milk can be had. The cream should not be removed from the milk, but should be well stirred into it. If the milk is found to be too rich, a little water should be added. In some cases, it should be half water. If the right kind of milk cannot be obtained, gruel may be made that will be as good if not better than cows' milk. Take powdered barley (it may be ground in a perfectly clean coffee mill, or pounded in a mortar), a teaspoonful to a gill of water, and boil it fifteen or twenty minutes. Strain through a fine sieve or strainer, and add a very little loaf sugar. If good milk can be had, add one-third milk. This should be given to the child blood-warm through a nursing bottle, keeping the bottle and mouthpiece in water, when not in use, to keep them sweet and clean. For babies under six months, this diet will be found better than a diet of cows' milk only. Do not add much sugar, as it will make the child costive, and will occasion torpidity of its liver.

If the child becomes very costive, give it gruel made of oat-meal, or of unbolted wheat meal. Always cook it well and strain it. If barley or barley meal cannot be had, use oat-meal and graham flour instead. Graham meal, constantly used, will be apt to cause diarrhea. In this case, it should be used alternately with oat-meal, the child being given a tepid enema, followed by a small cool enema. When diarrhea first sets in, the child should fast one meal.

The child will do better if its food is frequently changed from one of these grains to the other. Never overfeed the child. Many mothers allow their babes to nurse or feed until they have to vomit. This is wrong. Overfeeding and hot and foul air are the chief causes of summer complaint. Keep the doors and windows open, or at least keep the room well ventilated.

Never allow the child to wear garments that are foul, or that have become sour by its vomiting or

drooling on them. Do not allow the child to go more than twenty-four or thirty-six hours without a passage of its bowels. Gentle kneading or percussing of the abdomen will often cause them to move; but if this is unsuccessful, move them by means of an enema. If the child cries with colic, and is known to be costive, give it a tepid enema. A warm wet cloth laid over the abdomen will relieve pain in the bowels. It should be kept well covered with a dry one, or the evaporation will cause chilliness.

As the child advances in age, it will bear a larger proportion of milk in its food than was formerly used, and will also require a greater variety of food. Unbolted wheat-meal bread, and most of the various grains, and sound, ripe, sweet or subacid fruits, may be given it. Baked apples and pears are excellent if given in small quantities. Never give your children candies, sugar-plums, nor confectionery of any kind, nor pies or cakes of any except the very plainest kinds, and of these, the less the better.

Never allow them to eat between meals. Feed them with strict regularity. Never allow them to eat cheese, or butter, or greasy food of any kind. The less meat they eat the better. If they never taste it, so much the better. Do not give them fried eggs, nor fried food of any kind, nor hard boiled eggs, nor custards that are cooked much, as all such food is hard to digest. Teach them to eat slowly, and as they get old enough to use solid food, teach them to masticate it thoroughly, and to eat without washing their food down with drink when it is but half chewed.

In hot weather, babies, if fat and strong, should be bathed daily if they sweat much or are uncomfortable with heat; but if the child is feeble, once in four days is often enough. No fixed rule can be laid down to govern in this matter, as the weather varies so much in temperature, and babies vary so much in their conditions. The general rule should be to keep the child as comfortable as possible. Above all things, never give the babies any drugs or medicines because they are a little unwell, or even if quite sick. Never give them laudanum, nor Mrs. Winslow's Soothing Syrup, nor any other soothing syrup; for many a little child has had its life destroyed by being compelled to swallow these things.

M. G. K.

WHAT CONSUMPTIVES NEED.—The late Dr. Marshall Hall, of England, said: "If I were seriously ill of consumption, I would live out-doors day and night, except in rainy weather or mid-winter; then I would sleep in an unplastered log-house. Physic has no nutriment, gasping for air cannot cure you, monkey capers in a gymnasium cannot cure you, and stimulants cannot cure you. What consumptives want is air, not physic—pure air, not medicated air—plenty of nutritious food."

Sugar. — No. 3.

ADULTERATIONS.

THE object of the preceding articles has been to show the true character of sugar and its relation to both animals and vegetables as an aliment. In the first article, attention was called to a few well known and established facts which seem to prove conclusively that sugar cannot be correctly considered as an inorganic substance. In the second article, it was shown that although sugar is a substance of nutrient value to both animals and vegetables, it is indispensable to the latter, while of minor importance to the former, since nutrient material of this class is abundantly supplied to animals in the much less objectionable form of starch, gum, etc. Some of the objections to the use of sugar were also noticed, especially the evil effects resulting from its excessive use. In this article, attention is called to some of the terrible adulterations of the various forms of sugar which are in common use as articles of diet.

Some time ago, my attention was called to the fact that adulterations of sugar of a very serious character were becoming alarmingly frequent. White earth, sand, powdered gypsum, chalk, etc., have long been employed for this nefarious purpose; but these foreign matters are so easily detected that their use has been of late in a great measure discontinued. Compared, however, with the means which have now been resorted to, these are quite harmless. It has long been known to chemists that a variety of sugar could be manufactured from common starch, sawdust, cotton, or woody fiber of any kind, by treating it with sulphuric acid. (For a description of the process, see the "Scientific Department" of this number.) The sugar thus produced is called grape sugar, and two and a half pounds of it are required to equal one of cane sugar in sweetness.

For some years, this kind of sugar has been used in the manufacture of candy and of alcoholic liquors. It is also manufactured in Germany for commercial purposes; and, more recently, a number of manufactories have been established in this country for the purpose of imitating and adulterating the various forms of cane sugar. Several such establishments are located in New York and New Orleans, and one in Madison, Ind. The greatest fraud seems to be in the article known as "golden drip" sirup. This sirup is very superior in appearance, but often contains not the slightest trace of cane sugar, being made entirely from sawdust, paper rags, starch, and other similar trash, treated with sulphuric acid. This sirup can always be distinguished from the genuine by its reaction with an infusion of tannin. As tea leaves contain a large amount of tannin, a very convenient test is to put a small quantity of it into a little strong tea. If the sirup is of the kind

described, the liquid will become black upon being stirred.

Some months since, a gentleman of this place purchased a cask of this sirup which appeared to be of very fine quality, although it had a somewhat peculiar flavor. This peculiarity, though not very noticeable, was detected by one of the physicians of the Health Institute, who accordingly subjected it to the test of mixing a little with strong tea. The mixture immediately became as black as ink, thus revealing the spurious character of the sirup. Some of it was also made into molasses candy, which, upon being eaten, turned the teeth and tongues of the eaters very black. (Deserved punishment, perhaps, for their transgression.) Here was an optical demonstration of the presence of sulphuric acid, and the idea of a stomach in the same condition as the teeth and tongue was not very pleasant. But to place the matter beyond a doubt, a specimen was sent to the State University at Ann Arbor for analysis. Dr. Rose, professor of the laboratory department, after a careful chemical analysis of the sirup, reported that the sugar which it contained was not cane, but grape sugar. He stated, also, that beside grape sugar, the sirup contained a large proportion of sulphuric acid, together with some iron, and a little tannin, and must have been made either from old rags boiled with sulphuric acid in iron vessels, or from sawdust treated in the same way. There seemed now to be no possible doubt that the sirup was a most unfit article to be placed in any person's stomach, and it was accordingly returned to the grocer from whom it was obtained.

A correspondent of the *Herald of Health*, writing to that journal in relation to "golden drip," among other statements, says that its poisonous qualities are so great that flies were killed in prodigious numbers by eating of the sirup which leaked from the barrels containing it while stored in a warehouse. They seemed to learn by experience, and after a day or two would not touch it; a good hint for those who admire the article.

Not long since, I had the opportunity of conversing on this subject with a wholesale dealer in sirups and sugars. He informed me that the extent to which these adulterations were practiced was fearful; and that he often found those which were so bad that they could easily be detected by the taste. Wishing, however, to determine more decisively the truth in regard to this matter, I took the pains, a day or two ago, to collect from the principal dealers in this city, samples of the best "golden drip" in market. I procured, in this way, seven different specimens of the sirup, which varied in color from the best, which was almost as clear and transparent as water, to the poorest, which looked little better than cheap molasses. The prices ranged from 85 cts. to \$2.00 per gallon. All but one or two of the sirups were really so fine, both in taste and ap-

pearance, that I expected to find nearly all genuine. But upon subjecting them to the proper chemical test, what was my surprise and disgust to discover that only *one* among them all was genuine. All the rest contained a great amount of sulphuric acid, with iron and other impurities. Several specimens of the New Orleans molasses were also tested, but with the same result.

There are two classes of these spurious sirups. One consists of sirups made entirely from old rags, sawdust, starch, etc., and the other, of those which have been made from black, inferior kinds by bleaching with sulphuric acid. The specimens spoken of above were mostly of the latter class; but there is little or no difference in their power for mischief to life and health. Nothing can be told by the appearance of the sirup, for in this trial the very finest looking, which was sold at \$2.00 per gallon, was found to be about the worst of all, containing a large amount of sulphuric acid.

New Orleans molasses is often adulterated in the same manner to keep it from souring and fermenting as it is otherwise liable to do. The other day a Detroit cartman was conveying a barrel of this molasses (unadulterated) from the warehouse to the purchaser in another part of the city. He was driving along entirely unconscious of any danger, when suddenly an explosion occurred, and he found himself thrown violently to the ground, while staves, hoops, and molasses were flying in all directions. So great was the force of the explosion that the man narrowly escaped serious injury. It is to prevent such accidents that sulphuric acid is added, no account being made of the far greater dangers which must result from the destruction of the delicate coatings of the stomach by the corrosive poison.

But not only molasses and sirups are adulterated, but the same is more or less the case with sugar, and especially with the cheaper kinds of white sugar. Many sugar refiners make use of nitric and sulphuric acids to "bleach" cheap, inferior varieties, thus converting a very dark brown, into a light coffee, sugar. This kind of sugar will affect tea or tannin in the same manner as will spurious or adulterated sirups.

When we see to what an astonishing extent these poisonous adulterations prevail, can we wonder that so many people are dyspeptic? And yet Prof. Welch of the homeopathic college of Chicago says that "golden drip" is just as good as any, and he wonders that people do not use more of it. Such a statement might appear exceedingly strange to us did it not come from a man who daily doses his deluded patients with such abominations as asafetida, jalap, belladonna, chloral, etc.

Although I have by no means exhausted the subject of adulterations, having only called attention to a few of the most alarming and dangerous ones, I will now bring these articles to a close. Before doing so, however, I wish to make my po-

sition on the subject distinctly understood. In the first place, I produced certain facts and arguments to prove that sugar was not an *inorganic* substance in the *proper* sense of the term. It was not claimed, however, that it was *properly* an *organic* substance, but that it was a *partially organized* substance, intermediate between the two great classes of purely *inorganic* and purely *organized* substances. My object in so doing was not to encourage the increased use of sugar as an article of diet, but, as I stated, to find the truth in the matter, since it appears to me that the position taken by some is untenable in view of well-established scientific facts, of which I called attention to but few, for the sake of brevity. In continuing, I adduced other facts which afford ample reason for regarding sugar as an article of diet really quite unnecessary for anything except to render acid food more palatable to perverted taste and appetite. And in conclusion I have shown, I hope to the satisfaction of every candid mind, that the use of sugar in its various commercial forms is not only unnecessary, but absolutely dangerous. If it is used at all, none but the very best "loaf" or "crushed" sugar should ever be employed. These are comparatively pure. But since the use of sugar in its separate state is unnecessary as well as dangerous, and since nature has provided it in the various fruits and grains in just the proper quantities to meet all the demands of the system, is it not the safest and most prudential course to avoid it as much as possible? This is the plan I have adopted for several years, and for many months have discarded it almost entirely.

J. H. K.

Fried Bread.

"FRIED bread" seems not a very inappropriate name for unleavened soft biscuits (*gems*), which we are sometimes compelled to eat, or go hungry. From want of proper instruction, or from inattention to the laws of health, and justice to hygienic principles, some cooks, even among reformers, have fallen into the habit of thoroughly greasing their bread pans, and then letting them heat and burn, till they send off a cloud of smoke, into which burning, smoking grease the batter is dropped in expectation of good bread.

But alas! for the disappointed cook, and a double alas! for the stomach. This process prevents the bread from rising. It fries part of it, at least, rendering it indigestible, and thus highly injurious to the digestive organs. Now, why will the cook do this, when it is wholly unnecessary? And a little reflection should teach one thus.

Some cooks tell me they never grease their bread pans, and find no necessity for so doing if the pans are sufficiently hot when the batter is put into the cups, and the oven is of the right temperature.

But if grease must be used, a very small quantity applied with a clean rag or small swab, occasionally, is all that is needful. Try it, and you will find it so. A hygienist of the genuine stamp wants burnt butter in his stomach no more than he wants smoke in his eyes, or a thorn in his flesh.

Unto you! O ye cooks, comes up an imploring voice from the stomach to cease to do evil, and to learn to do well in this line of cookery. With good graham flour, and pure, cold or hot, water, you have, or may have, power to furnish and enrich your tables with the sweetest, most nutritious and healthful bread which the world affords. And every reformer should know how to prepare it in each of the various ways recommended by the HEALTH REFORMER, and the Cook Book, for sale at the Health Institute, Battle Creek, Mich., for 20 cts.

We invite you to read up, and post up on this important branch of the reform till you are masters of your business—till you can present to the world that kind of bread, emphatically the “staff of life,” which, to the well-disciplined palate, is sweeter than honey and the honeycomb.

A. S. HUTCHINS.

Moral Bearing of Health Reform.

THE bearing of our manner of physical life upon our morals and religion is so evident to any one who investigates it, that it is truly wonderful that any should imagine that there is no connection between them. Yet many a pious Christian, viewing the subject through the smoke and effluvia of tobacco, has decided that such filthy, pernicious, and health-destroying habits have nothing to do either way in regard to glorifying God in our body and spirit which are his, or in regard to cleansing ourselves from “all filthiness of the flesh and spirit.” How many a one has claimed to have attained to sanctification—to perfect holiness and perfect patience—and have seemed indeed to “enjoy” their religion exceedingly, when, at the same time, let them be deprived of their tobacco for forty-eight hours, and the whole face of their sky would be covered with gloom and despondency, and perhaps a spirit of irritability and fretfulness develop itself in spite of all their efforts to conceal it. Now it would be unfair to say that their religion was all in their tobacco, instead of themselves; but this illustration does prove the position that what we put into our mouths does have a powerful influence upon our religion and morals. Said a professor, pleading for the indulgence of his favorite habit, “I could not enjoy a good meeting without my tobacco.” In reply, it was asked, “Could you enjoy your tobacco without the meeting?”

The principle once established that our physical habits do have a bearing upon our moral and religious life, it may be applied to many particulars.

Stimulating, and therefore unhealthful, food, or even healthful food taken in too large quantities and at improper times, must have, in a degree, similar effects. The mind is not clear to discern the right that views things through a mass of undigested food and indigestible condiments. In short, all our habits of physical life have an influence in the formation of our moral character and religious life. Viewing it thus, we can see some force in the apostolic direction: “Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God.”

Our ancestors, in establishing our American government, did well in divorcing the church from the State. Religion is, and must be, independent of civil enactments. But whoever undertakes to make religion, or even morality, independent of our eating and drinking and the indulgence of our appetites and passions, will find that he is vainly striving to put asunder what God by physical and moral law has joined together.

Our physical habits will have a marked effect upon our moral character and religious life; and this fact ignored, is the very reason why people do not see and appreciate the benefits of health reform. The mind is so beclouded, and the moral sense so blunted, by the indulgence of appetite, that to them the health reform is not worth what it will cost. They are not prepared to judge aright, because perverted appetites clamor for indulgence; and therefore the gratification of these are falsely deemed more valuable than the moral good to be gained by a change. Thus the very principle we inculcate, namely, that moral sense is in great measure dependent on our physical life, is proved true by their rejection of the reform, judging it of less value to have a clear mind and an acute moral sense than to enjoy these at the expense of a change in regard to their habits of living. Did not perverted appetite darken men’s minds and moral sense, they could discern the benefits of health reform as a thousand times more valuable than all the false gratifications which stand in its way.

R. F. COTTELL.

A NASHVILLE man was awakened the other night by a pain in his stomach; and thinking that the cholera was at hand, he clutched for a bottle of camphor which he kept on the table ready for instant use, and commenced to apply it, with vigorous rubbing, to his abdomen. He experienced immediate relief, but was considerably surprised at not perceiving the strong scent of camphor. Suspecting that he might have made a mistake, he lighted the gas and made an inspection, which resulted in the discovery that instead of camphor he had used a bottle of ink. Query. Which cured the man? the ink, or the rubbing? Stomach pains are almost invariably removed by rubbing and percussing the abdomen.

Alcoholic Medication.—No. 1.

BY RALPH E. HOYT.

THERE is not to-day, and never has been during the history of the temperance reform, any obstacle in the way of its advancement half so formidable as Alcoholic Medication. Unfortunately for the peace of society, the great mass of so-called temperance men of the present age seem not to comprehend the real cause and the only cure of intemperance. I feel justified in making this assertion, after long and close personal observation, years of active effort with pen and tongue, in behalf of this important reform, and a careful study of the relations of alcohol to the human system. I have examined the subject in all of its bearings, scrutinized it from every conceivable stand-point, pondered over its knotty features, studied anxiously the causes and the effects involved therein, and analyzed it, to the best of my ability, in its every moral, social, political, and physiological bearing, with a sincere desire to learn the truth, and, having learned it, to promulgate it, whether it be popular or unpopular. I am confident that until there is a radical change in public sentiment with reference to the matter of Alcoholic Medication, no considerable degree of progress in the cause of total abstinence will be possible. Temperance men and organizations may talk as they will, and labor as zealously as they can, may elaborate arguments upon the evils of intoxication, and hurl red hot anathemas at the liquor seller; ministers may preach "temperance sermons," and offer up fervent prayers for the triumph of sobriety; prohibitionists may clamor for excise laws, and legislative bodies may enact them; mass meetings and temperance conventions may pass resolutions declaring that the fountains of drunkenness must be dried up; yet all will avail but little, practically, so long as the doctors teach and practice, and the people blindly believe in, Alcoholic Medication. This, in my humble opinion, is the corner-stone of the liquor traffic, and the primary cause of failure in nearly every "temperance movement" made thus far.

Narrowed down to a plain, simple proposition, the case stands thus: If alcohol is essential to the health and life of human beings, its sale and use should be encouraged rather than prohibited. If it is a bad thing, *per se*, and neither essential to the preservation of life nor the restoration of health, its sale and use should be discountenanced and discouraged by every proper and lawful instrumentality. Now which is alcohol? Good, or bad? Necessary, or unnecessary? An element of life and health, or of death and disease? It must be either one thing or the other, and before any further steps are taken in the direction of temperance reform, it should be determined *which*. A very large majority of those so-called conserva-

tors of the public health, the doctors, believe and teach that alcohol, in one form or another, is absolutely indispensable as a remedial agent; that its effects upon persons in various stages of debility are strengthening, invigorating, and in every way salutary; that in numerous cases of serious illness, alcohol is *the* great remedy, the only thing that can save life and restore to health. What more could be said in favor of alcohol? If the theory of the doctors be correct, the question settles itself, and needs no further argument, pro or con. If alcohol be what the doctors say it is—something that saves life, and gives health and strength to the people—what palpable nonsense, what gross inconsistency, to talk about prohibiting the sale of it by law, or to organize societies to war against it.

The masses of the people—with a degree of faith in their physicians, which is only equaled by their ignorance of the laws of life and health—accept this verdict of the medical fraternity, and act accordingly. What is the result? Why, simply that the greater portion of the liquor drunk throughout the country is taken down ostensibly for "medicinal purposes." And under this popular pretext, nobody who believes in alcoholic virtue has any scruples about using it as often as inclination may dictate. And why *should* there be any scruples in the matter? If alcohol is necessary for persons who are dangerously ill, and good for those who are moderately so, and strengthening to those who are slightly debilitated, and refreshing to those who are physically "out of tune," on general principles—that's enough. These classes comprise about ninety-nine one-hundredths of the people, and if they all use liquor habitually—as under this delusive notion they not only may, but *should*—no wonder that the use of ardent spirits is well-nigh universal. Search the land over, and you can hardly find one person in a hundred who is all the time in the enjoyment of perfect health. At least ninety-nine in every hundred are more or less diseased, or out of health, or debilitated, or physically weak, or in a condition to be benefited by the use of alcoholic liquors—according to the popular theory. Then why should not people use liquors, habitually? They do, and they will, so long as Alcoholic Medication is the prevailing hobby of the medical fraternity, and this, too, in spite of all the prohibitory laws and temperance organizations in Christendom, which aim only to do away with liquor *as a beverage*.

All the temperance organizations of the day, I believe, virtually acknowledge the necessity and propriety of Alcoholic Medication. In the so-called "total abstinence pledge" of each organization, there is a saving clause, which virtually, makes it just no pledge at all; for, under such a "pledge," every member may use all the liquor he desires, provided he uses it "medicinally."

The signers of these instruments obligate themselves only to abstain from the use of liquor "as a beverage;" which means, if it means anything at all, that they must not use it when they are in perfect health, and as they are never in that condition, they are thus free to "medicate," alcoholically, *ad libitum*. Hence the comparatively insignificant amount of good accomplished by such organizations, the immense amount of "tippling" among their members, and the frequency with which reformed drunkards "fall." They reason, and correctly, too, that if liquor is good for them one day, it is good for them the next, and will continue to be good for them on every subsequent day; that if a small quantity of the blessed stuff will strengthen them a little, a larger quantity must produce the same result in a still greater degree. And so they use alcoholic liquor, in some form or other, under the name of "medicine," and by the authority of the learned medical fraternity, and call themselves "temperance reformers," and wonder why there is so much drunkenness in the land. In every strata of society, there are uncounted thousands who habitually use spirituous liquors, and yet never seem to imagine that their influence and example are thrown in the wrong direction. Among the highest and most refined, as well as the lowest and most ignorant, circles, this is the case, all over the land. Ask them why they use liquors, and the answer is that alcohol is necessary for "medicinal use," that it "supports vitality," is a strengthener of debilitated conditions, and a promoter of general health. Go a step farther and inquire how they know these things, and they reply that Dr. A., B., or C., tells them so. I am personally acquainted with scores of people, whose characters are above reproach—many of them influential members of churches, and not a few of them *ministers*—to whom drunkenness appears like the hideous vice it is, but who always keep ardent spirits on hand, and who consider a flask of whisky or brandy as essential a commodity in an outfit for a journey as a clean shirt—and even more so. With this state of affairs, what wonder that the cause of total abstinence makes such slow progress, and the vice of intemperance such terrible havoc among the people? What else could reasonably be expected?

I do not assert that, because alcohol is bad when used in large quantities, therefore it must necessarily be a bad thing when taken in smaller potions. Such a style of argument as that is simply foolish. There is nothing so good for the human system, taken in moderate quantities, that it would not prove injurious when used in excess; and the fact that a large quantity of any article injures the body or mind is not, of itself, any proof that a lesser amount would be bad, or that the article is not essential to health. Everything offered us as food or drink should be judged on

its merits, and with regard to its relations to the human system. I do not, therefore, oppose the use of small quantities of alcohol because large ones are injurious; but I hold that alcohol in any and every appreciable quantity is bad, and ought never to be taken into the human stomach, whether under the name of "beverage" or "medicine;" that it is chemically incompatible with the structures, and physiologically incompatible with the functions, of the body, and therefore an enemy to life and health; that it is injurious to a person in good health, to one slightly "ailing," and to a confirmed invalid, trembling on the verge of the grave. That while a gallon of liquor drunk by a human being is productive of a certain amount of injury, two quarts, swallowed by the same person, will prove half as injurious, one quart, one-fourth as bad, one pint, one-eighth, and so on, down to the smallest quantity capable of producing any effect whatever.

Now, these propositions are either right or wrong, true or false. Which are they? The whole question is one for science to determine. It is not a matter to be settled by legal enactments, nor by resolutions, nor by the pledges and rules of temperance societies, nor by prayers and sermons, nor by public caprice or professional *ipse dixit*. It is a question of plain, hard facts, one way or the other. If alcohol is a good thing, it should be used, freely and without restraint. If a bad thing, it should be severely let alone. All attempts to discriminate between its use as a beverage and as a medicine are ridiculously absurd. There is not a particle of difference, except in name, and names have very little to do with physiological results. I recently read a "temperance tract," written by one of the most eminent philosophers and conspicuous statesmen of this country, wherein the author sets forth, with much force and apparent enthusiasm, the evil effects of alcohol on the human system—if used *as a beverage*. But in closing his arguments, he alludes to the alleged necessity of using alcohol for "medical purposes," and begs the whole question by admitting such necessity, adding that, "the human system is governed by one set of laws in health, and by another and entirely different set of laws in sickness." This absurd announcement only furnished another striking illustration of how to mix up error with truth so as to completely neutralize the former. A temperance document containing such a fundamental error as that can never be productive of much practical good—no matter who is its author. The truth is, the human system is subject to the same laws always, and under all circumstances, and one of those laws leads it to expel from its domain, in the speediest manner possible, any poison which human ignorance or folly may introduce—alcohol not excepted. Nature always knows her business, and she never fails to discriminate between her

friends and her enemies. Nor will she nullify or suspend any of her laws to accommodate those who practice a false system of medication.

The Hon. Gerritt Smith, one of the foremost men in the "temperance army" of America, recently fulminated a sort of proclamation, addressed to the grand army of temperance soldiers, in which he declares that "no American should so much as wet his lips with alcohol, unless it be prescribed by a wise physician, who dreads it as a drink. No other physician is a safe counselor in the case."

The public need no longer be in doubt as to the identity of the man

"Who can a hair divide
Betwixt the north and north-west side."

His name is Smith. Gerritt Smith. No other member of the somewhat populous Smith family—nor, so far as heard from, no other member of the human race—has ever been able to accomplish that difficult feat. But G. S. has done it—or the nearest thing to it. He has demonstrated, so far as the mere assertion of a learned man can demonstrate, that a poison which would seriously injure a patient if given by a physician who thinks it a good thing to use as a beverage, may be beneficial to that same patient when administered by "a wise physician, who dreads it as a drink." Was anything equal to this ever heard of before, in the realm of human logic? Was there ever such complete, palpable self-stultification? So it makes all the difference in the world *who prescribes* the alcohol! If by a doctor who likes it, and has faith in it as a nice, wholesome drink for persons calling themselves "well"—look out for the stuff; it is not fit to be swallowed. But if recommended by a doctor who "dreads it as a drink"—take it; the "medicine" will do you good! It might, perhaps, be more satisfactory to the public if Mr. Smith would proceed to explain *how* the effect of alcohol is controlled or regulated by the opinion of the physician who prescribes it. But I fear he will never give us this explanation—because he never can. When *will* our public men—leading spirits in the slow-moving "temperance cause"—learn to use common sense in the discussion of the alcoholic question? When will persons of influence, intelligence, learning, and talent, cease to talk and write like school children, and begin to *reason* like rational men and women in discussing this important question?

As this article has reached the length intended, I will defer the further discussion of the subject till next month.

Chicago, Ill.

A LITTLE boy accosted his papa thus: "Papa, are you growing still?" "No, dear; what makes you think so?" "Because the top of your head is coming through your hair."

Farmers' Wives in Insane Asylums.

THE records are said to show that the largest relative proportion of female patients in lunatic asylums are wives of farmers. This is corroborated by the experience of many persons intimately acquainted with agricultural affairs. And when the varied duties requiring brain work, as well as the exercise of muscle, which these women spend their lives in performing, are considered, together with the exacting nature of these duties, the wonder is not that some fail, but that a larger proportion of them are not sacrificed. A farmer's wife assumes not only all the cares of maternity and of domestic affairs, which of themselves are considered an overwhelming responsibility by other classes of women, but, in addition, they have a share of the farm work to perform, think about, or prepare for. The dairy, the garden, care of fruit, weaning and feeding calves or lambs, the care of the poultry, and often the marketing of some of their produce, fall as a matter of course to the share of the farmer's wife. These are looked upon as little things, but, in reality, in effect of worry and attention to details which they demand, they exhaust and weary mind and body as much as the plowing, reaping, or other heavy work of the farm. In fact, the labors of the farmer himself are recreation compared with the multitudinous details of little things which make up the daily duties of his wife. But, as though all this were not sufficient, in addition, her thoughtless husband adds to it the care of hired help, and brings into her house at the least convenient period of the year, his harvest laborers. Then, added to the extra work required, she suffers the irritation caused by having all the arrangements of her family and their domestic privacy broken up by the entry into her household of often the most undesirable of guests; and then the measure of her misery overflows. The climate, too, at the season when this infliction comes, is such as intensifies the trouble and renders it more oppressive. There need then be but little wonder that these women fail in health of mind and body, and that when a day of reaction comes, there is no desire left but to pass it in a state of wearisome, restless rest; nor need it be a surprise if the daughters show a desire to avoid the fate of the mothers.

Where is the remedy? The weapon which should cut the root of this evil is in the farmer's own hands; his wife, unfortunately, does not wield it. She, good woman, is the husband's willing slave; for him and his she yields to exhaustion, and, in a loving, patient, trusting way, looks up to him as her superior in tact and judgment, and believes it is all right so long as he says it must be. He can provide a remedy. While the earth must be tilled in the sweat of the brow, the farmer's wife must take her share, and she has an offset for it in the many and not inconsiderable ad-

vantages which a farm life brings to her, and which to her town sisters are matters for envy. But all outside of what necessarily and rigidly belongs to her department of the business should not be forced upon her. Let no hired help be boarded in the house. Generally this custom obtains that the wages may be reduced proportionately. But the money saved is too hardly earned. It is earned at the cost of the wife's and children's comfort and health, oftentimes of morals, as well as of body.

If the farmer keeps hired men regularly, it is so much the worse. Let him then hire a married man and supply him with a dwelling on the farm, and let all the extra help be accommodated there. The farmer's family will then be freed from their greatest trouble. His children will be freed from what is often serious contamination. The farm will gain much; the extra outlay made will thus come back. Married help is more regular and more trustworthy. As it becomes more common, the rural population will become more settled, and the supply of permanent labor will become increased. Less of a roving disposition will be formed among the young men who live by labor, and when they can more easily secure permanent and comfortable homes, they will be more inclined to marry and settle down than to go to the frontier and add to the number of half savage and dangerous vagabonds so plentifully found there, and who are all the more or less direct consequences of the state of things as they now exist. We need a more settled agricultural population, and our present system is antagonistic to this in every way. Society and morality would gain by the adoption of the system proposed, the farmer would be more satisfied in the end, and his wife and family would be relieved of what is now a great wrong, and care, and sorrow.—*New York Tribune*.

Adulteration of Tea.

BY M. E. CORNELL.

THIS subject is engaging the attention of chemists both in Europe and America, and the public have been startled with the results of the recent examinations. A chemist in Portland, Maine, makes the following statement:—

"My attention having been called to some samples of tea exposed for sale in this city that had the appearance of containing some other ingredients than pure tea leaves, I was led to examine some specimens. Accordingly, I procured a number of samples from several leading grocers in the city. These I subjected to a rigid chemical examination. The result was rather astonishing, and fully confirmed my suspicions. The investigation was continued until several samples had been analyzed, with the following results as to numbers, kinds, prices, and adulterations:—

"No. 1. Oolong, price 40 cents, contained old tea grounds, colored with logwood.

"No. 2. Oolong, 50c., same as above, with addition of sloe leaves.

"No. 3. Oolong, 50c., sand, old leaves, sulphur, lime, colored with Prussian blue.

"No. 4. Japan, 50c., sloe leaves colored with turmeric, and old tea leaves.

"No. 5. Green, 50c., colored with turmeric.

"No. 6. Black, 60c., genuine.

"No. 7. Oolong, 60c., contained other leaves colored with logwood.

"No. 8. Oolong, 70c., logwood, sulphur, lime, colored with Prussian blue and powdered with quartz rock.

"No. 9. Japan, \$1, colored with logwood.

"Several other samples analyzed contained more or less coloring matter, and other ingredients to increase the weight. But one or two samples were found genuine in the whole number."

The following, clipped from the *Daily Call*, of San Francisco, speaks for itself:—

"Matthew Brown, the English essayist, makes the bold assertion that the use of ale, wine, and beer, are harmless compared with tea-drinking. He pronounces tea the 'real enemy of modern civilization, the secret poison that is eating away the vigor of the age.' There are so many reformers, with different theories respecting the direful consequences attending the use of different kinds of stimulants and food, that nervous people will soon be afraid to touch anything outside of bread and water. Those who are rash enough to disregard these denunciations, entrench themselves behind such statements as that made a few days ago, of a woman having survived to be ninety-one years old, who from her youth had been addicted to the use of snuff and tobacco."

Those who are influenced by such a circumstance as that above referred to should consider that, if that woman had been strictly temperate, she might have lived thirty years longer. It is only a few years since a man died at the advanced age of 128 years. He had never used tea, coffee, tobacco, nor liquor, and had never been sick! All unnatural stimulants must be injurious, and destructive of the life forces. And since the use of stimulants is only a habit which can be overcome and corrected, how noble it is to lay it aside and be free men and women, each one walking forth in his integrity and uprightness!

SAYS Dr. Jules Guerin, in Paris: "Tobacco and alcohol act as stupefiers. They are the cousins-german of opium, though their effects are milder than those of the latter. But just as opium-smokers see all their faculties grow dim and old before the time, so do tobacco smokers and absinthe drinkers grow unconsciously stupid. The change is slower; but in reality they grow stupid. Their sensibility becomes less keen. Little by little they lose all their faculties."

What People Eat.

ONE of the most striking illustrations of the perversity of human nature, or, as the Bible expresses it, the disposition "to love darkness rather than light," may be observed in the remarkable readiness with which people can be induced to make use of the most abominable and disgusting articles as food, while they, at the same time, denounce, with scorn and contempt, a diet wholly composed of those delicious fruits, grains, etc., which nature has supplied for the sustenance of man in such lavish abundance, stigmatizing such food as "flat," "sickish," "tasteless," a "poor diet," etc. Such people would consider as a gross insult an invitation to eat at a table spread with such luxuries as are daily enjoyed by a genuine hygienist, while an "oyster stew," or a "clam bake," would be participated in with the greatest zest, and the slimy scavengers of the sea would be swallowed with the keenest relish. The same man who complains of "nausea at the very sight of a dish of graham mush" will sit down with the greatest complacency before a server containing the head of a hog, carefully prepared, so as to resemble, as nearly as possible, that of the living scavenger. His stomach makes not the slightest remonstrance, even when he regales himself with tripe and other portions of the offal of animals. The use of such things, and even worse, is very common.

A dish called *pates de foies gras* has been very famous in Strasburg for many years, and is now not uncommon in this and other countries. It is prepared from the livers of geese which have been fattened especially for the purpose. A few weeks before they are to be killed, the geese are placed in a dark room, which is kept at a high degree of temperature. Here they are placed in rows, with their feet nailed to boards to keep them quiet, and they are then deprived of their eyes. Several times a day they are visited by the heartless attendant having them in charge, who forces several dough pellets down their throats by means of a stick which he carries for the purpose. By this process, the geese soon become very fat, and their livers become of enormous size, being soft and flabby in texture, which just fits them for the depraved appetites of those who relish such dainty bits.

In England, the common snail is sometimes used as an article of food, especially as a delicate morsel for sick people. The same is true of the common vineyard snail upon the continent of Europe, while slugs are commonly used in China. The inhabitants of Zanzibar, a small island on the eastern coast of Africa, make use of several kinds of lizards as food, together with small monkeys and a species of bat. In India, many kinds of snakes are eaten, while white ants and locusts are a common diet among some African nations. Lo-

custs are also largely eaten by the Bedouins of Mesopotamia, who string them together, and subsist upon them on their journeys.

Turtles, frogs, lobsters, and crabs, are commonly used as food in this and other civilized countries, and that in spite of the well-known fact that these creatures are only in their element when reveling in the very center of the vilest cess-pool, whose putrid waters furnish them their sustenance. It is recently reported that European epicures have found another delicacy in the ordinary earth worm. Disgusting as such things may seem, they are certainly no worse than the habit of pork eating, which is indulged in by millions of people, and which often involves the eating of worms of a much more dangerous character than earth worms.

Such animals as cats, dogs, horses, mules, etc., are eaten by many nations, and are considered good and wholesome. At one time, horse-beef soup was quite a fashionable dish among Parisians.

In Scotland, the sheep which are found dead in the field are eaten under the name of "braxy sheep." When a man hires out as a shepherd, it is always stipulated how many "braxies" shall be allowed him. The Chinese find a great luxury in the shape of the nest of certain species of birds. They are eagerly sought after, and great dangers are undergone to obtain them.

But not content with the almost innumerable abominations afforded by the animal kingdom, there are a few of the human family who even attempt to derive nourishment from the inorganic, or mineral, world. A tribe of South American Indians who inhabit the shores of lake Titicaca eat largely of a species of clay, which, of course, serves no purpose whatever except to distend their lank stomachs, as it contains not the slightest trace of organic matter. The same is true of some tribes of the eastern continent.

There may be some apology for some of the people mentioned above, as it is quite possible that they eat the best they can get; but no such excuse can be urged for the rest, and what makes the matter appear still worse for the latter class is the fact that their higher civilization, and greater enlightenment, ought to teach them better things, and give them more cleanly tastes. We no longer wonder that so few people appreciate the pure and nourishing hygienic diet, when we see how terribly depraved and unnatural their appetites have become, as indicated by such morbid cravings.

K.

A PAPER is in circulation among the leading physicians of New York, for signature, favoring legislative enactment for the suppression of trade in intoxicating liquors. In London, three hundred medical practitioners signed a paper of like import, alcoholic drink, in their opinion, being wholly unnecessary for medicinal purposes.

Vomiting.

WE are frequently asked how to treat severe cases of vomiting, in which, to use the patient's own words, "it is impossible to retain any food in the stomach." Not many years since, the writer was acquainted with a case of this kind. The patient declared that, within a few minutes after each meal, he vomited all that he had eaten. There are very many individuals who are troubled more or less with this difficulty, yet it is evident that in no case does the patient eject *all* the food taken into the stomach; otherwise, he must soon die of starvation.

There may be many causes of this constant vomiting. It may be caused by cancer, or ulcers of the stomach, or by inflammation of that organ, or by poisons in the blood, or by certain kinds of food. To effect a cure, the general health should be attended to, the bowels should be kept free, the skin soft and clean, and the stomach should be allowed entire rest for one or two days, no food being taken unless the patient is far reduced. Many cases have been completely cured by causing the patient to abstain entirely from food for twenty-four or thirty-six hours, and then feeding him a single spoonful of milk or gruel, giving, in the twenty-four hours, just sufficient to keep the patient alive. This plan generally succeeds. After a few days, the amount of food may be increased somewhat, and, as the action of the stomach becomes healthy, other kinds of food that are easy of digestion may be allowed.

To allay thirst or fever, apply tepid wet cloths to the arms, body, and limbs, and give a small tepid enema. While the stomach is resting, it may, in very weak patients, be best to administer nourishment by way of the rectum. For this purpose, a little milk may be given, or a little wheat, oat, or barley-meal gruel. The gruel should be strained before using.

M. G. K.

Fœticide on the Increase.

"Murder most foul, as in the best it is;
But *this*, most foul, strange, and unnatural."

[*Macbeth.*]

The excitement about abortion continues. According to the highest medical authority, criminal abortion not only prevails to an enormous extent in New York, but is steadily and rapidly increasing, and the worst statistics of the city are surpassed by those of Boston. One woman, in Boston, testified verbally and by her edger, to having procured over twenty thousand abortions by instruments alone, in seventeen years, among both married and single women of all grades of society. The newspaper press here are discussing the matter in all its bearings, and declaring that the American race is dying out from this cause, which cannot be removed until our women have new ideas and new beliefs of the ante-natal life. [New York Telegram.]

HERE is a fearful yet truthful picture of the great crime of the age. Think of "staid, puritanical Boston," which affords an average of more than three victims per day to but one of the many who there drive their murderous traffic! But the number of detestable creatures, both lay

and professional, who practice this horrible art, is increasing to a frightful extent, not only in New York and Boston, but here in our midst. So wide-spread has this crime become that it is safe to assert that a physician's popularity, among a large class in these days, is in direct proportion to his readiness to relieve whoever asks him, of these little obstacles to convenience or pleasure.

The honest physician who has earned a right to public confidence by a thorough course of study, love of right, and respect for wholesome laws of the land, may protest against this infamy, but his voice is drowned amid the hissing of a brood who have come up from below at the bidding of a corrupt and perverted public sentiment. Is there a law of compensation which applies to ante-natal murder? or is the moralist's code a sham, and the Christian's faith and teachings a lie? If the command of Jehovah, "Thou shalt not kill," is worth the tablet upon which it was engraved; if the instinct of humanity, which shrinks from doing violence to human life, is not a sentimental delusion; if the laws of the State in which we live are not deservedly obsolete in this respect—then the press should speak and the pulpit thunder against this unnatural crime. Especially should the clergy deal with it searchingly and truthfully, for the churches are to-day filled with "whited sepulchers," who boast and pride themselves upon their connection with the hosts of the elect, who wink at, defend—nay, more—practice, this greatest abomination of the age.—*Michigan Tribune.*

Unconsidered Murderers.

UNDER the above title, the *London Pall Mall Gazette* moralizes, in the following fashion, upon the delinquencies of architects. The strictures of the *Gazette* are as applicable in this country, probably, as elsewhere.

"The man who cuts his neighbor's throat runs a good chance of being hanged; the man who murders him by secondary causes is neither condemned nor suspected. Yet there are crowds of these murderers abroad, agents and effects of our boasted civilization; and we decorate some of them, honor others, and pay all just as we pay the undertaker and the sexton for the considerate burial of our dearest. The ordinary architect is one of these murderers; and we question whether we shall get rid of his bad breed until one of them has been hanged *pour encourager les autres*. The ordinary architect builds a handsome-looking house, paying great attention to the ornamentation of the iron-work, the right curves of the moldings, and the general effect of the façade. The stairs are wide and, what he calls, noble, the drawing-rooms perfectly proportioned, and the principal bed-rooms are arranged with taste and according to superior ideas. But the drains go

into a stagnant cess-pool, and the waste pipe of the cistern leads direct into the drain; that is, the architect has built a house which is a nest for perennial typhus and diphtheria, and has thus constituted himself the prospective murderer of any number of innocent lives. Damp through all the basements, and imperfect ventilation in the sleeping-rooms, are extra flourishes of the weapons he employs in his trade.

"People take these fine, artistic houses, and their friends congratulate them on their good fortune in having a first-rate architect, and make all sorts of admiring comments on the perfect taste with which their dwelling is arranged. But, somehow, all sorts of troubles and illness follow. Children die of scarlet fever, and older people suffer from incurable neuralgia and dyspepsia; there are obscure cases of typhoid fever springing up, no one knows why or whence; and the fine house, with its chief rooms to the east or the north, with its defective ventilation, its poisoned water, and its contaminated air, is simply a death-trap constructed by an architect at great pains, abundantly rewarded by applause."

Matrimonial Incompatibility.

THE Rev. Dr. Peabody, in a late essay, touches upon this delicate subject after the following fashion:—

"The truth is that the greater proportion of the so-called incompatibilities and uncongenialities of domestic life, which are so often made the ground for the disruption of the matrimonial bond, are inadmissible as a justifying ground for any such dissolution, and could be readily overcome and blotted out of existence, if the parties most concerned had only the will to do it. A couple are no sooner married than they find that differences of opinion and mutual jars ensue, and all is not gold that glistened; and then one or both straightway imagine that there is no remedy but in ruthlessly breaking the solemn, sacred tie that binds them. A vague, restless feeling seizes upon one or both, producing discontent, engendering a certain thought of present bondage, which exists only in fancy, and creating a feverish desire for other associations and spheres, which are supposed to be more fitted and providentially designed for the mind and heart. No escape, it is said, but in cutting the knot.

It is a delusion. The marriage relation, in all its history, was never expected, perhaps, to be entirely free from misunderstanding and discords. Foolish to think that the whole mutual life can flow on like the earlier stream, without a ripple or eddy. Home is a school, a discipline, whereby husband and wife are to grow into each other, getting rid of their angularities, harmonizing their peculiar characteristics, and more and more be-

coming one in thought, sympathy, and life. The true blessedness of wedded souls is not insured by simple exchange of plighted faith. It comes through, and after, many a self-denial, many a crucifixion of the will, many a scourging of the resentment, anger, pride, vanity, and passions of the heart. It is true here, as in other relations, that he who saveth his life shall lose it, and he that loseth his life shall save it.—*Sel.*

What to Do in Case of Accident.

PROF. WILDER, of Cornell University, gives the following short rules for action in case of accident which will be found useful to preserve or remember:—

For dust in the eyes, avoid rubbing; dash water into them; remove cinders, etc., with the round point of a lead pencil.

Remove foreign substances from the ear by tepid water; never put a hard instrument into the ear.

If an artery is cut, compress above the wound; if a vein is cut, compress below.

If choked, get upon all-fours, and cough.

For slight burns, dip the part into cold water; if the skin is destroyed, cover with varnish.

Smother a fire with carpets, etc.; water will often spread burning oil, and increase danger. Before passing through smoke, take a full breath and then stoop low; but if carbonic acid is suspected, walk erect.

Suck poisoned wounds, unless your mouth is sore; enlarge the wound, or better, cut out the part without delay; hold the wounded part as long as can be borne to a hot coal or end of a cigar.

In case of poisoning, incite vomiting by tickling the throat or by warm water.

For acid poisons, give alkalies; for alkaline poisons, give acids—white of egg is good in most cases; in a case of opium poisoning, give strong coffee, and keep moving.

If in water, float on the back, with the nose and mouth projecting.

For apoplexy, raise the head and body; for fainting, lay the person down.

DANIEL WEBSTER is not the only bright boy born in New Hampshire. Another has been discovered—a youth residing in Dover—who refused to take a pill. His crafty mother thereupon secretly placed the pill in a preserved pear, and gave it to him. Presently she asked, "Tom, have you eaten the pear?" He said, "Yes, mother, all but the seed."

SAWDUST pills, says an old physician, would effectually cure many of the diseases with which mankind is afflicted, if every patient would make his own sawdust.

To Correspondents.

WIND COLIC—NIGHT SWEATS.—Mrs. G. R. P. writes : 1. I have a babe four weeks old ; it suffers much every day with wind colic. What shall I do for it? 2. What shall I do to stop night sweats?

Ans. 1. Keep the child's bowels free, and give it good food. Probably something that you eat affects the child. Whenever it has colic, if its bowels are hard and full, give it a small tepid enema, and apply a very warm fomentation over the bowels for ten or fifteen minutes ; then wet the parts with cool water and wipe dry. 2. Whenever you begin to sweat, take a cool sponge bath, and wipe dry, or a cool air bath after wiping all the sweat from the body. This last may be taken by removing all the garments, and then sitting, lying, or walking for a few minutes in the air. Make use of a nourishing diet, and sponge the body with cool water once or twice a day for a few days, rubbing the body well with the dry hand after wiping.

WORMS.—Mrs. F. says, My little daughter, four years old, is troubled with worms. What anthelmintic shall I give her?

Ans. It may not be necessary to use an anthelmintic in her case. You should state more fully the particulars concerning the case, as we are exceedingly loth to prescribe the giving of poison to kill the worms unless we know something more of the patient than the above communication tells us. In many cases, the worms will be entirely removed by copious cold injections. In others, a spare diet will so change the system that the worms will be starved out, or a dry diet of dry toast will sometimes do it. Worms cannot live where grossness does not exist. If the system of the child be cleansed by a proper diet and proper habits of cleanliness, the worms will starve. Give no slop food, no rich pies, cakes, &c. ; in short, give no food that is not pure and wholesome, and free from grease and condiments. Then, if the worms do not disappear after a few weeks, it will be well to give an anthelmintic, but this should be done cautiously. Kellogg's worm tea, for sale by all druggists, is as good as any.

Mrs. E. B. says, My daughter, nearly eighteen, has been troubled with dyspepsia, also, at times, with pain over her right eye, and palpitation of the heart, and a pain between the shoulders. She has had no show for seven months. Has dimness of sight at times. What is the matter with her? and what is the best course for us to pursue?

Ans. Your daughter has catarrh in the head and a torpid liver, with a general weakened condition of all the digestive organs, and impoverishment of the blood. The best course for her to pursue would be to spend four months at the Health Institute. This would be worth hun-

dreds of dollars to her. We have had many such cases, and have had good success with them. If she cannot stay four months, let her stay as long as possible, if it is but four weeks, and get the work of recovery started. One week at the Institute now would be worth as much to her as a month a year hence. She should have a nourishing diet, plenty of out-door exercise, pleasant, not fatiguing, and should keep the feet warm, and bathe twice a week. We would not advise home treatment, but will prescribe in case it is impossible for her to come to the Institute.

D. I. S. writes : One year ago, my wife had typhoid fever for six or seven weeks. She was treated by a drug doctor. Ever since she got over the fever, she has been troubled with dizziness. It is much worse when she stoops. She has hot flashes over the back and shoulders, and sometimes in the back of the head and in the stomach. She has severe headache most of the time. Her age is thirty-five. What shall I do for her?

Ans. Send her to the Health Institute. It will be money in your pocket to do so. This is another case of drug disease. Not one in ten of those who have typhoid fever, and are treated with drugs, recover from the fever without being rendered chronic invalids for life. Home treatment, amid family cares, is utterly useless in such cases.

Mrs. H. A. S. writes, I took a motherless babe to raise by hand when it was but one week old. We have fed it thus far on cows' milk, scalding the milk and putting lime water into it. It did well for eight weeks, but has had a very bad diarrhea for a week. What can we do to stop its diarrhea? and how shall we fix its milk?

Ans. The milk has been fixed too much already. Lime is a caustic, and, like other alkalies, will, if used continually, cause diarrhea by eating away the coat of the stomach and intestines. Give the child a few tepid injections, then apply a warm compress to the abdomen, and change its food. See article entitled, "Diet for Infants," in present number of REFORMER.

A. W. M. says, When a child, I had a gathering in my head, and my right ear has discharged more or less ever since. When I take cold, I am nearly deaf, and for the last year, that side of my head and my cheek-bone pain me all the time. What shall I do for it?

Ans. Yours is a case that requires constitutional treatment, such as you would not be likely to get at home. Can you not come and spend six or ten weeks with us? Several of your vital organs are more or less torpid, and they need to be restored to the normal condition. You need to take derivative baths. Come, and we will do what we can to help you.

PHYSICIANS, HEALTH INSTITUTE.

DR. TRALL'S
Special Department.

The Transit of Venus.

ON the ninth day of December, 1874, the planet Venus, sometimes our morning, and sometimes our evening, star, in its revolutions around the sun, is to pass directly across his face. The event is regarded as a very important one by astronomers. Expeditions have been planned by the scientific men of all the leading nations of the earth, under the patronage of their respective governments, to take observations. And for what purpose? Simply to obtain data for a more exact admeasurement of the distances between the planets of the solar system.

But, *cui bono?* No one pretends that any amount of observations from any number of places on the surface of the earth will enable us to determine the distances exactly. But we do it approximately. The distance between the earth and sun is generally supposed to be between ninety-five and one hundred millions of miles. If wind and weather are favorable, it is calculated that data may be obtained from the phenomena of the transit which will enable us to ascertain more nearly, to the extent of one, two, or possibly three, millions of miles, the distance between us and the "god of day," and, correspondingly, the distance between all of the other planets.

But suppose all of these facts are ascertained, and suppose the exact distance becomes known. How can this fact contribute to the welfare of any one or more of the thousand millions of terrestrial beings who are hurrying and worrying through life as though existence itself was a curse, and premature death the "pearl of great price"?

Well, all knowledge is useful, although it may be used or abused. And no one can study profoundly the works of God in nature without a deeper reverence for the Author of all. No science tends more to enlarge the intellectual and develop the moral nature of man than astronomy, unless it is biology. The contemplation of the forces of the universe, as exhibited in the formations, revolutions, and changes, of the starry heavens, and the laws of life, as manifested in the development, growth, and differentiation of vital organisms, are eminently calculated to exalt the soul above the trammels of creed and caste, emancipate it from the traditions and superstitions of the past, and reconcile man to God, nature, and his fellow-beings.

But, without deprecating the time, talent, and money, devoted to astronomical investigations which have no direct bearing on our immediate

interests, there is one astronomical problem worth studying, which has such a bearing. And just now the opportunity is presented for making important and useful observations. We mean the conjoint perihelion of the large planets.

We have already called attention to this subject through the HEALTH REFORMER and other periodicals, and, as is usually the case with ideas which are not popularly appreciated, or which are presented through unpopular channels, we have received the customary amount of ridicule and misrepresentation. Half a hundred newspapers have uttered their sensational witticisms and squibs, as though we had undertaken to play the dismal prophet, or had made some pretensions to knowledge not accessible to others.

We have done nothing of the sort. We have merely made the proper application of the facts and theories which others have published. Why did not these newspaper critics call on the authorities whom we quoted for information, or appeal to the professors of astronomical science?

This matter can be very easily investigated and the truth ascertained. And we now call on those men of learning who are so busy in discovering new planets, to give us the needful information. An eminent medical author has asserted in the *New York Journal of Medicine* that the four planets of the solar system will be in conjoint perihelion about the year 1880. Cannot the astronomers tell us whether this statement is correct? It is also either true or false that this unusual relation of the large planets to the sun, if it occurs, will seriously affect the temperature and electrical conditions of our atmosphere. Cannot the truth be ascertained by careful observations for a few years? It is true or false, moreover, that the coincident approximation of all the large planets of the solar system to the sun will so disturb thermometric and electrical conditions as to affect human health injuriously. Do not the signs of the times coincide with the affirmative of this proposition? And, lastly, it is true or false that the greatest pestilences ever known on the earth have been coincident with the perihelia of the large planets. Cannot the records of history determine this, one way or the other?

Instead of ridiculing those who call attention to these matters, the *Tribune*, *Graphic*, and other periodicals, would be better employed in calling on astronomers, historians, and physicians, for information. Instead of "stoning the prophets," they might be more useful in their day and generation by acquiring and disseminating knowledge on all subjects.

It is certain that the vicissitudes of weather—sudden and extreme alternations of temperature, storms, tornadoes, &c.—have been very remarka-

ble during the past year or two. Should these continue and become aggravated for several years more, the lesson for human beings will be one of vast significance—intrinsically more important than a thousand transits of Venus. And the sooner we ascertain the fact, if it be a fact, that the tendency of atmospheric influences for a series of years will be unfavorable to human health, the better preparation we shall be apt to make for it. The lesson which we take the occasion to teach, that all devitalizing habits—gluttony, intemperance and debauchery and dissipations of all kinds—render human beings more liable to sickness and death, can do little, if any, harm if neither pestilence nor perihelia ever happens; while a life more in conformity with the conditions of health for a few years may enable multitudes to survive the adverse influence, should perihelion and pestilential periods prove to be as disastrous as history seems to indicate.

Beechers, Butchers, and Spurgeons.

BEECHER is sometimes called the "American Spurgeon," and Spurgeon is sometimes called the "English Beecher." Both are "princes of preachers." Both have testified against the butcher's vocation as peculiarly demoralizing; yet both, we fear, patronize the butchers, not having investigated sufficiently the relation between the dietetic habits of human beings and their manifestations of moral qualities. In one of his powerful sermons a few years ago, Beecher exclaimed, "Who would want to have his son a butcher?" Why not? If flesh-food is proper for man, it is proper for the sons of men to butcher it; and if butchering is a commendable business, why should not Mr. Beecher's own son, or the son of any member of his congregation, or the member himself, be a butcher? We suspect, however, it would shock the pride, if not the moral sense, of all Plymouth Church, to have one of its deacons, or even its sexton, known as a butcher by trade.

Not long since, an extraordinary tea party took place in Mr. Spurgeon's church in London. Twelve hundred butchers assembled there, and after taking tea, received a wholesome sermon from the eloquent pastor. The butchers came together on the special invitation of a Mr. Varley, whom we may entitle a *reformed butcher*; for after his conversion, he abandoned the business. This fact seems to imply that Mr. Varley found the butchering business incompatible with the best exercise of the Christian graces, while the special effort made in their behalf by Mr. Varley and Mr. Spurgeon seems to indicate that butchers, as a class, are in special need of gospel preaching.

We are sorry, however, to learn, from the reports of the English papers, that the preachment of Mr. Spurgeon was not directed against the

butcher's calling, instead of being a mere admonition not to let the calling draw their minds away from the "paramount claims of Christianity."

The *Dietetic Reformer* concludes a notice of this meeting with the following comments by Mr. James Shield, of Liverpool:—

"I inclose an extract from the *Daily News*, containing a report of a butchers' tea meeting, held under the auspices of the Rev. C. H. Spurgeon, which strikingly illustrates the low tone of public sentiment as to the taking of animal life, even among those who should be foremost in all good works. How difficult it is to reconcile the sentiments expressed at this meeting with the teachings of a religion which inculcates universal charity and benevolence! Could we expect that a thoughtful Brahmin or Buddhist, after perusing this report, would form any but an indifferent opinion of the moral effect of a religion claiming to be immeasurably superior to his own, when one of its professors invokes the blessing of the Great Source of all life on the shambles where thousands of his creatures are daily and hourly slaughtered; and another religious professor is at the same time eulogized for his ability in teaching religion and killing pigs. The hymn after tea, chosen to harmonize with such sentiments, was that commencing, 'There is a fountain filled with blood.' 'The heathen,' who, as represented by Messrs. Thakur and Kapidia, so strongly protested against the appellation, would scarcely have their views of the Christian religion modified by such an exhibition. What moral influence do we desire to exert upon 'the heathen'? Do we wish to reconcile the inhabitants of our Indian Empire to the slaughter of animals, and to our practice of chasing and torturing poor defenseless creatures, miscalled sport?"

Alcoholic Pathology.

WE do not mean the maladies induced in human beings by the employment of alcoholic liquors as a medicine or a beverage, but the pathology of alcoholic liquors themselves. The muddledment of the medical profession, including our talented physio-medical friend, Dr. A. Curtis, respecting the essential nature of disease and the *modus operandi* of medicine, is well illustrated in the *London Food Journal* in a series of articles by H. H. Chichester on the "Diseases and Defects of Wines." Mr. Chichester regards the diseases of wines as entities or foreign substances which *attack* the alcoholic fluid, just as medical men teach that the diseases of human beings are entities or foreign substances which attack us. One of the numerous diseases with which wines are *afflicted* is termed "sour-sweetness;" of this, Mr. Chichester remarks:—

"The last malady requiring notice is *Agredoce*—literally, 'sour-sweetness'—the most formidable

of all the diseases affecting Portugese wines, and the more to be dreaded on account of the partiality which it invariably betrays for wines from the best soils, and of the finest vintages. It is a fact that this peculiar form of malady, so well known in Portugal, has hitherto remained unnoticed by any oenological writer, even by those best acquainted with the Douro wines."

Some diseases are said to have a "partiality" for certain organs or structures. Thus (according to the London *Lancet*) gout attacks, "preferentially," the great toe, while rheumatism *prefers* to ravage among the larger joints. Our medical text-books teach that cholera attacks the bowels, while fevers prefer to make their impression on the nervous system or in the mass of blood. Typhus fever and diptheria, as explained by our standard authors, might be termed "sour-sweetness" of the human blood, in the same sense that a putrescent condition of wine is called such; and the "sour-sweetness" of wine might as well be termed typhus fever or diptheria of that fluid. The conditions are analogous, so far as the inorganic and decomposing elements are concerned. There is, however, one very material difference, and this difference explains the essential nature of all diseases. In the fever, diptheria, or other malady of a living organism, there is an effort on the part of the vital machinery to expel the noxious elements from the organic domain, while with the wine there is no such effort. Disease, then, is, properly, remedial effort, and the different affections of wines, named diseases, are no diseases at all, but mere processes of decay. Who would think of calling the fermentation of sugar, the putrefaction of vinegar, or the rotting of dead wood, or the oxidation of iron, or the disintegration of rock, a disease or malady? It would be no more absurd than to term the processes of putrefaction or decomposition in wines diseases.

Sugar and Fermentation.

R. T. TRALL, M. D.—*Dear Sir:* I am much interested in the "Sugar Question." After reading your discussion with Dr. Galloway in the HEALTH REFORMER, I discontinued the use of sugar, as did several others, regarding it, like salt, an inorganic substance, and not properly food. But I notice in the July issue an article over the signature of J. H. K. in which "facts and arguments" are adduced in opposition to the theory you advocated, while your positions are characterized (modestly or otherwise) as "reckless and unscientific statements." Whether we conclude to use much or little sugar, or none at all, hereafter, I, as well as some others, would like to know the scientific truth of the matter. Will you enlighten us?
TRUTH SEEKER.

Leaving the modesty of J. H. K. to take care of itself, we have to say that his assumed "facts" are no facts at all, and that his pretended arguments are mere assertions—so far as they have any

bearing on the question in issue. If "Truth Seeker" will seek the truth of this subject in the chapter on Fermentation in Youman's Chemistry, he will find it. So far from sugar being fermentable, it is exactly the opposite. It prevents fermentation. It is used as an antiseptic to preserve organic matters against fermentation, as is common salt, vinegar, alcohol, arsenic, corrosive sublimate, sulphates of lime, soda, &c. Nothing ferments except albuminous substances (which contain nitrogen—sugar does not); but if yeast or any other fermenting material comes in contact with sugar in a state of solution, the "presence action" (motion) of the particles of the fermenting material will so change the elements of the sugar that they arrange themselves in a manner which results in the formation of alcohol and carbonic-acid gas. Fermentation is now known to be a process of plant growth, the nutrient elements of the yeast plant being derived from the decomposed nitrogenous (albuminous) substance. But sugar is a fixed, inorganic, crystallized matter, and when its elements are changed into alcohol and carbonic-acid gas, these are also fixed, inorganic substances, incapable of any changes except physical or chemical. To speak of sap as sugar, as J. H. K. does, is nonsensical. Sap is no more sugar than common salt is flesh, although both are obtained as the products of chemical analysis or organic decomposition.

EXPLANATION.

It will be seen by the preceding article that "J. H. K." is made the subject of some criticism on account of an article over his signature in the July REFORMER, headed, "Sugar." Thinking that some of the strictures are hardly just, which is doubtless owing to some misunderstanding on the part of the writer, I venture to make the following explanation, hoping that by so doing I shall remove "Truth Seeker's" doubts with reference to my modesty. And I feel the more ready to express myself freely, having been invited to do so in a private note from the author of the above article.

I regret exceedingly that any of my statements should have been misunderstood or misapplied; and it is principally for the purpose of correcting this misapprehension, or misapplication, that I now write. Let me state at once, then, for the information of all interested, that the expression, "reckless and unscientific," had no reference whatever to the person to whom it is applied by "Truth Seeker," and for whom I cherish the greatest reverence as a veteran in the cause of health reform, and an able champion of the true and noble principles of hygiene. Indeed, I had no reason to believe that he had taken the position controverted, viz., that sugar was an inorganic substance, like sand, salt, powdered glass, etc.; but, on the other hand, had, what appeared

to me, sufficient evidence that he held no such opinion. To assure the reader that I had some grounds for so believing, I will state some of the evidences from which I drew my conclusions.

1. Last winter, while attending lectures at the Hygeio-Therapeutic College, a friend and myself resorted to the doctor with this question. The remark was made that some one had said that he considered sugar to be inorganic. To this he responded, "Tell that person that I never said so."

2. A few weeks subsequently, this question was put to him before the medical class at the close of a lecture: "Is sugar an organic substance?" The answer was, "Surely." The same interrogator asked again, "Are its atoms bound together by chemical affinity? or by vital force?" The doctor promptly answered, "By vital force."

3. On page 441, vol. i, of the Hydropathic Encyclopedia, you may read as follows: "In relation to condiments, or seasonings, I have named milk, sweet cream, *sugar* in some form, salt, and the vegetable acids, as the only admissible ones. With the exception of salt, they are all, more or less, *nutritive*, and are really different kinds of *food*." Now as the same writer elsewhere claims that none but organic substances can ever serve as food for animals, it does seem to be a fairly drawn inference that the person who penned the above quotation believed sugar to be organic.

And right here I would say that these statements are not made with any malicious intent, but for the sole purpose of self-vindication, having been put on the defensive by the statements of the foregoing article.

In view of these facts, it was with no little surprise that I perused the manuscript of the article preceding this, entitled, "Sugar and Fermentation;" and I confess to be utterly at a loss to know how to reconcile its statements with those of the well-known author of the "Hydropathic Encyclopedia," and the president of the Hygeio-Therapeutic Medical College. And what adds still more to my astonishment is to find in this article the statement that sugar is *unfermentable*, while in the article on "Alcoholic Pathology," just preceding this, the "fermentation of sugar" is spoken of as a fact (see sixth line from the close of the article mentioned).

Truth-Seeker is cited to Youman's Chemistry to find the truth in the matter. The impression would naturally be received from this that Prof. Youman agrees with the positions taken; but so far from this being the case, he invariably considers sugar as an organic substance throughout his work, as do all other chemists of any note. Whether sugar is organic or not, there is evidence that it is not inorganic, besides what has been already given. One of the best arguments in support of this view is the following, which I quote from Dr. Trall, as presented by him in a lecture of which I have the notes. This is the argument: All inorganic substances can not only be *decomposed* by the chemist, but he also possesses the power to put together the elements obtained by analysis in such a way as to produce again the *original* substance. Now this is not true of sugar, for although the chemist can easily decompose it, or separate it into its component elements, oxygen, hydrogen, and carbon, it is impossible for him to cause these elements to again unite so as to form sugar. This can only be done through the agency of plant growth.

This argument seems conclusive enough. But let it be distinctly understood that the claim is not here made, and has not been, that sugar is a fully organized substance; for of course nothing but living animal or vegetable tissues can properly be called such. It is merely an intermediate or partially organized substance.

The statement that sugar will not ferment will probably be somewhat new to many; but if true, it should not be rejected on account of its novelty. In regard to fermentation, all Prof. Youman claims is that it does not *originate* in sugar. As far as this is concerned, however, it originates in sugar just as much as it does in albuminous matters; for it will not arise spontaneously in either. It is entirely dependent upon the presence of certain organic germs received from the air.

Dr. T. admits that sugar is decomposed by the action which ensues when yeast is added to a solution of it. Now whatever you may call this decomposition, one thing is certain; it is something which never occurs with inorganic substances. Common salt is composed of chlorine and sodium, a metal and a gas; but any quantity of yeast added to a solution of it will not decompose it. The same is true of soda, saleratus, sulphuric acid, and all other inorganic compounds.

But what is fermentation? Is it a process of plant growth, as "asserted" in the above article? or is it a process or action excited by plant growth? Since the chemists have been appealed to, let them decide the matter. Prof. Wells says that when a fermenting substance (as yeast) is "brought in contact, under favorable circumstances of temperature and moisture, with a complex *organic* body of small stability, it is capable of *inducing* in this latter substance a state of putrefaction or decomposition. In such cases, the substance *inducing* the decomposition is termed a *ferment*, and the *decomposition* induced, *fermentation*." He then takes a solution of sugar as an illustration. He also speaks of yeast as the "substance most potent in *exciting* fermentation in solutions of sugar." Prof. Youman also speaks of the power of yeast in "*exciting* fermentation." It will be noticed that the yeast is not spoken of as *performing* the fermentation, but as "*inducing*" or "*exciting*" it.

Last of all it is said, "To speak of sap as sugar as J. H. K. does, is nonsensical." I agree that such a statement would be nonsensical, and hence congratulate myself that I never made it. The reader can examine the article for himself. But since Dr. T. "always says what he means, and means what he says," it would be interesting to know if he will attempt to sustain the position taken in the concluding sentence of the above article. Granting any significance to grammatical construction, we are compelled to understand him to say that flesh is obtained from salt by chemical analysis.

In conclusion, I would say that what we want is the truth, the real facts in the case. Hence, it is really of no great consequence what have been *past* statements or opinions, if we only arrive at the truth now. If the ideas I have advanced are shown to be erroneous, I shall be glad to acknowledge them such and exchange them for more correct ones.

The references to lectures, which I have made, are not quoted from memory but are based upon phonographic notes taken on the spot. J. H. K.

The Health Reformer.

Battle Creek, Mich., September, 1873.

About Experience.

DR. GRAHAM was opposed to admitting experience as authority. With proper deference to that great man, I must differ with him. In regard to what is often miscalled experience, I should agree with him; and I think he must have been looking at this when he raised his objection.

Very few well-conducted experiments on the health question have ever taken place; very few are able to give a valid reason for their opinions. Generally, conclusions are drawn from insufficient grounds, and decisions are made by looking at one side only. A certain course is condemned without having been tried; and yet in all these cases people claim that their experience proves that they are correct. Of course, they are unworthy of credit. The following are instances of this kind:—

While visiting a family in 1866, I spoke to the mother on her free use of pork. She said it did not injure her. Of that, I expressed strong doubts. She earnestly replied:—

"I have always used it, and I *know* it does not hurt me."

"That you can only know," I answered, "by knowing that you are always in perfect health. Are you?"

"O no; I am never well."

"Then it is clearly true that *something* injures you, and how do you know that it is not the pork? But what ails your little girl?"

"I do not know; she has never been well."

"I can tell you; she is exceedingly scrofulous; a worse case I have seldom seen. Now, there must be a cause for this, and what do you think it is?"

She said she could not tell that.

"Well, I can tell you that. She inherited it from you; for you show plainly that you are scrofulous; and it is increased by the food you are giving to her. The pork which you put upon your table is a daily curse to yourself and child, and you can never hope for health while using it."

Now in this case, because she did not *immediately* feel the ill effects of its use, or failed to trace her ill health to that cause, she was sure that it did not injure her. This is no safe rule of judgment. The tobacco-user does not *feel* that tobacco injures him; the whisky-drinker does not *feel* that alcohol injures him; to the contrary, he feels much worse without it. But to quote these as the evidences of experience in favor of such articles, is decidedly wrong. They are but errors of judgment, and evidences of slavery to a perverted appetite.

But such error of judgment—of drawing con-

clusions from insufficient premises—is not confined to the illiterate; it is found with the scientific practitioner. In the medical journals we find reports of cases where certain poisonous drugs were administered, and the patients recovered; and they are forthwith set down as good for such diseases. And thousands of young practitioners follow up their use, not knowing how much injury they are doing. They are "in the books," and must be taken. And if the patient endures the treatment and recovers, the glory is given to the drug. Many physicians have declared that "experience proves" that human beings cannot live without salt, not one of whom ever knew a person to make the trial. I will relate a single instance of this false reasoning, not, however, with a new drug.

My own boy, aged ten, was very sick. A physician attended him who respected my opinions and feelings in regard to the use of strong medicines. Examining the boy, one day, he said his recovery was very doubtful; but if he could put him on a course of mercurials for twenty-four hours, he could bring him through. He said he had had four children in one family, in the same condition. Their death appeared certain; and he put them under a treatment of mercury and they recovered. The calomel, he said, undoubtedly saved their lives.

"Doctor," said I, "you have practiced many years, but do not know as much about calomel as I do. Let me tell you a few things which I know. Thirty years ago, when bilious and typhoid fevers greatly prevailed in Illinois, it was a custom with physicians to salivate in severe cases. By this means they *changed* the disease. A sprightly, intelligent lad was very sick with fever. Dr. M., considered the best physician in the country, tried to salivate him; ordinary means failing, he rubbed his gums with calomel and vinegar; but all in vain. The boy was not salivated, but the calomel settled in his hip joint; the bone exfoliated, and issued from ulcerous sores, and the patient was made a suffering cripple for life.

"In the same vicinity, I was requested to go to the assistance of a poor family where several were down with fever, among others, two little girls, from ten to thirteen years of age. Soon after I went there, I called the doctor's attention to a dark spot making its appearance on the throat of one of these girls. I knew that the fatal job was done. The calomel was literally eating her life away; and within two days a similar spot appeared on the cheek of the other. These were two of several cases of *life taken by calomel* in that vicinity that season.

"Now, to our own neighborhood: In 1861, I returned home, after an absence of several months, and was informed that a neighbor's boy was very sick. I immediately went to see him. The appearance of his face and throat, and especially his

breath, revealed to my mind the difficulty. When asked what I thought of his case, I replied that I thought he was suffering from the effects of calomel. The father was indignant, and said that he had not taken any. But calomel working in the system cannot be hid. He grew worse, and it was ascertained that the two physicians who attended him had each given calomel unknown to the parents. It settled in his face, and commenced destroying his cheek-bone. To stay its ravages, and to save the boy's life, a surgical operation was necessary; a portion of the cheek-bone was taken out, leaving him sadly deformed. And for months so serious—so terrible was his case that I did not blame, but only pitied, the mother when she told me she wished he would die.

"Now, doctor," I continued, "my children might come safely though this sickness under mercurials; but months hence, by exposure, or accidental wetting of the feet in cold weather, the calomel might be determined to some joint or bone, and they be made suffering cripples or invalids for life. I would rather they would die under acute disease than that they should be tortured for years with the effects of calomel."

The doctor confessed that my knowledge of the effects of calomel was greater than his, and that he could not blame me for being afraid of it. But now for the logic of his prognosis. The night following this conversation, I worked diligently with the boy, bathing him frequently, immersing him in warm water, and so allayed the fever. The next day, when the doctor visited him, he said:—

"This boy is better, and I think he will get along. And he is better off than if he had taken mercury; he is doing as well as could be expected under any treatment, and his system has not got to bear up under the operation of strong medicine."

"So I think, doctor. And now let me show you how doctors make mistakes. Had you given my boy calomel last night, and had you found him as well as he is to-day (which may well be doubted), you would have pronounced it another triumph of calomel, and said, without hesitation, that nothing else would have saved his life. And those four children, to whom you referred yesterday, whose lives you are so sure were saved by calomel, had they been treated as this boy has been, might have recovered without calomel, and even done much better than they did with it."

The reader will bear in mind that it is *never* certain that a specified course has saved the life of a person, for it cannot be certain what would have been the result of another course, or of no treatment at all. We may state *apparent probabilities*; but beyond that, a decision of this kind is of no weight.

As regards the authority of experience, it can be received as evidence only when different systems or habits are fairly tested, and observations carefully made, guided by intelligence, and free from

prejudice. Were these conditions always made the basis of judgment, we feel confident that but very few objections against the health reform would remain to be offered. Certainly, none would longer offer their *feelings*, while gratifying perverted appetites, or while under the influence of narcotics and stimulants, as the safe light of experience.

J. H. W.

A "Regular" Kill.

EVERY newspaper contains from one to a dozen or more accounts of murders, suicides, deaths by railroad accidents, boiler explosions, etc., etc. The number of deaths thus recorded is appalling; but notwithstanding the enormous total which a yearly summary would present, all of the causes of death mentioned are insignificant in importance when compared with the pill box and medicine chest of the "regular" medical profession. And yet, while the name of the homicide is published in every political and county paper of the land, and branded with the blackest infamy, and while the most assiduous efforts are made to ferret out and bring to justice the wretch who attempts the life of his fellow-man, it is seldom that the attention of the public is called to the villainous proceedings of a large and rapidly increasing class of men who are constantly and systematically engaged in the destruction of their fellows, and with such astounding audacity that the only excuse they urge, when the bereaved survivors of their victims protest against this wholesale slaughter of their dearest friends, is that the *kill* was "regular"! Although "killed by a physician" might be truthfully inscribed upon fully five-sixths of the tombstones of our cemeteries, it is quite rarely that the doctors get proper credit for their deeds. A representative case has recently been made public, and is worthy of attention. A Chicago correspondent has sent us the particulars as they were published in the city papers.

A few weeks since, a card appeared in the *Chicago Times*, over the signature of W. F. Storey, the well-known proprietor of that paper, in which he charged Dr. H. A. Johnson of that city with having caused the death of his wife, Mrs. Storey, by gross recklessness and carelessness. Dr. Johnson soon published a defense in which he gave his diagnosis and treatment of the case. From his own statements, it seems that he found the patient, Jan. 9, suffering somewhat with slight muscular soreness of the abdomen and back, which he immediately set about "curing." For eleven days he continued the process, administering bromide of potassium, morphine, colchicum, carbolic acid, bi-carbonate of potassium, citrate of potassium, aconite, chloroform, chloral, and various other poisons. At the close of the eleventh day the doctor pronounced the rheumatism (not the patient) "cured." The patient no longer

suffered any pain. Outraged nature had ceased to make any remonstrance. But she was restless, and could not obtain a moment's sleep. This, the doctor said, was all she needed, and so he gave chloral and a hypodermic injection of morphine and belladonna to stupefy the nervous system and thus "cure" the sleeplessness. In about eight minutes the patient became unconscious, apparently sleeping, and continued in this condition for several hours, when the attendants turned her in bed, and she suddenly ceased to breathe.

And now what does the doctor do? Does he acknowledge that the lady had been drugged to death, the final blow being given by morphine and belladonna, two of the most poisonous drugs? No, indeed. Although he had declared a few hours previous that the rheumatism was "cured," he now certifies that the deceased Mrs. Storey died of rheumatism of the heart! And when Mr. Storey, after six months' silence, warns the public of their danger in trusting their lives in the hands of such men, Dr. Johnson, who by the way is a member of the city board of health, gathers about him his medical friends, who unanimously agree that the treatment administered by him was entirely "regular." In relation to this point, Mr. Storey says, "I have not alleged that the medicines were not 'regular.' Chloral and chloroform, and other wild medicines are 'regular' in the practice of a certain school of physicians; and so are hypodermic injections."

Mr. Storey again says, "Constantly do we hear of fatal results of the careless administration of chloral and other modern contrivances of medical science. It is time the profession was checked in this career of reckless sacrifice of human life, and if by this exposure I shall contribute, in ever so little, to that consummation, I shall feel compensated for the pain it has cost me."

When will the people open their eyes to the fact that disease is not an entity, a foe within the body to be fought with untiring zest, to be killed by the administration of poisons, which if they have any effect whatever will only kill the patient? When will they cease to allow themselves to be "cured" to death, while the doctors grow rich upon their miseries? Disease and pain are friends, not foes, and they should be "cured" in the same way that we ease an upbraiding conscience; viz., by ceasing to violate established and invariable laws, and conforming to their requirements. J. H. K.

How to Remove Motes.

AN exchange gives the following plan for removing motes from the eye:—

"Take a horse hair, make a loop, take hold of the lid, draw it out so that the loop of hair can spread over the ball of the eye. Press the finger on the lid, and draw the loop out, and the eye

will be cleaned, even of steel filings, if they be fast in the ball."

Here is another plan. If the mote is beneath the upper lid, take hold of the lash and draw the lid out and down as far as possible, elevating the lower lid at the same time. Then press the upper lid down upon the lower one, and open the eye. In most cases, the mote will be found adhering to the eyelashes of the under lid, from which it can be easily removed.

A Patient's Report.

MRS. P. T. H. came to the Institute January, 1872. Notes of case are as follows: Health delicate from childhood. Was never strong since remembrance. Much trouble in the head—pain over the forehead and in the back part of the head. Suffering from catarrh. Eyes always weak. On taking cold, there was a sensation as if breathing through the ears. Was badly dyspeptic. Throat very irritable. Had bronchitis. Breath hot. Pain in and between the shoulders. Pain in the region of the heart and in the left side. Lungs weak; had had pleurisy. For many years had been afflicted with uterine disease. Eight years since, by adopting the reform dress and dieting somewhat hygienically, had found much relief from that weakness. The past year, had been worse. Suffered from piles, also from heat and pain in the locality of the kidneys. Hands and feet usually cold.

In treating this case, many things were encountered which were very discouraging to both physicians and patient, and which called into exercise patience and perseverance. A few months' treatment improved the general health; but before it became fully established, she felt it necessary to return to her home and family. Again she felt the need of assistance, and returned to the Institute for treatment. The success which has attended her efforts to regain the invaluable blessing of health, she reports in a letter.

MISS P. M. LAMSON, M. D.

DR. LAMSON—*My Dear Friend*: Thinking that you would like to know how I get along, I will drop you a few lines. My health is much better than it has been for a long time, still, I have the dyspepsia. I suppose I am not so careful in my diet as I ought to be, use too much milk in my cooking, perhaps. One old doctor told a friend that if I wish to get well I must live on beef-steak. I think I will challenge him to a contest in the cornfield, cutting weeds, where I think "bran bread" would triumph over beef. At least, I am willing to give the venerable doctor a fair trial. I am doing a great amount of work this summer. I have made three hundred and fifty pounds of butter, besides doing housework, sewing, and knitting, and have spent much time in out-door labor. Mr.

H. thinks that I am working too hard; but I think not. I am one of the stirring kind and cannot be contented unless I am engaged in something. The news we have from my room-mate is really cheering. I did not think she would ever come up as she has. I am truly thankful that she has so nearly recovered her health. I think her case is a grand triumph of the hygienic system over drug medication.

It is encouraging to those who are afflicted to know that there is a way by which they can obtain relief if they will only be persevering. I have great faith in hygienic treatment, and am fully convinced that it is the true way of treating disease. The woman I have helping me has a little child, and they have both had the ague very hard. I treated them very successfully with water.

I fear I am trespassing on your precious time. I am often with you and other kind friends at the Institute in mind if not in body. I think with pleasure of the many pleasant hours I passed there. Believe me ever your friend,

P. T. H.

Fever and Ague.

As many requests are sent in for advice in regard to the treatment of ague, I have thought best to revise an article on this subject written five years ago and published in Vol. 3, No. 5, of the REFORMER.

The cause of this disease is most generally attributed solely to miasms arising in low, swampy districts, from stagnant pools, &c. We admit that these are exciting causes of ague, and other forms of fever, as are also the barn-yard, pig-sty, hen-roost, noxious privies, and like nuisances, within a few steps of the dwelling. If the above were the only sources of ague, and fevers in general, then to leave the marsh and move into a better locality, or to remove the stables, &c., to a proper distance, would prevent this class of complaints. But such is not the case. We see persons living in the nicest localities, with everything around them neat, and yet sickness and death enter these as much, perhaps, as in places more objectionable in every respect.

Then if this be so, we must look for other causes than the ones mentioned. These are found in the various and prevalent violations of the laws of health, in diet, dress, and the general habits of life. These we have not space to particularize, but would say in brief, to avoid the causes of ague, place yourselves in the best possible relations to the laws of your being.

I will now proceed directly to treat of the complaint which is the subject of this article. The term ague is supposed to be derived from the Gothic, *agis*, which literally means "trembling," and is the common name for intermittent fever.

There are, in this disease, febrile paroxysms, recurring at stated periods, the fever subsiding for an indefinite time between these paroxysms. The time intervening between the paroxysms is called the *intermission*. This disease exists under different forms, the most prominent of which are *Quotidian*, *Tertian*, and *Quartan*. Several other forms are given, but they are of no consequence in this connection, as the treatment is nearly the same in all cases, the cause being the same, and the disease the same, only being of greater or less severity, owing to the condition of the patient, or the complications arising from other complaints.

Under the first division given, the paroxysms occur every day, in the second, every other day, and in the third, every third day. In each form there are three stages; the cold lasting from a few minutes to three hours, the usual length being about one hour; the hot stage, also, varying from two or three to eighteen hours, when all febrile symptoms disappear, and the third or sweating stage begins. There are many particulars touching each of these stages, which are of interest to the professional reader, but would only load the mind of the general reader with non-essentials. I will therefore pass at once to the symptoms and manner of treatment.

Symptoms.—These are similar to other febrile symptoms. For several days before the paroxysms are fully established, the patient will feel a sense of depression, lassitude, yawning, stretching, headache, pain in the limbs and back, quite sensitive to cold, instinctively drawing up to the fire, even in mid-summer. Slight chills or cold streaks will pass rapidly over the system, but especially up and down the back; the skin contracts, and breathing becomes hurried, tongue slightly coated, much thirst usually, and appetite impaired or all gone. Bowels usually become constipated, and the patient has a great aversion to any kind of work; would about as soon burn as be to the trouble of moving his chair back from the fire. When the paroxysms are fully established, the above symptoms are intensified.

Sometimes, however, the premonitory symptoms will be very slight, scarcely any chill at all, and the fever being the first notice given, and often very severe. In this, the hot stage, there is generally severe headache. This stage gradually passes off, and the sweating stage comes on, when the patient feels weak for a time, but gradually gains strength during the intermission, often feeling quite well, although not entirely free from the symptoms of disease, there remaining paleness, pain in the stomach, with some fur upon the tongue, and unpleasant sensations in the head, &c.

Treatment.—This is a very important part of our subject, and requires especial attention. It is the opinion of even many that admit the superiority of the hygienic system in almost everything

else, that ague cannot be cured by anything else than drugs. A greater mistake could not be made. Drugs do not cure disease; they only palliate or change the action, establishing other diseases. But the hygienic system effects a cure by removing the cause, or, I should say, aids or assists nature in performing the cure, by removing obstructions and regulating its remedial action.

When the remote symptoms of the chill are felt, cover the patient warmly in bed, putting hot flannels around the feet, then applying a jug of hot water to them, also to the knees and back, keeping the head cool by applying cold cloths. As there is usually much thirst, give plenty of water to drink. If cold water increases the chill, give warm water to drink. When it is convenient, the patient may be put into water all over, except the head, at a temperature of 90°, increased gradually to 110°. If he is strong, he may remain in the bath until all symptoms of the chill are gone.

When the chill entirely subsides, put him into a pack at 100°, and let him remain until the fever is fully established, then repack in a sheet at 95°, or sponge with tepid water, keeping the head cool.

After the sweating stage has passed, which usually follows the fever, sponge the body all over with tepid water, and rub thoroughly until all dampness is removed from the skin. If it be of the tertian form, on the well day give him a sitz bath at 98°, increased to 110°. Have the patient well wrapped in blankets, and let him remain, if not too feeble, until perspiration starts, then transfer him immediately into a pack at 80°. Let him remain one hour, at which time give a dripping sheet at 90°. Let him then cover up warm in bed.

On retiring in the evening, apply a fomentation for thirty minutes over the liver and stomach, then remove it, and apply a cool compress to be worn during the night. On removing it, the parts should be bathed in tepid or cool water and well rubbed. If the paroxysms occur daily, give the sitz and pack just described at that time in which the patient feels strongest, or give the pack or sitz according to strength, as described farther on. Use enemata at 92° to free the bowels when constipated or in a torpid state. Manipulations and percussions over the bowels every other day will have a good effect.

As the kidneys are usually affected in bilious complaints, an occasional fomentation over them (perhaps two or three per week), followed by the cool compress for an hour or two, or during the night, as recommended for the liver, will be found very beneficial. While in the sitz bath, have the feet in water varying from 105° to 110°, dipping them a few times in cool water on removing from the bath. The above course of treatment should be kept up until the severity of the disease subsides. Then reduce the treatment, giving only

that prescribed for the well day. If the patient's strength should fail to any considerable extent, give treatment only twice a week, which may consist of the pack for from forty minutes to an hour, followed by the dripping sheet; or the sitz may be taken as described, reducing it to 85° for five minutes before leaving it. The patient and attendants must be the judges as to how much treatment can be borne.

The hot-air bath, and the Turkish bath, properly used, are excellent in treating this complaint. When there are great weakness and complications from diseases of a local nature, which are not infrequent attendants, a hygienic physician should be consulted at once, as it is impossible to explain every point in an article of this kind.

DIET.—This should consist of plain food simply cooked, such as good graham bread, oat-meal in the form of cakes or pudding, gruels, corn-meal bread, choice fruits and vegetables, taking great care not to overeat. Use lemon quite freely when the stomach will bear it. Half of one eaten before meals will be beneficial.

In concluding this article, let me forcibly impress this idea upon the patient, that the state of his mind will have much to do in his recovery. It is not best to check the paroxysms at once, as may often be done by medicines. It is an action to be regulated, and, if properly done, the system will be purified. Therefore, let the patient be cheerful and hopeful in mind, and patiently wait until the work is accomplished.

WM. RUSSELL, M. D.

Health Institute, Battle Creek, Mich.

Drinking Impure Water.

SET a pitcher of iced water in a room inhabited, and in a few hours it will have absorbed nearly all the perspired gases of the room, the air of which will have become purer, but the water, utterly filthy. This depends on the fact that water has the faculty of condensing and thereby absorbing nearly all the gases, which it does without increasing its own bulk. The colder the water is, the greater its capacity to contain these gases. At ordinary temperature, a pint of water will contain a pint of carbonic-acid gas and several pints of ammonia. This capacity is nearly doubled by reducing the temperature to that of ice. Hence water kept in the room awhile is always unfit for use, and should be often removed, whether it has become warm or not. And, for the same reason, the water in a pump should all be pumped out in the morning before any is used. That which has stood in a pitcher over night is not fit to drink in the morning. Impure water is more injurious to health than impure air, and every person should provide the means of obtaining fresh, pure water for all domestic uses.—*To-Day*.

The Ground-work of Reform.

THE general well-being of the people must mainly depend on their own exertions and self-restraint. Sanitary improvements in man's material surroundings will not compensate for social transgressions against laws of morality; for public virtue is essential to public health, and both to national prosperity. The time, however, has gone by when people can be dragooned into cleanliness, or be made virtuous by public regulations; and hence it is that the most thoughtful among practical reformers of the present day base their hopes of sanitary progress on the education of the masses as the real ground-work of national health. The people must be taught that good conduct, personal cleanliness, and the avoidance of all excesses, are the first principles of health preservation; that mental and physical training must go hand in hand in the rearing and guidance of youth; and that morality does not consist so much in a blind observance of the formulas of empty creeds as in a hearty submission to precepts of health. Nor is this all. They must be interested systematically in the general rules of sanitary progress, and become more intimately acquainted with the social and material causes by which it is impeded. Unless a knowledge of these fundamental principles of hygiene be widely disseminated among them, it is in vain to expect that legislative enactments, however well devised, will succeed in raising the standard of public health to any considerable extent.—*Wilson.*

"Keep Your Mouth Shut."

NEVER allow the action of respiration to be carried on through the mouth. The nasal passages are clearly the medium through which respiration was, by our Creator, designed to be carried on. "God breathed into man's nostrils the breath of life," previous to his becoming a living creature. The difference in the exhaustion of strength by a long walk with the mouth firmly closed, and the respiration carried on through the nostrils instead of through the mouth, is inconceivable to those who have never tried the experiment. It is said that the habit of carrying on the work of inspiration and expiration through the mouth is the origin of almost all diseases of the throat and lungs.

Color of Clothing.

In an article upon "The Clothing we Wear," Dr. Nichols, of the *Boston Journal of Chemistry*, says:—

"The color of clothing is by no means a matter of indifference. White and light-colored clothes reflect the heat, while black and dark-colored ones absorb it. White is the comfortable and fashionable color for clothing in summer. It reflects heat

well, and prevents the sun's rays from passing through and heating the body.

"If white is the best color for summer, it does not follow that black is the best for winter. It must be remembered that black radiates heat with great rapidity. Give a coat of white paint to a black steam radiator, which is capable of rendering a room comfortably warm at all times, and the temperature will fall at once, though the heat-producing agency remain the same as before. A black garment robs the body of a larger amount of heat than white, and consequently the latter color is the best for winter garments. It is the best color for both summer and winter.

"Although this statement may seem like blowing hot and cold, it is nevertheless true. Let those who are troubled with cold feet, and who wear dark socks, change to white, and see if the difficulty is not in part or wholly removed."

Infantile Mortality in France.

THE average mortality of infants one year old throughout France is 18 per 1000. In the ten departments which chiefly receive *les petits Parisiens*, the infants whom fashion and morality in France consign to rural wet-nurses, the mortality is 51.68 per 100. In the department of la Creuse, where the people marry early and mothers nurse their own children, the mortality is 12 per cent; in that department (spite much emigration) the births exceed the deaths; in all the others, the deaths exceed the births; and a gradual depopulation is proceeding in France which excites the liveliest apprehension for the government.—*Brit. Med. Journal.*

TO THE POINT.—A lady who had received a severe bite on her arm from a dog, went to Dr. Abernethy; but knowing of his aversion to hear the statement of particulars, she merely uncovered the injured part, and held it before him in silence. After examining it, he said, in an inquiring tone,

"Scratch?"

"Bite," replied the lady.

"Cat?" inquired the doctor.

"Dog," rejoined the lady.

So delighted was the doctor with the brevity and promptness of the lady's answers that he exclaimed,

"Madam, you are the most sensible woman I have met in all my life."

THE total annual consumption of tea in the United States is about 50,000,000 pounds, of which 20,000,000 is green tea of various descriptions, about 15,000,000 Oolong, and the remainder Japanese and other varieties.

THE saying that "it is more pleasant to give than to receive" applies only to medicine and advice.

MRS. WHITE'S DEPARTMENT.

WHAT WAIT WE FOR?

WHAT wait we for? The day has come;
The rising sun and opening flower,
The song of birds and wild bees' hum,
All greet with joy the morning hour.
The fields are to the harvest white,
The grain in nodding plumes bends low,
As if the reaper to invite;
And yet we still delay to go.

What wait we for, with folded hands,
In pleasure's gay, enchanted bowers,
While swiftly glide the wasting sands
Of life's most precious, priceless hours?
Life hath a nobler aim than this;
'Tis toil insures success, not fate.
If we these golden chances miss,
To-morrow may be all too late.

What wait we for? There's work to do
For every heart and every hand
In this wide world of want and woe,
Where sin has blighted every land.
Let each go forth while yet 'tis day,
Fearless with Heaven-inspired might,
To wage a warfare 'gainst the wrong,
And battle bravely for the right.

What wait we for? while ignorance
Wraps much of earth in darkest night,
And we, the favored ones of God,
Walk in the clear and noonday light!
We, who the keys of knowledge hold,
Entrance to none should e'er deny,
But wisdom's gates to all unfold
The way to immortality.

What wait we for? All o'er the world
Want, woe, and misery, are found;
The poor ye always have, said Christ,
That charity might thus abound.
Let each give, then, in liberal shares,
As God hath prospered him in store,
If rich, give alms; if poor, give prayers;
And thus be blest forevermore.

What wait we for? Nothing to do?
Then dry the tears on Sorrow's cheek,
And pour the balm on wounded hearts,
Sweet words of loving kindness speak.
To scatter wide the seeds of Truth,
Nurture the tender germ of Hope,
And reap the harvest many fold,
Gives largest talents ample scope.

What wait we for? Let us arise,
Cast off the purple robes of ease,
Gird on the Christian armor bright,
The weapons of our warfare seize—
The shield of Faith, the Spirit's sword,
'Gainst sin and Satan's allied powers.
Go boldly forth to war. God's word
Is sure. The vict'ry shall be ours.

—Rural New Yorker.

Proper Education.

I HAVE been led to inquire, Must all that is valuable in our youth be sacrificed, in order that they may obtain an education at the schools? The constant strain upon the brain, while the muscles are inactive, enfeebles the nerves, and students have an almost uncontrollable desire for change and exciting amusements. After confinement to study several hours each day, they are, when released, nearly wild. Some have never been controlled at home. They have been left to follow inclination, and the restraint of the hours of study is, they think, a severe tax upon them; and not having anything to do after study hours, they are tempted to engage in mischief, for change. Their influence over other students is demoralizing. Those students who have had the benefits of religious teaching at home, and who are ignorant of the vices of society, frequently become the best acquainted with those whose minds have been cast in an inferior mold, and whose advantages for mental culture and religious training have been very limited. And they are in danger, by mingling in the society of this class, and in breathing an atmosphere that is not elevating, but tending to lower and degrade the morals, of sinking to the same low level as their companions. It is the delight of a large class of students, in their unemployed hours, to have a "scrape." And very many of the young who leave their homes innocent and pure, by associations at school, become corrupted.

If there had been agricultural and manufacturing establishments in connection with our schools, and competent teachers had been employed to educate the youth in the different branches of study and labor, devoting a portion of each day to mental improvement, and a portion of the day to physical labor, there would now be a more elevated class of youth to come upon the stage of action, to have influence in molding society. The youth who would graduate at such institutions would many of them come forth with stability of character. They would have perseverance, fortitude, and courage to surmount obstacles, and principles that would enable them not to be swerved by wrong influence, however popular.

For young men, there should be establishments where they could learn different trades, which would bring into exercise their muscles as well as their mental powers. If the youth can have but a one-sided education, which is of the greatest consequence? the study of the sciences, with all the disadvantages to health and life? or the knowledge of labor for practical life? We unhesitatingly say, The latter. If one must be neglected, let it be the study of books.

Physical health is essential for the development of moral and true Christian character. Intellectual and spiritual development is dependent upon

a healthful constitution. In our schools, physical labor, study, and recreation should be alternated, and excesses avoided. If temperance in eating, and all the habits of youth, are carefully guarded with this object in view, to preserve sound physical constitutions for future usefulness, with proper physical labor, the young could bear considerable mental taxation without injury. But with intellectual culture there should be equal improvement of the physical, that all the faculties of both mind and body may be equally balanced.

Those who combine useful physical labor with study have no use for the gymnasium. The benefits of physical labor in the open air have the advantage tenfold to that obtained within doors. The mechanic and the farmer may both labor hard, yet the farmer is the healthier of the two. Nothing short of nature's own sweet air will supply the demands of the system. We should consider that the organs of the body are not a lifeless mass, but the living, active instruments of the soul.

The old-fashioned farmer, a tiller of the soil, has no need of the gymnasium, for he has all kinds of movements without it. His gymnasium is not confined within walls. His movement room is in the open air. The canopy of heaven is its roof, the solid earth its floor. Here he plows, plants, and hoes. He sows and reaps. In haying, he has a change of movements, he mows and rakes, pitches and tumbles, lifts and loads, throws off and treads down, stows away, and goes through a great variety of movements, which would look nonsensical if his business did not demand all these maneuvers.

These various motions bring into action the bones, joints, muscles, sinews, and nerves of the body. His exercise makes full, deep, strong inhalations and exhalations necessary, which expand his lungs, purify the blood, sending the warm current of life bounding through arteries and veins. A farmer who is temperate in eating, drinking, and working, usually enjoys health. His tasks are pleasant to him. He has a good appetite. He sleeps well, and may be happy.

Contrast the active farmer with the student who neglects physical exercise. He bends over his table or desk, his chest is contracted, his lungs crowded. He does not take full, deep inspirations of air. He sits working his brain in a close room, his body as inactive as if he had no particular use for it. His blood moves sluggishly through his system. His feet are cold; his head is hot. How can such have health? It is not the taxation of study that is destroying the health of students; it is the disregard of nature's laws. Physical exercise is essential; this, the farmer gets, but the student does not. Let the taxation come upon the muscles in well-regulated physical labor, which will make the student breathe the deep and full, taking into his lungs plenty of the pure, invigorating air of heaven, and he is a new being.

There should be experienced teachers to give lessons to young ladies in the mysteries of the kitchen. If mothers were what mothers used to be, the necessity would not be so great. Sensible mothers are wanted. A mother possessing good judgment, with force of character, with patience and decision, having skill fitted to train and mold the minds and characters of her children, is a great family blessing. If the destiny of the race is dependent upon the right kind of mothers, there are so few of the right stamp that the prospect is indeed discouraging. A knowledge of domestic duties is beyond all price to women. I have seen many families whose happiness was wrecked by the inefficiency of the wife and mother to superintend a household. In every situation in life, whether rich or poor, high or low, the knowledge of domestic labor is of the greatest advantage. In my travels, I see entire families suffering with sickness in consequence of poor cooking. Sweet, nice, healthful bread is seldom seen upon their tables. Yellow, saleratus biscuits and heavy, clammy bread are breaking down the digestive organs of tens of thousands.

Again I repeat, good, old-fashioned mothers are wanted. It is not as essential that our children should learn how to embroider and do fancy work as to learn how to sew, knit, mend, and cook the food for the family in a wholesome manner.

When a girl is nine or ten years old, she should be educated to take her regular share in household duties, as she is able, and to feel responsible for the manner in which she does it.

A father, when asked what he intended to do with his girls, replied; "I intend to apprentice them to their excellent mother, that they may learn the art of improving time, and be fitted to become wives, and mothers, and heads of families, and useful members of society."

Washing clothes upon the old-fashioned rubbing board, sweeping, dusting, and a variety of duties in the kitchen and in the garden will be an excellent gymnasium for young ladies. This kind of useful labor will take the place of the croquet ground, of dancing, and other amusements which benefit no one.

From *Arthur's Home Magazine*, I clip the following:—

"TWO KINDS OF GIRLS.

"There are two kinds of girls; one is the kind that appears the best abroad, the girls that are good for parties, rides, visits, balls, &c., and whose chief delight is in such things; the other is the kind that appears best at home, and the girls that are useful and cheerful in the dining-room, and all the precincts of the home. They differ widely in character. One is often a torment at home; the other, a blessing. One is a moth, consuming everything about her; the other is a sunbeam, inspiring life and gladness all along her pathway.

Now, it does not necessarily follow that there shall be two classes of girls. The right education will modify both a little, and unite their characters in one."

It is not necessary that a thorough knowledge in household labor should dwarf the intellect. If the intellectual and physical powers are equally exercised, the mind will have greater strength. All the faculties, being equally exercised, become equally strong. The healthful activity of all the organs reacts upon the mind, and imparts to it its proper spring and strength.

In our schools should be departments for the purpose of educating young ladies to cut and make garments, to cook, and become informed in all the branches of physical labor, as well as in the sciences, that they may understand the practical duties of life.

E. G. W.

WASTED.

WASTED!

Precious pearls of time,
Moments rich as diadems.
One by one they came unnoted,
One by one afar they floated.
One by one! till myriads sped
Far away to join the dead,
Till the lost life, shattered, broken,
Won no heaven-born light nor token,
Has drifted to this fearful shore!

Wasted!

Gifts of doubtless mind
By the Hand eternal given;
They had mounted to the skies,
Meet and reverent sacrifice
To the Majesty of Heaven:
But that spirit-lyre erst strung,
To sweet harmonies unspoken,
Shivered, and, its deep chords broken,
Murmureth but of songs unsung,
Of rich melodies flung wildly,
Of Fame's gorgeous altar fire;
One brief moment in its brightness
Flashing, swiftly to expire;
Our high purposes all blasted,
Talents hidden, treasures wasted!
Consecrate at Mammon's shrine,
Owning not the Hand divine.

Wasted!

Founts of deepest love,
Gifts of mercy from above,
Treasures from affection deep,
Waking but to writhe and weep.
Wasted—youth's rich, golden hours!
Wasted—loftiest, mightiest powers!
Wasted—manhood's glorious prime,
Hopes, and aims, and thoughts sublime!

Weepst thou? Ere life's setting sun,
Ere Time's fleeting sands be run,
Rouse thee from ignoble rest,
Toil to win the land more blest.
Swiftly are thy moments flying—
Up! ere hope be drooping, dying!

Redeem the time. Idleness is the fountain

from which flows many a stream of intemperance and folly and ruin. This fountain gurgles up beside moss-covered rocks, where bending poppies distill their narcotic dew, to steep the senses of all who repose on its grassy banks, and yet all ages loiter there. The soul is enervated, and utterly disqualified for all the duties of life, for the idler can be neither good nor great. Earth and Heaven place their crowns only on the heads of those whose hands are hard with toil, whose muscles are firm with labor, whose minds are expanded with knowledge, and whose hearts are full of faith, and love, and purity, and fidelity. Would you be good and great? Believe and labor. Genius, nor wealth, nor position, will make you great. Genius, without effort, is steam without an engine. Wealth, without labor, is a snow heap on the sand. Position, without toil to maintain it, is a target alike for the wise man and the fool. Religion, without self-sacrificing perseverance and self-denying zeal and deeds of holiest love, is "sounding brass or a tinkling cymbal."
—Sel.

Living Together.

THE art of "living together" pleasantly is greatly promoted by the habitual exchange of the little courtesies of life; they are never unimportant, never unacceptable, are always grateful to the feelings, and are a constant well-spring of agreeable feelings in every household. Shall brothers and sisters be less careful of the feelings of one another than of those of a stranger? And, between husband and wife, should there be less effort at gentleness of deportment, of suavity of manner and courtesy of expression, than is extended to outsiders, who have no special claims and may never be seen again? Shame upon any member of any family who neglects those affectionate attentions and those suavities of deportment toward the members of the household and even to the lowest servant, which cannot fail to elevate the giver, and to draw from the receiver those willing and spontaneous reciprocities which make of family associations a little heaven below.

Fault-finding is an apple of discord in multitudes of families. There are some persons who, from ugliness of temper arising from bodily infirmity, or an inherent blight of nature, are forever finding fault, either for something said or done, if not in the family, then out of it. Something is always going wrong with them; in every remark they make, there is vinegar and bitterness; their whole nature seems to be in a condition of chronic snarl; their adjectives are of the most sweeping character; everybody is a "liar," or "swindler" or "scoundrel," even if their shortcomings are of the slightest character. Such persons are demoralizers of the community in which they live, and of those with whom they associate;

and as to the family in which they reside, they are a perpetual storm, a tornado, and a curse.

This complaining, fault-finding trait does not assume these gigantic proportions of enormity at once, but always comes by slow degrees and long practice. Let the reader fear falling into this great condemnation; let him be so afraid of it from this hour as to resolve never to find fault with anybody or anything, or characterize any one's conduct for omission or commission, until he has "slept on it," thus giving the clearer judgment of a renovated brain an opportunity of more dispassionate exercise.

Let every person of intelligence, refinement, and culture, bear in mind that in "living together" with others pleasantly, happily, it is of essential importance to practice the virtues of uniform gentleness, deference, and courtesy, remembering that one of the most cardinal points in the proportion of domestic enjoyment and of family happiness is to cultivate self-sacrifice; for it is this which cherishes love in the heart of the giver, and kindles it in those for whom the self-sacrifice is made; or, to frame the principle in a phrase which all can comprehend, remember, and apply, that is the noblest heart in any household, which gives to the others the first choice, and leaves to others the best places and the best things.—*Hall's Journal of Health.*

"Fearfully and Wonderfully Made."

THE statement of the wise man that "out of the heart are the issues of life," had reference primarily to the moral nature, unquestionably, yet it has a physical application of a wonderful interest. Like the tongue, it is a "little member," not "boasting great things," but performing an amount of labor absolutely miraculous. The human heart is about six inches in length and four in diameter, contracting, or "beating," about seventy times, in male adults, each minute, seventy-five in females, and in children more frequently. In sickness, of course, its "beats" are ordinarily much more frequent. The design of these contractions is to send the blood to every nook and recess of the body, bearing food for bone, muscle, nerve, hair, nails, blood-vessels, etc., without which the body could not receive its nourishment even for a single day. So true is this that the puncture of the finest needle, in any part of skin, produces a flow of blood, indicating that one or more of the millions of blood-vessels of the body—some of which are too small to be seen by the unaided eye—have been wounded.

Omitting all reference to the mysterious transformation of all kinds of food into red blood—though the same food, if taken by some of the lower orders of animals, would produce white or yellow blood, instead of red, conforming to the constitution of these animals—there is enough directly connected with the heart to commend our

admiration. From birth, and even before, this faithful servant toils till the latest period of mortal life, pumping day and night untiringly, contracting, and sending about two and a half ounces of blood where it is needed, oftener than once each second of existence, since a moment's pause would endanger health, if not life. This faithful sentinel in the citadel of life is true to his charge, never yielding to fatigue or indulgence for a single minute, so important is its mission, sending the pure blood, just purified in the lungs, or fresh from the laboratory of the organs of digestion, to repair the waste of our constantly-dying bodies, substituting new particles as fast as the processes of decay remove old and worn-out ones. Without this regenerating process, this daily creation, our bodies, or portions of them, would be masses of effete, dead matter, as substantially so as if life were extinct. Truly, "in the midst of life we are in death."

To form some vague idea of the labor performed by this small organ, let it be remembered that the human body contains about thirty pounds of blood, all of which passes from the heart to the lungs for purification and to all parts of the body once in about three minutes. And what a labor! At this rate, at the close of a life of "threescore years and ten," this small and retired organ, having no reference to its acceleration in illness and childhood, will have beat no less than 2,565,440,000 times, lifting and sending up and through the minute ramifications of the blood-vessels a weight of more than 400,000,000 pounds, or about 200,475 tons! The hearts of the patriarchs must have performed a labor equal to raising more than 2,500,000 tons! And yet this little organ never stops for repairs. If it is out of order, as it often is, it labors and must labor till its power utterly ceases, and then stop from mere exhaustion. All of this is done by pumping less than three ounces at each contraction, each stroke.

The passage of such a vast amount of liquid through the hardest metals would wear away such a heart many times during a life-time, and yet this soft and yielding heart endures all this labor, and never stops for repairs. Its walls are not very thick, though the fibers are arranged to give it the greatest amount of strength, its peculiar structure, of itself, proving a great first cause. It constitutes an exception to the general principle that health results from labor and succeeding rest, since it toils on from its creation till the close of life, though constantly in danger from disease and from accidents. Though its labors are often made even much more burdensome by excesses and dissipation, especially by the use of tobacco and ardent spirits—its repairs are only secured while constantly at work, being secured by that wonderful agency sometimes called recuperation, an agency constantly endeavoring to avert and remove the injuries resulting from our almost continual

physical sins. The same blood that it sends to all parts of the body also visits its own structure for its own nourishment and protection.

Again, the care manifested in the protection of this organ is worthy of remark. A slight puncture of its walls would inevitably destroy life. To guard against such a contingency, it is placed where such an accident is not likely to occur, between the lobes of the lungs, in the chest, which is surrounded in its walls by the ribs and still stronger bones, where it is again inclosed in a tough covering, sometimes called the "heart-case." The arteries, the blood-vessels carrying the blood from the heart—the cutting of the larger of which would be as destructive, if not soon tied, as that of the heart itself—are deep seated, out of the way of ordinary accidents, while the veins are on the surface to some extent, as seen on the backs of the hands, the cutting of which is attended, ordinarily, by no special harm. These arteries are known by their beating, as at the wrist, though the larger ones are too far from the surface to be felt, being constantly protected, passing under muscles and bones, or through grooves manifestly made for their protection. A good illustration of the latter is found at the elbow, at what is called the "crazy-bone," a depression or groove in the bone of the arm through which the blood-vessels safely pass the joint—instead of on the surface where they would be constantly exposed—with the nerve, a slight injury of which produces a singular sensation felt even to the ends of the fingers.

It is also true, in the event of ordinary accidents, that the blood-vessels, torn as they usually are, do not bleed as freely as they do when cut, which is still another means of saving life, and another evidence of the mercy and goodness of the Heavenly Father.

It may be well to remark that some of the diseases attributed to the heart, as "heart-burn," "palpitation of the heart," are generally a derangement of the stomach reacting on the heart, that organ often being charged with the sins of another. Of course it is sometimes diseased and overexcited. The excitants floating in the blood are carried to the heart and irritate and excite it to overaction, resulting in debility, producing an effect not unlike that of putting similar substances, as mustard or pepper, in the eye. All of the stimulants and excitants tend to produce an increased action of the heart, resulting, as a necessary consequence, in disease or a diseasing tendency. Whatever irritates and disturbs the stomach produces, indirectly, more or less disturbance at the heart, and indeed upon the whole body. The stomach is generally overtasked, more cruelly worked than our horses, for which we are now justly feeling considerable sympathy and regard, though that, unlike the heart, was made for some rest. If, therefore, we would avoid these "palpitations," "flutterings," "burnings," etc., a

little more care of the stomach, less exciting, rich, concentrated, and unwholesome food would be promotive of our health and comfort. It is enough that it should labor constantly without being abused.—DR. J. H. HANAFORD, in *Household*.

Don't Be Afraid.

WE believe, reader, these three words embody a great part of the philosophy of life—that nobody can live out his own true, honest, complete self, till he has learned not to be afraid. Be sure that you are in the right, and then go ahead. Let a strong, courageous, persistent heart beat in your breast, and do not be turned aside by the sneers or malice of others. Confront and conquer that old terror, "They Say," which always meets every true, strong soul at the outset of life, and which, alas! is the haunting dread and terror of so many men's and women's lives, making them dwarfed, aimless, useless.

"Every man must answer to God for himself." This life we are now living is engraving its pictures on some gallery of eternity, and there we must meet them face to face. What matters it to you, O sincere, earnest reader, what this man or that woman says of you, how they malign your acts, or misinterpret your motives? They cannot hurt you. Just as sure as God lives, just so sure as the city of his redeemed rests secure, and green and beautiful upon its foundations of chrysolite and chalcedony, the right shall triumph.

"We would espouse the cause, and defend it," remarked a lady to us, the other day, "for we believe it is the truth; but then, everybody would laugh at us, and think it was so strange."

Well, what if they did; let them "think" and let them "laugh." Which is worth more, the commendation of your own conscience, the approval of your God, or the ridicule of a man "such as thou art"? O weak, faltering, faint-hearted brother or sister, rise up and assert thy royal prerogative while "on this side the night."

Moral courage is the only true, vital atmosphere of the soul, without which no one shall do good. Hate cowardice; loathe it with unspeakable, unutterable loathing, for it is thy worst enemy. It shall poison all the running waters, and fair gardens, and pleasurable fruits, of thy soul! The truly courageous man is reverential and broad-minded. Obstinacy and dogmatism are not courage, as so many imagine. Neither are the sentiments and feelings of all others to be lightly set aside; but, once assured that any opinion, creed, or sect, is wrong, then pause not, nor give truce for cowardice's sake.

Ah, reader, the battle of life is short and fierce, and they who would be heroes in the conflict must bring to it every energy—must struggle manfully, fearlessly for the right against the wrong. And

oh! how blessed, beyond all speaking, to lie down at last with the thought that life has not been wasted—that the world is a little better for our having lived in it! Surely, each of us has his work. God has created all for some purpose, and we must find it before the bells of eternity knell the last hour of our lives.

Don't be afraid, reader. Go with a strong, cheerful, trusting heart to thy work, and, God being on thy side, the wicked of this world, the powers of evil themselves, shall not avail to harm thee, and angels shall sing thy victory.—*Sel.*

Useful Occupation.

WE make the following extract from Dr. Harriet Ide Hunt's "Glances and Glimpses," a volume whose pages are sown with so many and such grand truths that we hardly know which to select for our readers.

This book ought to be in the hands of every wife and mother, aye, every woman in the land, rousing her to some sense of her vast responsibilities, and of the frightful evils that follow in the train of violated physical, mental, and moral laws.

Alas! reading this book, one realizes to some degree how false and perverted are our systems of fashionable education, and realizes, too, how important it is that every mother should understand the laws of physiology, and so become the physician of her own children, instead of trusting to quacks and nostrums about which she knows nothing. How many opening lives might thus have been saved; how many breaking hearts spared.

"There are women who have wealth, and who may be supposed to have nothing to do with this subject—'occupation for woman.' But it is not so. They have a great deal to do with it. Responsibility rests on them, as on every one. *Wealth has never given happiness except through its use.* The moment luxury is its use, that moment diseases of mind and body lay hands on their victims. How can the physique be braced, if no fresh breath from the outer world is suffered to permeate the languid, enervating air of the drawing room? How can the grasp of the mind be vigorous, without action?

"Daughters of inherited wealth or accumulated labor! the wide door of philanthropy is open peculiarly to you. Your life-work lies beyond your threshold; your wealth has placed you above the sorrowful struggle for daily bread which takes up the whole time of so many of your brothers and your sisters. You are the almoners of God. A double accountability is yours. There are sufferings around you which you can alleviate or remove. There are heavy burdens which you can lighten. There is ignorance which you can illumine. There are the poor who look to you for solace and for aid.

"You are liberally endowed. Are you to use those gifts and powers for those only who have had

the same advantages as yourselves? No! If you can find nothing else to do, let each of you find out some poor child, poor in purse, but rich in soul, as all children are before the world makes them bankrupt, and with a holy and generous self-denial lay aside a certain sum each month for that child's culture. Educate—carry that child forward; ultimate your life in that child. Bring philosophy to your investigation of the mystery of existence. It will show you at least that it is impossible for you to enjoy physical health and spiritual life if you pass your time in sleeping, eating, drinking, dressing, reading, flirting, or anything that is only for your own gratification. Nor will these occupations prepare you for the life to come.

"If you are not wholly insensible, you will thank me for these hints. Use them. Your duty is to minister to the sorrows, the privations, the wants, and the needs around you. Show the world that there are Florence Nightingales for the sad army of the suffering and the poor! Make it your life-work 'to attend to the neglected and to remember the forgotten.'

"Money! Money! rely upon that for happiness! Possession adds to your responsibilities, if you look at it rightly. It elevates you; it gives your life dignity and nobleness if you use it as a trust. Used otherwise, it is useless.

"A fixed purpose in the mind of every young woman, rich and poor, when entering on the theater of life, would open the mind to an understanding of the divine word, 'Lead us not into temptation,' for idleness is the greatest temptation to selfishness, and selfishness is the ruin of the individual, and the cause of three-fourths of the misery in the world."—*Sel.*

Food and Health.

BULK, as well as elements of nourishment, is essential in food. Neither cattle nor horses could be kept alive long on fine flour, meal, or grains of any kind; but they will thrive upon these articles mixed with grass, dry hay, or straw. The walls of the stomach and bowels must be kept apart in order to have perfect digestion. A dog lived twenty-one days, the only survivor of a wrecked vessel at sea, closely shut up in the cabin, by eating the thick, strong, wood and leather binding of a Bible. Had he had plenty of hard bread, he would probably have died in about fifteen days, as the mucous surface of the digestive apparatus, by coming in contact, would have inflamed fearfully.

Those persons whose diet is rather coarse, as bread of unbolted flour, large fruit eaters, bread and milk people in the country, etc., are exempt from pains of dyspepsia. Those sustained mainly on very fine, concentrated, delicate food, washed down with tea, are gaunt in form, weak in muscle, and always taking medicine. Their food should have more bulk.

A poor man's family never lack for an appetite with a crust of brown bread. His neighbor's darlings, surfeited on rich cake, highly-seasoned dishes, and nurtured in luxury, are the life of doctors and druggists. So says science.—*Household.*

Novel Treatment of Dyspepsia.

SOME years ago, a physician in New York city published a small book in which he gave well-written certificates of marvelous cures of dyspepsia. Patients began to flock to him. Their introduction to his mode of treatment was very queer. He took the patient into his consultation office, examined his case, and if it was one that he could cure, he announced his fee to be five hundred dollars, to be paid in advance. If the patient's confidence was strong enough, the money was paid, and then the doctor led him through a hall, up a flight of stairs, through another hall, then through a room, down a flight of stairs, up a flight, down a flight, then to the right, then to the left, and at last they arrived at a small room without windows, artificially lighted, where the patient was required to put his name to a solemn vow that he would not reveal the mode of treatment. This being finished, the patient was introduced to the treatment. It consisted in slapping the stomach and bowels. Besides this, the patient was required to live temperately and much in the open air.

On rising in the morning, he was required to spend from five to ten minutes in striking his own abdomen with the flats of his hands. Then he went out for a morning walk after having drunk a tumbler or two of cold water. At eleven o'clock in the forenoon, he spent a quarter of an hour in slapping the bowels with his hands. Then he lay down to rest. He dined temperately at two o'clock, and spent the rest of the afternoon in sauntering about. At seven o'clock in the evening, he repeated the percussion, and went to bed at nine o'clock.

A majority of the cases of dyspepsia that sought relief at this establishment had used all the other means except the slapping; that is, they had used plain food and lived much in the open air. It was the slapping, pounding, and kneading with the fists, sometimes with those of an attendant, that cured these people; for cured they certainly were. Marvelous cures were effected at this establishment.

After the death of the doctor, some of the patients felt themselves absolved from the obligation of secrecy, and one of them described the treatment to me. In every case of indigestion, no matter what may be its character, slapping the bowels with the flats of the hands on rising in the morning, four hours after breakfast, and in the evening on going to bed, is excellent treatment. I cannot conceive of a case of chronic indigestion which such manipulation would not relieve. If

the patient be so weak that he cannot perform these slappings and kneadings upon his own person, the hand of a discreet person should be employed.

It is marvelous how the stomach, for example, which, when these manipulations are first practiced, may be so very tender that the slightest touch can hardly be borne—it is marvelous how in two or three weeks a blow almost as hard as the hand can give, is borne without suffering. If you have a pain in the side or across the chest, percussion will relieve it almost immediately. But constipation, dyspepsia, torpidity of the liver, and other affections of the abdominal viscera, are relieved more surely and completely than any other class of affections by percussion, kneading, etc. Such treatment comes under the head of counter irritation. A new circulation is established in the parts near the point of suffering and congestion. Besides this, especially in abdominal troubles, the manipulations appeal to the contractility of the weak, relaxed vessels of the affected part.—*Dio Lewis.*

CHILDREN can do a great deal more than they are usually supposed to be capable of. It doesn't weary a child to set the table any more than it does to roll a hoop, and at six years of age, a boy or girl can be made responsible for this task. Boys can learn housework just as well as girls. We know a boy of twelve who makes elegant bread, compounds cake of faultless flavor, and frosts it, washes dishes quickly and clean, sweeps, makes beds, milks the cow, feeds the chickens, takes care of the baby, helps regularly about the washing and ironing, and holds his own in all respects with any boy of his age. He is no prodigy, he is only the result of judicious training. We know a girl of fourteen, modest, pleasing, entirely feminine, who takes care of the horse and cow, washes the buggy when necessary, drives the double team to market when the hired man can't be spared, weeds in the garden, rakes in the meadow like Maud Muller, and is altogether feminine, though from necessity she does the work of a boy.

Warm Baths for Children.

A PHYSICIAN, in a very sensible article upon bathing, says: "For the wind in the stomach children are thought to have, for their tiresome crying and for the restlessness and worrying at night with which they are afflicted, if the warm bath were resorted to oftener, and the dosing of soothing syrups and worse nostrums less, it would be better for the children."

THE excesses of our youth are drafts upon our old age, payable with interest about thirty years after date.

SCIENTIFIC.

The Constitution of Matter.

MUCH discussion has arisen upon this subject among both learned and unlearned men. All sorts of theories, absurd, ridiculous, and unique, have been advanced. It has been claimed by some that matter is infinitely divisible. However true this may be practically, it seems very absurd theoretically, when we consider the stability and solidity of many forms of matter.

Again, it has been claimed that there is no actual existence of any material thing, and that what appear to us as real and established facts and existences are merely imaginary appearances and optical delusions.

A third class who have been styled as materialistic in their views, have held, and for some years advocated, what is popularly known as the atomic theory. From certain chemical and physical phenomena, the conclusion was some years since arrived at by scientists that all matter was composed of solid atoms, which were indivisible and impenetrable; but while the inference of the truth of this theory has been very strong, yet there has been no proof advanced which might be considered conclusive, although many attempts have been made to render visible or ponderable in some manner the minute ultimate atoms. But no microscope has ever yet been invented of sufficient power to do this. Some years ago, Dr. Thomson, of England, from very probable data, determined the weight of an atom of lead to be 1-310,000,000 of a grain. And he has more recently determined that the distance between two atoms in a liquid cannot be more than 1-10,000,000, nor less than 1-200,000,000 of 1-25 of an inch. To make the matter more easily understood, he illustrates it by saying that if a pea with its constituent atoms were magnified to the size of the earth, the relative size of the atoms would be about that of shot when compared with the earth.

Another philosopher has arrived at the same results, and says that the numbers of atoms contained in a single pin head would be represented by a figure eight with twenty-one ciphers annexed. To count these at the rate of ten millions a second would require a period of 250,000 years.

The Moon.

DURING the last century, the physical condition of the moon in respect to temperature has been a matter of much curiosity and speculation, as well as scientific investigation. The prevailing opinion has been that its condition in this respect was exactly the opposite of that of the sun, the latter being a burning orb, heated to a degree of intensity entirely inconceivable, while the former was subjected to a degree of cold to which the severest arctic winter could be no comparison. Thus, poets have sung of the "cold, gray moon," and many eminent philosophers have similarly described it, while some have even claimed that, in

opposition to the warm and genial emanations from the sun, the moon emitted cold rays. Science has now demonstrated that, instead of this intense cold, the heat of the moon is so great that no living creature known to us could survive there.

It also appears that, instead of our receiving cold rays from the moon (an absurdity in the light of modern science), we actually receive a certain amount of heat. The quantity has been accurately determined, and is equal to that which would be received from an old-fashioned copper penny at the temperature of boiling water, when held at a distance of about ten feet from the face.

Grape Sugar.

IN another column, considerable is said about grape sugar in connection with the adulterations of cane sugar. A short description is here given to satisfy the curiosity of those who may wish to learn more about it.

Chemists recognize several kinds of sugar, but cane and grape sugars are the principal ones. Cane sugar is obtained from the sugar cane, the sugar beet, the sugar maple, and the date. Being principally derived from the cane, it is called cane sugar. Grape sugar is obtained from grapes, figs, and most fruits. Little granules of it are often found in raisins in the pure state, hence its name.

This is the way in which grape sugar occurs naturally; but it may also be produced artificially in several ways. When starch is subjected to long boiling, it is converted into this kind of sugar. The same result is produced by the freezing of starch. It is by the latter means that the sugar of the maple is produced, although in this case it is cane instead of grape sugar. When yeast is mixed with starch, and fermentation takes place, the first process is the conversion of the starch into sugar. But by far the most practicable way of producing grape sugar is by boiling starch, or woody fiber of any kind, as cotton, saw-dust, paper rags, etc., for a long time in connection with some acid. Sulphuric acid is usually employed for this purpose.

After boiling for some hours a solution of starch with dilute sulphuric acid, the acid is neutralized by the addition of chalk. The liquid is then filtered and the residue is set away to cool and crystallize. In a few days it will be found to have become a solid mass of grape sugar.

This process is a very curious and interesting one, as readily appears when we find that the sulphuric acid does not enter into combination with the starch or woody fiber, but that the starch seems to undergo a change on account of the presence of the acid, without uniting with it.

Prof. Pepper, a popular lecturer upon scientific subjects, says that he once saw a considerable quantity of sugar which a man had made from his worn-out shirt.

THE report is current that Prof. Watson, of the Michigan University, has discovered another small planet.

THE sound of the salute fired by the British fleet at Spithead in honor of the Shah's visit was heard a distance of one hundred miles.

Items for the Month.

A BLUE cross by this paragraph signifies that the subscription expires with the number containing it, and that it is the last that will be sent till the subscription is renewed. We hope all who see the blue mark will renew their subscription immediately.

The editor still remains in his mountain retreat in Colorado. Nothing having been received from him this month, the REFORMER goes to press without the usual editorial, doubtless much to the disappointment of many of its readers. The article on "Experience" is well worthy of careful perusal, as it contains many valuable ideas.

Health Publications.

SEVERAL tracts and pamphlets upon health subjects which have been in preparation during the last few weeks are now in the hands of the printers, and in the course of a week or two the following will be ready for circulation:—

"Good Health, and How to Preserve It," tract, 32 pp.; "Nature and Cause of Disease, and the So-called 'Action' of Drugs," pamphlet, 48 pp.; "The Bath: Its Use and Application," pamphlet, 48 pp. These pamphlets are intended for general and extensive circulation, and are written in a style suited to people who are unacquainted with medical terms and phrases, being free from technicalities of this sort.

Other publications on similar subjects will be ready soon, and all will be offered at such prices that no one who has any interest in the cause of health reform will be prevented from procuring and circulating them on account of the expense.

Several communications were received a day or two too late for publication this month. Some others which should have appeared in this number were not received at all. As has often been suggested, it is very desirable that contributors should send their articles, if possible, so that they will be received by the fifteenth of the month preceding that of publication.

Parties remitting money to us by mail in sums of more than \$1.00 should take the precaution to either register their letters or procure P. O. orders. When this is done, the publishers will stand all losses.

"Boswell's Standard Room Heater," etc., noticed recently by Dr. Trall as the "Hygienic Cooking Machine," is on exhibition at Youngstown, Ohio, by the agent, D. C. Moore, of whom circulars can be obtained.

Questions were received from several correspondents too late to find a place in the answers to correspondents in this number. They will be noticed next month.

The subscriber who wishes to know if starch is food, is referred to the article on sugar in the August REFORMER.

The article on "Alcoholic Medication," by Ralph E. Hoyt of the Chicago Press, is the first of a series with which he purposes to favor us. Mr. Hoyt is an experienced worker in the temperance cause, both as an able journalist and an interesting and accomplished lecturer. He is now in the lecture field, and is meeting with most flattering success. The papers speak of one of his lectures as furnishing a "lively discourse on some of the most interesting questions of the day, with many a pungent and witty thrust at the delusions and fashionable follies of the period." He hopes to visit Battle Creek this month.

Book Notices.

FOODS. By Edward Smith, M. D., LL. B., F. R. S. New York: D. Appleton & Co.

This is a work which contains a great amount of valuable information. It makes no pretensions to being a treatise upon diet, but gives a complete and thorough account of the origin, character, and properties, both chemical and dietetic, of the class of numerous and varied substances popularly considered and employed as food by different nations. In treating the subject, the author groups all alimentary substances into three classes; Part I., treats of solid foods, Part II., of liquid foods, and Part III., of gaseous food, or atmospheric air. In their classification he very properly departs from the usual course, in considering air and water as foods. There seems to be no reason why they should not be considered as such, for although they do not enter into the composition of the solid parts of the tissues, they are as necessary to the life and maintenance of the body as any article of diet. The work is neatly bound in cloth with gilt back; pp., 485.

DIGESTION AND DYSPEPSIA.—By R. T. Trall, M. D., New York: S. R. Wells.

This is the name of Dr. Trall's latest work, and, like his numerous preceding ones, is both interesting and instructive, being characterized by that terseness of expression and vivacity of style which is discernible in all his writings. It contains one hundred and sixty pages, presents a good typographical appearance, and is well illustrated.

The heaviest brain on record was recently found in the skull of a London bricklayer who could neither read nor write. It weighed sixty-seven ounces.