

The Health Reformer.

NATURE'S LAWS, GOD'S LAWS; OBEY AND LIVE.

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Proper Diet for Man.—No. 5.

MEAT-EATING A CAUSE OF DRUNKENNESS.

The distressing prevalence of intemperance among civilized nations is no doubt largely owing to the habitual use of flesh food. Being itself stimulating, it creates a love for the peculiar exhilaration which all stimulants possess. After a time, meat ceases to furnish the degree of stimulation desired; something more potent is demanded, and so the flesh-eater fosters, and by degrees establishes, the habit of taking pure stimulants of some kind. The article employed may at first be tea or coffee, then tobacco, and finally alcohol; in either case, the crime against nature is the same in kind, only differing in degree. The simple act of eating meat, drinking tea or coffee, chewing tobacco, or drinking brandy, is no transgression of either moral or physical law. The violation of law consists in the *gratification of the desire for artificial stimulus*, it being wholly immaterial what particular agent is employed. The degree of the transgression is proportionate to the *effect produced*, no matter what the article used.

VEGETABLE FOOD NOT STIMULATING.

The argument against meat as a stimulant is often met by the remark that vegetables are also stimulating. This statement is untrue. Vegetable food, such as wheat, corn, potatoes, and similar productions, are wholly unstimulating in character. Why, then, it is asked, does a weary man, who is faint and weak from hunger, feel rested and strengthened immediately after eating his dinner, and while the food eaten is still in his stomach, none of it having been yet assimilated? This objection may be easily answered. Why does the sudden cry of fire cause a bed-ridden invalid to spring from

his couch and escape from the burning building, notwithstanding the fact that he has not before walked a single step for many years? How does the music of fife and drum enable a weary soldier to continue his march for many hours with ease after he thought himself completely exhausted? The cause of these phenomena is found in mental and nervous influence. In the first case, the mental excitement becomes so great that pain and weakness are dissipated, and the whole vital force of the system is summoned to action. In the second case, the wearied, irritated nerves are soothed by the harmony of music, and their action becomes balanced and harmonious, when weariness of necessity ceases at once.

So in the case of the man who feels stronger immediately after eating his dinner. When hungry, there was nervous irritation, an unbalanced condition of nervous action resulting from the unpleasant sensation of hunger. As soon as the cause of irritation is removed, the man feels rested and refreshed, and so appears to be stronger.

COMPARATIVE NUTRITIVE VALUE.

In regard to nutritive value, there is a striking difference in favor of vegetable food. Notwithstanding the generally prevalent opinion that flesh is concentrated nutriment, and far more nutritious than vegetables, grains, etc., the results of analysis, according to our best chemists, unmistakably show that such is by no means the case. Our most reliable investigators have determined, by the most carefully conducted experiments, that one pound of beef contains no more actual nourishment than is afforded by a pound of peas or lentils; and if we include what Liebig terms respiratory food, we find that wheat and barley meal furnish more than twice, and oatmeal and rice more than three times, as much nourishment as an equal quantity of flesh. We see, then, that, in fact, flesh food ranks below many of our common vegetables in nutritive value.

Indeed, we might reasonably suppose that this would be the case, since all animal food must be originally derived, directly or indirectly, from the vegetable kingdom, and must of necessity be liable to deterioration in undergoing the various necessary changes. The albuminous portion of beef is said to be about twenty-five per cent of the whole. That of lentils is the same, and that of peas is twenty-three per cent. But, by a little scrutiny, we see an opportunity for a great error to be made here; for, while in the case of the peas and lentils the calculation includes nothing but heating, nutritious elements, in the albuminous portion of the beef are included all the results of decomposition, or broken-down and decomposing tissues as well as healthy ones. As is readily seen, this might affect the result very largely.

OBJECTIONS CONSIDERED.

Many objections to the exclusive use of vegetable food have been proposed, but most of them are without either logical or practical force, and are only urged in the vain attempt to reconcile unnatural and perverted habits with physiological laws. We will examine some of them without particular reference to consecutive arrangement.

1. Does not the Bible sanction meat-eating?

So says the Christian objector who honestly and sincerely believes that the Scriptures not only countenance but command the use of animal food. Our space is here too limited to allow us to go into all the details of the Scripture argument; but we will call attention to two points which should be sufficient to satisfy the objector: 1. Meat used in the way in which the Bible directs, and as the Jews now use it, as already described, would be comparatively harmless. 2. Abundant evidence can be produced to show that in his dealings with mankind Providence has permitted, and even regulated by laws, many things which he neither directed nor sanctioned. Instances of this kind are so familiar that specification is unnecessary.

2. As meat is not a *pure* stimulant, and is also nutritious, must not its effects be wholly different from those of mere stimulants, like alcohol, brandy, wine, etc.?

Meat cannot be considered as *injurious* to the system as *pure* stimulants; but it is equally

injurious to the extent that it is stimulating. The stimulating and nutrient portions of flesh are two wholly distinct elements. That portion of the meat which is nutritious is not in the least stimulating. The stimulating portion is foreign, effete, poisonous matter, and is not in the slightest degree nutritious. The effect of eating meat is, physiologically, precisely the same as would be that of eating any kind of wholesome, nutritious food mixed with some poisonous, innutritious stimulant.

3. But, admitting that meat is stimulating, is not a certain amount of stimulus needed, at least by certain temperaments?

Stimulation is invariably the result of poisoning. Poisoning is a violation of the laws of nature. The habitual use of any stimulant, then, must be *physical* sin, leaving out the question of morality. Who will contend that a certain amount of physical transgression is necessary for some temperaments any more than that a certain amount of immorality would be beneficial to certain individuals? If God has so constituted people that they find it necessary to transgress some of the *physical* laws of their being by using stimulus, or in any other way, is it not equally probable that he has made it true that the highest and most perfect development of some persons can only be attained by a moderate indulgence in vice—stealing a little occasionally, lying or cheating now and then? The absurdity of the objection reveals its falsity.

4. Is not flesh necessary to the inhabitants of cold climates to prevent them from freezing? and when sailors go North are they not obliged to make use of a large proportion of animal fat to keep them warm?

This objection is easily answered, for it is not founded on facts. It is not disputed that the Esquimaux and similar tribes eat large quantities of animal food, but science demonstrates in the clearest manner that this is wholly unnecessary, so far as the maintenance of life is concerned. According to Dr. Edward Smith, F. R. S., one pound of beef-steak when eaten will produce only one-third as much heat as a pound of rice, oatmeal, or wheat flour. And a pound of either of these grains will produce more than one-half as much heat as a pound of pure fat—whale oil or bears' oil. It is certainly true, then, that the vegetable king-

dom furnishes heat-producing elements in sufficient quantity to supply all of the wants of man in this direction. If the northern barbarians cannot obtain a sufficient quantity of vegetable food to sustain life, they would doubtless find it much for their health to remove to some milder climate.

Those who claim that flesh food and animal fat are absolutely essential to the maintenance of life in the arctic zone seem to have forgotten that the reindeer inhabits those frozen regions and derives plenty of heat from the lichens which grow upon the rocks, the coarse herbage, and other similar vegetable food.

5. If we do n't eat meat, what shall be done with all of our domestic animals, our oxen? our sheep? our hogs? and, the Frenchman would add, our broken-down horses?

What shall we do with them? Anything but devour them. Do with our horses what we have always done with them until the fastidious (?) Frenchman conceived the idea of eating the faithful animal after he had outlived his usefulness. Do with our cows and oxen just what we do with horses, and just what the people of other countries do with them. As long as biting frosts and chilling winds exist, we can find something to do with the sheep without dining upon him. And as for the hog, we will let him attend to his natural and quite important business as scavenger. If he gets so numerous as to overrun us, and self-preservation becomes necessary, we can use him to lubricate our machinery, light our halls, and for several other useful purposes. Certainly, there is no necessity for eating him to get him out of the way!

6. Has not the long use of animal food by the human family made such changes in their dietetic relations that flesh is now better adapted to their wants than vegetable food, although not originally designed for their sustenance?

In answering this objection, we will call attention to the two following considerations: 1. Such a change as the objection supposes is quite improbable. The laws of man's nature are not the uncertain products of circumstances; they are great, immutable principles, founded in his nature and organization. They are not mere arbitrary, empirical rules, instituted by some superior, governing being simply for man's annoyance. They are laws which exist as a nec-

essary consequence of man's existence, being co-existent with him. How, then, can circumstances change them? How can the whims of perverted taste subvert them? Will any amount of sinning change one "jot or tittle" of the moral law? Never; for that perfect code is founded in man's *moral nature*. Equally unchangeable are physical laws; for they are founded in man's *physical nature*. 2. But a change of this kind has never taken place. It could only take place by a corresponding change in the structure of the human system; for, as we have already seen, those animals which use animal food possess different alimentary organs from those which use vegetable. Had man become carnivorous by long use of animal food, we should find him with teeth, and other organs of alimentation, like those of carnivorous animals, which we have already seen is not true. Then we must conclude that so far as a constitutional change in favor of a flesh diet is concerned, its occurrence is not only improbable, but is untrue in fact.

7. But the change from a flesh diet to an exclusively vegetable one is so difficult; is not this an evidence in favor of animal food?

Instead of being an evidence in favor of the use of flesh, this objection furnishes one of the strongest arguments against its use; just as the tobacco-user's craving for the filthy weed, and the drunkard's longing for the fiery draught, the opium-eater's frenzy for his narcotic drug, are the most indubitable evidences of their pernicious character.

CHANGE OF DIET.

People who become convinced of the truth of the positions taken in the preceding articles sometimes lose confidence in them when they attempt to abandon the use of animal food and adopt a vegetable diet. The reason of this is that they attempt to make the change too abruptly. When the system has been long accustomed to the use of meat or any other stimulant, some little time is required before the system can resume its natural tone after being deprived of it. It is best to make the change gradually. At first, use animal food in less quantity; then use it less frequently; and, finally, abandon it altogether. It is quite possible that some very aged people who have been accustomed to its use for many years should never be advised to abandon it entirely. But

young people in fair health may abandon its use at once without damage to the system, and when the appetite has once been overcome there need never be necessity for resuming the use of meat of any kind.

CONCLUSION.

This investigation might be prolonged to almost any length, but we have constantly aimed at brevity and conciseness, and must now bring the subject to a close. As we have seen, the invariable testimony of anatomy, of physiology, and of the united experience of ancient and modern nations, has been decidedly in favor of a purely vegetable diet for man, and entire abstinence from such articles of food as can only be obtained by taking the life of any living creature.

These views are obtaining favor and acceptance very rapidly among the thinking, reasoning classes of people. Almost every community contains one or more vegetarians, and a single organization of such persons numbers upwards of twenty thousand. The reform is rapidly advancing in strength and numbers. Medical colleges have been established with regular charters, and a score of institutions for the treatment of the sick by a reform in diet, as the principal means, have been put in successful operation, and are performing astonishing cures of many of the most chronic and hopeless disorders.

J. H. KELLOGG, M. D.

A Bloody Beverage.

SOME time since, a paragraph was going the rounds of the papers which gave an account of the wonderful beneficial results to be obtained from drinking the warm blood of slaughtered animals. It was stated that a gentleman who was very much reduced by disease had found astonishing benefit from this practice at a slaughtering establishment known as the "Brighton Abattoir," near Boston. Encouraged by his success, a number of others had commenced the revolting practice also, among whom were several ladies. A recent journal informs us that there are now more than one hundred individuals who daily visit the Brighton establishment to drink the blood of the animals butchered there. There is said to be some prospect that a hotel will be built for the accommodation of the frequenters of the place.

Speaking of one of the earlier persons who

sought relief at this sanguinary establishment, a journal says, "One gentleman from Boston, a consumptive, was so feeble that he could scarcely get to the abattoir; he can now knock down his bullock, and take his matutinal blood-cocktail regularly."

The perversity of human nature is indeed astonishing. How strange it is that people will cling to old superstitions and follies, and even eagerly seize and indorse *new* absurdities rather than receive a single ray of truth in its beauty, purity, and simplicity. People will allow themselves to be tortured almost to death with sinapisms, blisters, drafts, and other counter-irritants. They will swallow croton, cod-liver, castor, or angle worm, oil with avidity.

They will open their mouths, and with the utmost complaisance allow the doctor to deluge their stomachs with the most loathsome compounds that medical ingenuity and chemical skill can produce. They will drink putrid ale, adulterated wine, bad whisky, and barrels of "bitters" and "tonics," with the mistaken notion that these vile compounds are "strengthening." These dirty practices are all bad enough, but what shall we say of people whose moral sense has become so obtuse that they can view with pleasure the tortures of a dying brute, while their mouths "water" for blood; who have lapsed so far into savage barbarism that they can sip with delight the warm, red life-blood fresh from a dying creature's veins? The most charitable thing we can say of them is that they have so long violated nature's laws and ignored her teachings that their moral sense is wholly subverted, their natural instincts obliterated, and their natural taste perverted.

But, laying aside all moral and esthetic considerations, is it true that any *physical* benefit may be derived from drinking the blood of animals, as claimed by the advocates of this practice? A moment's consideration of the matter will settle the question. What qualities has blood to recommend it as a remedy? Is it good to quench thirst? None but blood-thirsty people could regard it thus. Is it good food? Doubtless it is somewhat nutritious, but how much inferior to the various esculent fruits and vegetables! "But is n't it strengthening?" says one. If by strengthening is meant stimulation, which is not strengthening at all, then we can answer in the affirmative. Blood is stimulating; that is, it is poisoning. It contains the elements of death, as well as those of life.

Whatever apparent benefit may be derived from drinking blood is wholly due to its stimulant effect; and by stimulation must not be understood anything but that which is abnormal, anti-vital, and wholly opposed to the best interests of the vital economy.

The project of constructing a hotel for the accommodation of the devotees of blood-drinking, betokens the same kind of enterprise that led a San Francisco gas company to erect seats in their works for the convenience of the crowds of invalids who came there to breathe the filthy gases emanating from the retorts, with the baseless hope that by so doing they might find relief from their aches and pains, all the legitimate results of the violation of nature's laws. How absurd to conceive that a person who has become sick by some transgression of physical laws can be cured by committing a worse sin! and yet almost the whole system of druggery is founded on this very principle.

Our advice to the poor people who are drinking blood at Brighton is to abandon the disgusting habit at once, and leave the horrid practice in the hands of degraded Patagonians, savage North American Indians, and, perhaps, a few demoralized butchers.

J. H. K.

Cheering Words.

WE are constantly in receipt of letters of encouragement from our friends, all of which are most heartily welcomed. The following is from a staunch reformer whose long and extensive experience enables him to speak with confidence:—

“THE HEALTH REFORMER.

“No one who knows the value of this paper can afford to do without it. Its practical teachings on the preservation of health and the treatment of diseases pay the cost of the paper many times over during the year. If any one will carefully read and act upon its suggestions, they need not fall into the hands of ignorant and unprincipled quacks, that class of cannibals that prey upon diseased humanity. May the REFORMER still go forth to enlighten and bless its thousands and tens of thousands. May it finally be seen that its mission has not been in vain.

R. F. COTTRELL.”

When we glance at our rapidly increasing list of subscribers, and think of the many thousands who eagerly welcome each new number of the REFORMER, and, we hope, try to practice its teachings, we think we have just grounds

for believing, even now, that its “mission has not been in vain.”

A friend in Canada who seems to be an energetic worker in the cause sends the following:—

“The true principles of health, as well as a rational system of treatment for the sick, are very little understood in this part of the Dominion of Canada. Drug medication flourishes here; and although the drug doctors kill more than they cure, still the people trust them and some would rather *die* by *regular* treatment than *get well* by *irregular* means. Still, light is spreading. A number of copies of the REFORMER are now taken, and I am doing what I can to persuade the people to read it. Water treatment has been tried to some extent, and has been quite a success. An instance of the superiority of water treatment over ‘drugging’ I will now relate:—

“My little boy, six years old, was attacked with measles. He seemed to get along well for a few days, but getting cold, he was seized with convulsions, and for two days was utterly unconscious of anything except pain. Being absent from home, the drug doctor had a chance to prescribe mustard, blisters, and such infernal stuff. The doctor had little hopes of him, and our neighbors were positive that his days were numbered. My first work, when I reached home, was to put him in a wet-sheet pack. In a few minutes, he ceased to suffer, closed his eyes in a short time, and was at rest. The fever was high, so we kept cool cloths on his head, chest, and throat. When taken out of the pack, he would get restless, and seem full of pain. We kept him one whole night wrapped in wet cloths. The result was, that after forty-eight hours, consciousness returned, and on the next day he could swallow, and called for food. Since then, his appetite is good and he is almost as well as ever. Our neighbors are astonished at the quickness of the *cure*, as they call it; and, better than all, there is no medicine in him to keep him sick for a long time as drug patients usually are. I shall take advantage of the circumstance to increase the circulation of the REFORMER.

JAMES EVANS.”

Another friend writes from California:—

“EDITOR HEALTH REFORMER: I wish to write you a few lines in regard to my experience after reading your valuable health journal about five years. I cannot help but rejoice in the glorious results that I have had in following the teachings of this journal. We have frequently found relief by following its teachings. Two years ago, our three children all had scarlet fever; and with our limited knowledge of water treatment, we had complete success, while other children were dying around us. Since that time, we have discarded drugs and drug doc-

tors. But the most glorious result occurred recently, or during the past winter.

"We moved about two hundred miles south. The changes of habits, of water, the exposure on the trip, and going into an old house after having arrived at our destination, resulted in the sickness of two of our children of typhoid fever. Finally, three of the children and my wife had the fever, and the babe, sixteen months old, took brain fever. Then we had a hospital for nine weeks; and with our limited knowledge of the water cure, we had a complete success in every case. I am satisfied that with a drug doctor my wife and babe would have died. Another good result was that when the fever was broken up, or had run its course, the patient did not have a course of drugs to recover from; nor fever sores, paralyzed limbs, etc. Let others read and thus be benefited.

J. G. WALKER."

One of the greatest beauties of the hygienic treatment of disease, and one of the strongest arguments in favor of the system, is its simplicity, and its perfect adaptation to the necessities of man. The remedies are always at hand. There is no necessity of keeping the poor sufferer in misery while a messenger is dispatched to the drug store, several miles distant, perhaps. The methods of treatment, and the general principles are also so simple and easy of comprehension that every man may become his own physician with comparatively little effort.

Whisky Analyzed.

"PROF. SAMUEL AUGHEY, of the University of Nebraska, reported to the Temperance Society of Lincoln, in that State, the result of a chemical analysis of samples of a number of well-known and popular brands of whisky and wine. From his report, it appears that benzine, sugar of lead, strychnine, strontia, oil of almond, and potash, constitute a large proportion of these liquors, enough strychnine being found in a quart to kill a man, if taken at a dose."

Adulteration of any kind is a criminal offense, and ought to be recognized as such in this country as it is in England. But if adulteration were admissible in anything, it could certainly be tolerated in intoxicating liquors. In fact, we are of the opinion that adulterated liquor is really less harmful than the pure article. Sugar of lead, oil of almonds, and strychnia, are poisons, but so is alcohol a poison, and one of the very worst of poisons. A small quantity of pure alcohol will produce

immediate death. It will destroy the stomach like aquafortis. Enough strychnia in a quart of whisky to kill a man is certainly frightful, and the risk of taking such an amount of poison ought to deter every toper in the land from tasting the poisonous stuff; but the fact that half a quart of whisky contains enough alcohol to kill two or three men is still more frightful. Liquor is certainly bad enough without adulteration; but it is rather doubtful whether so bad a thing can be made any worse.

The idea that *pure* whisky is not very bad, which is entertained and expressed by many sensible people, is wholly without foundation. Strychnia and alcohol are both poisons. Strychnia is one of the worst of poisons; alcohol is a poison, for large doses of which there is no antidote; and the *purer* it is, the more poisonous it is.

K.

RUINOUS ECONOMY.—The almost universal practice of robbing wheat of its most valuable and nutritious portions by the process of bolting, has been repeatedly deprecated by many of our most eminent scientific men, who justly declaim against the wasteful practice of depriving ourselves of the best of the grain and feeding it to hogs and other domestic animals, while contenting ourselves with the poor remainder. But the most astounding climax is reached by a writer in a Western agricultural paper, who recommends corn meal and shorts as fertilizers which will enable the farmer to secure a good crop of tobacco! He claims that this has been demonstrated by the experience of tobacco-raisers in the Connecticut valley. It is no wonder that we find our large cities filled with indigent people, and our county houses with paupers, when such a miserable economy is practiced as that which leads men to convert wholesome and nutritious wheat, rye, and barley, into poisonous beer and whisky, and to enrich their land with corn meal and shorts for the purpose of being able to reap a large crop of that poisonous, narcotic weed—tobacco.

K.

THOUGHTS come into our minds by avenues which we never let open, and thoughts go out of our minds through avenues which we never voluntarily opened.

WE should accustom the mind to keep the best company by introducing it only to the best books.

GENERAL ARTICLES.

BACKBONE.

WHEN you see a fellow-mortal
 Without fixed and fearless views,
 Hanging on the skirts of others,
 Walking in their cast-off shoes,
 Bowing low to wealth and favor
 With uncovered, abject head,
 Ready to retract or waver,
 Willing to be driven or lead ;
 Walk yourself with firmer bearing,
 Throw your mortal shoulders back,
 Show your spine has nerve and marrow—
 Just the things which his must lack.

When you see a theologian
 Hugging close some ugly creed,
 Fearing to reject or question
 Dogmas which his priest may read,
 Holding back a noble feeling,
 Choking down each manly view,
 Caring more for forms and symbols
 Than to know the good and true ;
 Walk yourself with firmer bearing,
 Throw your mortal shoulders back,
 Show your spine has nerve and marrow—
 Just the things which his must lack.

When you see a politician
 Crawling through contracted holes,
 Begging for some fat position
 In the ring or at the polls,
 With no sterling manhood in him,
 Nothing staple, broad, or sound,
 Destitute of pluck or ballast,
 Double-sided all around ;
 Walk yourself with firmer bearing,
 Throw your mortal shoulders back,
 Show your spine has nerve and marrow—
 Just the things which his must lack.
 A stronger word
 Was never heard
 In sense and tone
 Than this—*backbone*.

A modest song and plainly told—
 The text is worth a mine of gold,
 For many men most sadly lack
 A noble stiffness in the back. —*Sel.*

Care of the Teeth.

BY DR. D. C. HAWKHURST.

WE republish the following article from a previous number of the REFORMER, as it is well worthy of being carefully read several times over. No one can afford to be ignorant of the valuable information it imparts.

No matter how fine the face is, white and well-preserved teeth will add to its freshness and agreeableness ; no matter how beautiful it is, neglected teeth will detract from that beauty.

You will therefore care well for your teeth.

If you are not yet old, you will desire to avoid that sunken and disrupted appearance which loss of the teeth communicates to the features. If you are young, you will desire to maintain that symmetry and wholesomeness of the mouth and purity of the breath which neglect is sooner or later sure to destroy.

In either case, you will desire to maintain your health, and you cannot have perfect health without teeth that are capable of doing efficient work.

I know many sad stories of broken-down health and shattered nervous systems, which clearly had originated in inflamed gums, decayed teeth, and the dyspepsia occasioned by the same, aided no doubt to a very great extent by numerous lesions and consequent irritations of the dental nerves.

I shall say more of this in another paper. It is now my task to tell you how to care for your teeth, in order to prevent these results.

Those whose jaws and teeth are already in ruins have not much to lose by waiting a few weeks ; but you with bright teeth, who have organs that can yet be saved, have not a day to lose. You should begin at once that thorough and efficient care of your teeth which alone can preserve them.

Among measures for the preservation of the teeth, cleanliness ranks first. It is more important than all things else. Those surfaces of the teeth which are kept freest from soft deposits of food by friction of the lips and tongue, are also freest from decay ; on the other hand, all confined localities, interstices and fissures, where impurities are sheltered from friction and removal, are burrowed into by decaying cavities. It is often asked : "Why do teeth decay most often in secret and hidden places, making the cavities both hard to find and difficult to fill ?" It is because filth accumulates here and corrodes the hardest enamel. You have not done your whole duty by your teeth until you have removed the last atom of impurity from the most sheltered position between the teeth.

As a cleansing agent, the tooth-brush is indispensable ; nothing has ever been invented that can equal it. It should not be too stiff, else it will wound the sensitive edges of diseased gums, and become an instrument of destruction to the very organs it is intended to save. It should not be used rashly, but with extreme care, so as not to injure the tender membranes of the gum while exploring the most confined interstices after impurity.

You do not know how to use a tooth-brush by instinct, as a bird builds her nest : it is a thing to be learned. Perhaps you have been using a brush for years while your teeth are still decaying. Go to some dentist, and assure him that you will not be offended by the truth ;

he will tell you that you do not half use your brush.

The brush should be used perpendicularly; it should be forced between the teeth both back and front; it should be carried briskly over the ends and into the fissures of the double teeth; it should be used on the inside of the arch; it should pursue its relentless search on every side of the wisdom teeth. The tooth-brush should also be used with an abundance of tepid water, else it will only stir up the impurities without removing them. Rinsings of soft water may be required to wholly dissolve and carry them away.

How often should the tooth-brush be used? For most people, so often that it will never get dry from one using to another. The brush must in any case be used as often as you eat. "Twice a week," and oftener when you "go visiting," will not satisfy the demands of hygiene. The organic atoms of food do not long lie exposed to the warmth and moisture of the mouth without undergoing what is termed putrefactive decomposition. The result of this is an acrid, chemical agent that attacks and slowly decomposes the enamel. There is, therefore no safety unless the teeth are kept absolutely free from the pulpy remains of food.

Most persons should devote from five to ten minutes each day to cleansing the teeth. Brushes of different quality, tooth-picks, floss silk for crowded teeth, should all be at hand. If you do not know how to use all these things, get some dentist to show you. Have n't time for all this? Very well! You will soon have time to spend with your dentist in having expensive fillings inserted. And when all is done, perhaps he will tell you: The fillings are warranted if you keep your teeth absolutely clean, not otherwise.

In conclusion, let me say that there is no good reason why you should not preserve your teeth as long as you do your fingers. You will not do this. You will lose your teeth sooner or later. But the reasons why you will lose them are bad ones, and never ought to have existed. In another paper I will still discuss with you how to delay this result. Strict attention to the above hints and such as I shall give from time to time will no doubt enable you to prolong the usefulness, the efficiency, and the beauty, of your teeth for many years.

Look not mournfully into the past. It comes not back again. Wisely improve the present. It is thine. Go forth to meet the shadowy future, without fear, and with a manly heart.

UPHOLD truth when thou canst, and for her sake be hated; but know thy individual cause is not the cause of truth, and beware that they are not confounded.

Why Do Hygienists Get Sick?

BY W. T. CURRIE, A. M., M. D.

ONE great difficulty stands in the way of all our efforts in this cause. People ask this question, Why do hygienists get sick? Unless we can remove this stumblingstone from the path over which we would persuade men to travel, we shall long plead with them in vain.

At the college table, one day, I refused some dishes which were passed, when one of the other teachers, turning to me, said, "I never knew a man who lived on your kind of diet, who was not weak and sickly." Probably every hygienist in the country has heard remarks similar to this. They tell us that these people are a weak, sickly, puny race; and, generally speaking, they are. But does this prove anything against their system of living? No; nothing. The very fact that these people *live*, and are able to work, and enjoy anything whatever of the blessings of health—this fact alone speaks volumes in its favor. Other people, with the same chances for life which *they* had, and no better, are nearly all dead and buried. These people *live*, and why? Because, through the thousand voices in nature, they have heard the invisible God speaking to them, and saying, "I have no pleasure in the death of him that dieth; wherefore turn yourselves, and live ye." They have obeyed this voice, and therefore they live.

It is a most difficult thing to persuade *well* people to change their habits of living. "What is the use of a strong and healthy man like me bringing myself down to such a miserable fare as this?" So I heard a man say. His question tells the whole story. Those who are well, seldom trouble themselves to examine into these questions. They live and keep well; what more do they want? The history of hygienists might generally be written in the same words with that of a woman who "had suffered many things of many physicians, and was nothing bettered; but rather grew worse." They have been sick; they have taken doctors' prescriptions, numerous patent remedies, from the vilest decoction of bitter herbs and bad whisky, down to the "Red Triangle"—the Indian doctor's great temperance (!) remedy. Every new medicine has given them a little relief, and then left them worse than before. They have tried everything, as they think, and all have failed. They were fast sinking into the grave. Through some chance, they heard of the hygienic cure. Like a drowning man catching at a straw, they turned to this as their last hope. They studied this, and found that to obey is to live. Like that woman, they turned to the Lord in penitence, and he healed them.

Now is it any wonder that hygienists sometimes get sick? Compare ten years of their former life with the same number after their

habits of living are changed, and from that judge something of what this new method of life has done for them. So, my friends who have embraced this cause, do not let these sarcasms move you. When people make these unjust remarks about your manner of living, tell them that when you lived as they do you were never well; and now you are seldom sick. Hygienists do sometimes get sick. This is easily explained. It often comes from the dregs of some old disease still lurking in the system. By this new method of living the old poisons have been partly eliminated from the system, but a portion often remains for years in the blood. By the hygienic method of living the system is roused up and sets itself to work to remove the last trace of this poison. This effort of nature is called disease. Thus, hygienists are often afflicted with disorders whose causes lie far back in their past lives and can be traced directly to their *old habits*, not to their new methods of living.

Therefore we say, in the first place, that many hygienists get sick because they were sick when they were converted to hygiene, and although much improved by their new habits of life, have never become entirely well.

In the second place, as I said before, very few well people are converted to this system of living. Its advocates are, in great part, made up of people born with feeble constitutions and with a slender hold on life. They have a natural tendency to disease. Many of these people, by the most careful habits, become comparatively well, enjoy much of life, and work hard for many years. Sometimes they get sick. It is no wonder. The marvel is that they can ever be well, when other people, with the same chances of life that they have, are *always* sick.

Thirdly, notice that all who profess to be hygienists are not such in reality, any more than all are good Christians who bear the Christian name. Many are ignorant, and for this reason live badly and get sick. Others are inconsistent, and do not live as well as they know how to live. They often eat bad food and do other things which they know to be wrong, and therefore get sick.

Fourthly, we have to live in the world where other people will get sick, even if we keep well ourselves. We are often called upon to take care of them, and in this and other ways, at times, we have to endure an amount of labor which causes the body to break down at some point, and people say that we are sick.

Finally, many hygienists do *not* get sick. We can show many throughout the country who have become so strong by means of careful habits during many years that they are now but little liable to disease. They sometimes get tired, but are never sick. Only give us a fair field for work, and we will show thousands of this class. Send to us, not those who are

almost dead from manifold abuses, but send us the young, the strong, the active, with keen eye, elastic step, vigorous nerve, and a firm hold on life. Send us these to educate, train and develop, in, and by means of, the great principles of the science of health, and we will soon show to the world a vast army who never get sick.

Hereafter I purpose to give some advice to the "Grangers," or farmers' clubs, and, also, to write "A New Chapter on Christian missions to the Heathen," and make some remarks on the "Necessity of a *New* Reformation in Christian Churches."

The Nerves.

A FEW weeks ago, Dr. Brown-Séguard delivered a course of lectures upon the subject of "The Nerves." Probably no living person has made this subject the object of so much careful study and experimentation as has this eminent physician. For the benefit of those of our readers who may not have access to the printed reports of these lectures, or who might not care to read them entire, we will present some of the many interesting facts which the lecturer brought forward in dealing with the subjects of nerve force and mental and nervous influences.

THE NERVOUS SYSTEM.

The nervous system consists of two elements; viz., cells and fibers. The whole surface of the brain is covered with a layer of gray cells, so minute as to require a powerful microscope to reveal them, but cells, nevertheless. From each one of these cells there is sent out a nerve fiber still more minute. What are termed nerves are bundles of these little fibers, thousands of them being bound together, each one running direct from its starting-point, the cell, to its termination in the skin, the muscles, or some remote portion of the body. Nerve force is controlled, if not generated, by the cells, and is transmitted wholly by means of the fibers. This being the case, it becomes very evident that there can be no such thing as animal magnetism, since the latter supposes that nervous force can be transmitted independent of nerves, and so communicated from one person to another. Electricity and nerve force are two wholly distinct things. A nervous person is one whose nerve force is deficient rather than superabundant.

When speaking of reflex action, and its causes, the lecturer gave an account of the observation of a very intelligent negro whose master was affected with a disease of the spinal cord which produced convulsions in the lower limbs. The most intense stiffness would mani-

fest itself in those organs. They would be rigid as a bar of iron for a time; and, after a few minutes, would begin jerking violently. Then the jerking would cease, and the rigidity would return. This painful attack would continue for a whole day at a time. His negro servant, in dressing him, found it very difficult to put on his pantaloons. One day he chanced to take hold of his great toe, and found that as he pulled it the limbs became perfectly soft and flexible, the convulsions wholly disappearing. After this, "whenever he wished to push his master's pantaloons up, he would pull his big toe down" and then experience no difficulty. His master soon learned the utility of the operation, and employed the negro to pull his toe at other times than when he was dressing, and always with like effect. Dr. Brown-Séguard has seen fourteen similar cases.

Experiments show that decapitation produces instantaneous unconsciousness, so that criminals who are thus executed suffer only an exceedingly brief paroxysm of pain.

"CURIOUS EXPERIMENTS—HOW HORSES ARE QUIETED.

"According to a discovery made by Prof. Schiff of Florence—a discovery which has been pushed beyond him by many others—we can very readily produce these conditions. He found that it was quite enough to touch the nostrils, as I do mine, simply passing the finger along the sides of the nose, to stop the activity of the heart and respiration, and stop consciousness in a measure. He did not find, but left another to find it, that interchange between tissues and blood is also stopped. It is well known now that most of those men who succeed in quieting violent horses, put their fingers to that part, and sometimes inside the nares. Merely touching these parts may produce some effect; pressing hard upon them has far more effect. It is not essential that the application be made there, as a pressure of the lip may produce the same thing. In some animals, rabbits and guinea pigs, if we pass needles into their chest and heart, so as to judge of respiration and circulation, we find that the needles stop altogether as we press the lips or part of the cheek. It is not that the poor creatures are frightened, as when we have deprived them partly of their consciousness, or almost altogether by the use of chloroform, the same phenomena occur. There is a very curious fact mentioned by Catlin, who traveled in the West, and wrote two volumes on the Indians. He states that the calves of the Buffalo, if they are caught, and the air from the lungs of a man is strongly breathed into their nostrils, will become so fascinated by that peculiar influence that they will run after the horse of the hunter and follow him five or six miles.

It is said, and Mr. Catlin also affirms it, that in Texas, or in other parts of the country where there are wild horses taken by the lasso, if the hunter succeeds in taking hold of their nostrils, and then forcibly expels air from his lungs into the nostrils of the horse, he will follow him anywhere, and become perfectly tame. These facts deserve to be studied. I have heard that when Mr. Rarey acted so powerfully on very violent horses, both in this country and in Europe, he had something to do with their nostrils also. What he did, however, he kept in a great measure secret. That part of the system, at any rate, has a great deal to do in diminishing the activity of the principal organs. It is very natural, therefore, that such a power should be acquired by one who has done such a thing to an animal as intelligent as the horse."

"CONVULSIONS, AND EXTRAORDINARY MEANS OF CHECKING THEM.

"I pass now to a completely different kind of phenomena of arrest. That is, the stoppage of convulsions of various kinds. The first I will speak of is a kind of convulsions which we call eclampsia. Very frequently in this case, an irritation of the skin in children may produce a cessation of the fit. Dipping a child in very hot water, or throwing very cold water on it, may stop convulsions.

"Ducros, a court physician for whom the Princess Adelida had a great fancy, was an ingenious man if he was not altogether honest. He succeeded in the presence of the physicians in stopping fits or convulsions in children or men, merely by pressing the skin in the neighborhood of the ear. A pressure in the neighborhood of the nostrils may do this. If we are seized with cramps, and can put one foot flat on a very cold floor, the cramps may disappear at once.

"Hysteria is one of the most singular affections we are subject to. I say we, because even men are so attacked sometimes. A remarkable and successful treatment of this, which I witnessed in Paris, is so peculiar and strange that if it were not before such a trustful audience, bold and daring as I am when I am sure of the truth, I should not dare to mention the fact. The daughter of a friend of mine was attacked with a fit of hysteria every morning. I succeeded for a time in breaking up the fit by the use of violent means for a half an hour before the paroxysm was due. But after a time the means I used completely failed. My friend then went to see a gymnast in Paris, named Triat, who was far more daring than I am, and was in the habit of treating hysteria in a very bold and unique way. He used to take his patients, as he did this lady, up a ladder, after having bandaged their eyes so that they could see nothing. After they

had ascended to the height of about 20 feet, he made them walk very carefully on a plank that was about seven or eight inches in width. He, of course, was a gymnast, and accustomed to walk there, so that he could easily lead the person forward. When the young lady had reached the middle of the plank, which was pretty long—for it was a large gymnasium—he said to his patient, ‘Now, you are perfectly safe, and there is no possibility of your fit coming on again.’ He had previously assured her that this means was infallible; had referred to hundreds of previous cases, and exaggerated his success in order to act on the mind of the patient. ‘Now,’ said he, ‘after I have left you, you will not try to lift up the piece of cotton-wool that is fixed on your eyes until one minute has elapsed.’ He started away and left the patient there in great danger, as you may imagine, of falling. After a minute had passed, the patient removed the bandage and opened her eyes. Fortunately for Mr. Triat, no accident has ever occurred there. How many patients he cured that way, I do not know; but I know the daughter of my friend was certainly cured. The next day there was no need of taking her up there. She had had enough of it.

“There are many other means that may cure an attack of hysteria. The great point to be remembered is, that faith in the patient in those cases is the principal medicine. Placing the arms in very hot water, as Dr. Cerise has found, will stop the fit. Other means, such as the application of ice on the back of the neck when the patient does not expect it, will also succeed. A ligature tied very tightly around the limb may stop the attack.”

“HALF THE BRAIN EQUAL TO THE WHOLE.

“A study of the facts relating to the brain has led me to conclude that each half of the brain—paradoxical as it may seem—is a whole brain. That is, that one-half of the brain is sufficient for all the functions of the two halves of the brain. If that is the case, I must mention a conclusion, although it may seem outside of my subject. It is that we are extremely neglectful in educating only one part of the body. We educate our right arm and make use of the right side of the body as much as possible, and leave the other side inactive, except in walking. We do not perform what is really needed if we have two brains. There is no question that it is our habit of making use of only one side of the body that consigns to one-half of the brain—the right side—the faculty of expressing ideas by speech. If we developed both sides of our body equally, not only would there be the benefit that we could write or work with the left hand as well as with the right, but we should have two brains instead of one, and would not be deprived of the power

of speech through disease of one side of the brain.”

“MUSCULAR MOVEMENTS AFTER DEATH.

“It has been found that 48 hours after the heart has been separated from the chest of a dog it continued to beat. There is recorded the case of a man at Rouen in whom the heart was found to beat for 36 hours after the death of the body by decapitation. There is, therefore, a possibility of long persistence of life in those organs. And I dare say that the great cause why we see those organs stop at death so quickly, is that the phenomena of arrest of their activity have taken place at time of death.”

“I was once called to see a patient who was indeed no more a patient; he had died before I reached him. I was told that he was making certain movements, and his family and friends all thought he was alive. I examined him and found that he was certainly dead without any chance of returning to life, at least according to our very limited knowledge. I found that he was slowly performing movements that he had been performing with great vigor before I came. He would lift up his arms at full length above his face, knit the fingers together as in the attitude of prayer, then drop the arms again and separate them. The movements were repeated a good many times with less and less force, until, at last, they ceased. These singular movements, to persons not knowing what may take place in the human body after death, must certainly have looked as if the will-power had been directing them. Evidently there was no such thing there. The heart had stopped beating; the respiration had ceased for a long time. The appearance of the eyes and of the other parts of the body was such as we observe in death.”

“EXTRAORDINARY FEATS CAUSED BY DISEASE.

“The field of pathology is indeed very rich in cases in which all sorts of movements resembling voluntary movements are made by patients who, however, are not trying to perform those movements. There is one case especially of a young lady in Paris who was attacked with ecstasies every Sunday, and who performed a feat the thousandth part of which not one among you could perform unless you were diseased like her. Every Sunday at 10 o'clock the young lady ascended a bed, and, putting her foot on the top of the edge or border of the bed, took an attitude of prayer and began to address prayers to the Virgin Mary. She continued in that attitude, fixed like a statue, except that her chest continued to move and her heart to beat, and the lips were giving utterance to sound. All the other parts of the body were absolutely motionless. This was a feat that you could not perform on level ground.

Standing rigidly on tip-toe, even without shoes, is an utter impossibility, beyond a short time."

"INABILITY TO BRIDLE THE UNRULY MEMBER.

"There are some other cases which consist not merely in a disorder in movement, but also in some disorder of the mind associated with it. There are cases in which, through some irritation, a patient will utter certain words and not always the most desirable words. A most eminent mathematician—one of the four or five most able and ingenious mathematicians of the age—is suffering from this affection. He is certainly, as regards power of mind, above most men with whom I am acquainted. But very frequently, under this affection, a word, and often one which no man in society ought to utter, will come to his lips. He has, sometimes, the power of contracting his lips before the sound comes out, so that he may be saved from the mortification of being heard. But sometimes it occurs with such rapidity that it is uttered fully, and the poor man has the mortification of saying something that very few educated men would say. My friend Dr. E. C. Seguin related the case of a clergyman who was troubled in this way, and whose affection took a peculiar form. Immediately after having begun the Lord's Prayer, after having said, 'Our Father which art in Heaven,' he invariably exclaimed, 'Let him stay there.' Of course he had to give up preaching.

"A lady of the highest nobility in England, had to leave court for a similar reason. She gave utterance to the most unpleasant things for people to hear: 'You are very stupid;' or, 'This is a madness in you.' And she said those things to the Queen or to anybody else, and that quite suddenly, frequently interrupting a conversation for the purpose."

Natural Adaptations.

BY R. F. COTTRELL.

"WHEN God created the universe, he made everything just and right. He made those animals that are preyed upon with ears turning backward, to enable them to catch the first indications of sound from a pursuer, and he made those species that prey upon other animals with their ears turning forward, for the same purpose."—*Capt. E. L. Hovey.*

Several queries might be raised concerning the suggestions of the text. It might be questioned whether the Creator intended that one animal should prey upon another, when all things were made "just and right;" and whether habit, being changed, might not turn the ears in a new direction; or, whether the same animal, as the deer, cannot throw the ears backward when pursued, or forward when cautiously approaching a new spot in grazing.

The latter they certainly do. The hare and the fox furnish as good illustrations of the subject as any perhaps; the long ears of the hare sloping backward in the flight, and the shorter ones of the fox pointing forward in the pursuit. But when the fox is pursued by a larger animal of his own class, would it not be to his interest to have his ears turned backward?

But the point of special inquiry is this: It being designed that the hare should be eaten by the fox, why this natural adaptation in the hare to make sure his escape? Is it not the design of nature that he *should* escape? If there are two adaptations in nature directly opposed to each other, who can tell what the design is? Who can tell whether it was designed that the fox should eat the hare, or that the hare should escape? It may be replied that though it is the design that the fox should eat the hare, on the other hand it is designed that the chase should be prolonged. It may be for the health of the fox to earn his meat before he eats it. But what benefit comes to the poor hare by this arrangement? Better to be slain at once, than under the most exquisite torment of fear exhaust itself in a prolonged effort to escape, all to no effect, because it must after all suffer the pains of a violent death. It looks as if the murderous fox had broken the original design.

Now the application. On the subject of health we claim that there are certain natural laws of our being, obedience to which conduces to health; but that disobedience is sure to bring disastrous consequences, which we sometimes call the penalties of nature's violated laws. The design of these pains and penalties is to secure obedience to those natural laws which are just and right. To this, every intelligent person will assent. But still some hold that nature has provided, in certain poisonous substances, mineral, vegetable, and animal, remedies for almost every disease. Has the Creator ordained penalties to secure obedience to natural laws, and then provided remedies to do away the penalties? As long as people believe such contradictory theories, they will be likely to do as multitudes are now doing, namely, recklessly violating the laws of their being and, when the sure results of disobedience appear, relying upon poisonous drugs to avert death, the ultimate consequence of their transgressions.

That the Creator has established certain physical laws, the violation of which will certainly bring sickness and death, will not be questioned by any intelligent person. The only question is, whether he has provided remedies, so that those who choose may violate those laws with impunity. Has he, after establishing wholesome laws and justly requiring obedience, stultified himself by a counter-arrangement, thus encouraging disobedience and making void his own righteous laws?

Vitality and Drugs.

BY W. R. DUNHAM, M. D.

[The following article has been sent to us in reply to an article by J. A. Tenney in the April number of the REFORMER under the same heading. We publish it because we desire that our readers should have an opportunity to view the subject from its various standpoints, and also because the candid and gentlemanly manner in which Dr. Dunham handles the matter demands that he should have a chance to speak. Those who read the article in question will remember that it was mainly a criticism upon a lecture delivered by W. R. Dunham, M. D., before the Connecticut River Valley Medical Association, and published in the *Boston Medical and Surgical Journal*.]

We have received from an unknown source a copy of the HEALTH REFORMER, in which we find ourselves not only criticised, but publicly called on either to repent or explain. It seems that one Dr. Tenney desires to know more about "Nature's Laws;" consequently, it becomes our duty to make the effort to enlighten him in the direction of reform.

We quote as follows, "Why, my dear sir, if you introduce a substance into the vital domain that is so 'incompatible' that a 'special effort of vital force is manifested to expel it,' how in the name of common sense, can it *aid* vital force?"

We cannot explain this problem to the satisfaction of one possessed only of "common sense," but we think we can to one who is familiar with cultivated sense in the direction of understanding nature's laws. Previous to making this attempt, allow me to balance the assertion of Dr. Tenney by one of my own. He says, "If you give a 'medicine' that 'directs' the powers of the system, it is because it is a worse poison than the one against which those powers are already at war." We deny this statement, which makes us even with Dr. Tenney; not satisfied, however, with being even with him, we rise to explain.

Vital power has a way or manner, instinctive, by which it behaves in relation to all substances, regardless of whether they are *greater* or *less* poisons. Some it appropriates and assimilates; others it ejects by special effort; others it is not capable of ejecting, but dies in the struggle. For instance, the introduction of strychnia into the stomach does not occasion the stomach to eject its contents, but the system struggles in convulsions until death. If this power was one of wisdom, it would occasion the stomach to eject it immediately.

A person may take a quantity of strychnia

sufficient to cause death, and then if we give the individual, after convulsions have occurred, a dose of ipecac, which is *not* a worse poison than the one against which those powers are already at war, the vital power will put forth this special effort and eject this "incompatible" ipecac, thus disproving the assertion of Dr. Tenney. We have witnessed such proceedings.

We admit that these "special efforts" *waste* vital power; but Dr. T. seems to think, if such be true, that a drug cannot *aid* vital power. We do not use the term *aid* to signify as being synonymous with the opposite of *waste*. To illustrate, Mr. Ravenous Appetite eats boiled potatoes, bologna sausage, ham and eggs, sour-crust, lobster, pickled eels, mince pie, and ice cream. The manifestation of vital power is ordained on a plan of a special way of behavior in relation to all substances; and its special intended behavior toward food is to digest it. The power of digestion being limited, it cannot digest this quantity, and it does not choose to vomit it up, such not being the law of relation to the case. Pain ensues as an evidence that vital power is at war with this quantity. Now, we ask, what is the desire of vital power in the problem before us? "Why, my dear sir," it is to expel it! We know how vital power behaves in relation to ipecac, consequently we administer a dose; and, as a result, the stomach ejects the ipecac by a "special effort," and along with it the other contents of the stomach also. Thus the presence of the ipecac occasioned vital power to act in a manner that did accomplish its desired results; which we call an *aid*. Not by acting on the stomach, nor by adding any power to the stomach, but simply the manner which this stomach of power behaves in relation to the ipecac, occasioning a condition more favorable to comfort and life. Thus the slight waste of power in relation to the ipecac was a choice of evils much in favor of its use, or some other article, preventing, possibly, the occurrence of a greater loss of power which would have occurred by allowing the system to wait its slow, instinctive way, in this case, of disposing of the contents of the stomach by another process.

Dr. Tenney, or others, may say that the ipecac did not *do* anything. We do not pretend that it did; but its presence was more conducive to life. Food does not do anything, but the vital power uses it for the maintenance of life in a different process; our clothing does nothing to us, but vital power manifests itself more advantageously by its surroundings, for the purpose of maintaining life, and thus our clothing aids vital power. Therefore, in aiding vital power, it is possible that whatever is used should depend on circumstances; what would aid at one time might be injurious at another.

Ipecac is less injurious than tartarized anti-

mony, and, possibly, warm water might be less injurious than ipecac. The principle involved in using warm water for an emetic, is just the same as that in relation to ipecac,—a *waste* of power. It is a "special effort," and even at a lesser cause than the previous one. The preference to warm water is summed up by the difference, if any, in the loss of power between expelling water, or ipecac, admitting that one is never assimilated and the other may be. A certain quantity of food may be assimilated, yet all that can be crammed into the stomach cannot be; and the system has to make a "special effort" to expel the surplus water or food on the same principle it does to expel poison.

Suppose we, a drug doctor, meet this Mr. Ravenous Appetite out on the plains, five miles from any habitation, on his way home from a visit to his mother-in-law, suffering with pain, rolling in the dust with agony. We cannot find a feather to tickle his throat, and no hot water convenient, but a plenty of ipecac. We administer a dose, and up comes the bologna, ham and eggs, etc. Now, we inquire, has the employment of the ipecac aided in restoring a better state of affairs for the vital powers to exist under? Has the drug indirectly afforded any aid? We think so, yet are willing to be persuaded to believe whatever is true, always anxious to obtain knowledge from any source, thankful for small favors that will enable us to see more clearly.

In conclusion, we add that the science of man and medicine is very erroneously taught, even by those who claim to be reformers, and those who merely improve on the practice of their fathers. We confess that the theory that is quite too often advocated for the use of drugs tends to lead the practitioner to use more and more, and a reform in theory is important.

Instruction and Education.

WE see plainly that a greater proportion of mankind are, so far as their reason and intelligence are concerned, in the condition of children; governed by instinct, appetite and passion; uncontrolled by conscience and judgment; ready for any impression; prepared to tread any path marked out that leads to any indulgence, bodily or mental. The remedy for this is plain, palpable, and on the surface; difficult in detail, but ultimately practicable—a sound form of education, secular and religious. Education, we say, not instruction—nothing is more dangerous than knowledge to the mind without the capacity to make a proper use of it; then, indeed, it does but afford an additional facility for the commission of crime.

WITHOUT earnest convictions, no great or sound literature is conceivable.

OBEY AND LIVE.

The Giver of life has established its laws;
A certain effect surely follows its cause;
The means to sustain life, he fails not to give,
And leaves it with us to accept them and live.

The free air and sunshine our dwellings surround,
And food that is wholesome grows out of the ground;
No mineral substance our systems demand;
And flesh is but vegetable food second-hand.

To keep ourselves cleanly, pure water is found,
Descending from clouds, welling up from the ground;
To quicken life's currents and make our frame strong,
Kind labor is given, our life to prolong.

And when the sun sinks out of sight in the west,
It gives us a season of undisturbed rest,
Rebuilding the system, its strength to renew,
To still do life's duties as they shall accrue.

And that in cold weather we still may be warm,
Caloric abounds; and defense from the storm
Is found in good clothes, made for comfort, not show,
And setting so light that life's streams freely flow.

These rightly accepted will give us good health,
A blessing transcending the millionaire's wealth;
His wealth cannot purchase exemption from pain,
Nor, when he is sick, give him soundness again.

And drugs, which are poisons, cannot cure the sick;
If given to well ones, they prostrate them quick;
How then, in all reason, who is it can tell,
When given to sick ones, they can make them well?

No, no! it is folly, our only safe way
Is to study health's precepts, and, learning, obey;
Repent of transgressions, and ever be found
Improving life's blessings with which we abound.

R. F. COTTELL.

An Expensive Vice.

STATISTICIANS often startle us by their revelations; but the facts which they present us respecting the cost of liquor and tobacco are simply astounding. We need no longer wonder why so many thousands of individuals in our large cities live in such abject poverty, and languish in squalid wretchedness, when we are informed by reliable authority that tobacco costs more than bread, and when a correspondent of the *New York Post* finds the basis for the following statements in official documents:—

In the whole United States there was spent for intoxicating liquors during the year 1870, the sum of \$1,483,491,865.00. Of this enormous sum, New York spent \$246,617,520.00; Pennsylvania, \$162,663,405.00; Illinois, \$119,933,945.00; Ohio, \$151,734,375.00; and Michigan, \$52,374,170.00. Add to this \$90,000,000.00, the cost of litigations, crimes, prisons, etc., chiefly caused by intemperance, and the total for a single year is the immense sum of

\$1,575,491,865.00. This amounts to an average of \$40.00 each for every man, woman, and child in the United States.

"The cost of flour and meal was . . .	\$530,000,000
" " cotton goods,	115,000,000
" " boots and shoes,	90,000,000
" " clothing,	70,000,000
" " woolen goods,	60,000,000
" " newspapers & printing,	40,000,000
Total,	\$905,000,000

Then liquor costs three times as much as flour and meal, nearly ten times as much as clothing, and \$670,000,000 more than all of the items mentioned in the above list together.

"There are 140,000 licensed, liquor saloons in the United States, each having (estimated) forty daily customers, making five million, six hundred thousand drinkers.

"The quantity of distilled, fermented, and brewed liquors drank was sufficient to fill a canal 4 FEET DEEP, 14 FEET WIDE, AND 80 MILES LONG; and if all the drinkers could be placed in procession, five abreast, they would make an army 130 miles long, and if those killed by the intemperate use of spirituous liquors were there also, we should see a suicide at every five miles, and 550 funerals per day; and if all the places where intoxicating liquors are sold were placed in rows, in direct lines, they would make a street 100 miles long.

"THERE WERE 400,000 MORE PERSONS engaged in the liquor business in the United States than in preaching the gospel and school-teaching; and from the effects of intoxicating drinks, 100,000 are annually sent to prisons, 150,000 to drunkards' graves, and 200,000 children are reduced to want. The total number of persons engaged in the business is 560,000, of which 56,663 are employed in making and selling annually 5,635,633 barrels of beer.

"It is estimated that the clergy of the United States costs annually \$12,000,000; the lawyers, criminals, prisons, &c., \$90,000,000; and intoxicating liquors, as before said, \$1,474,000,000.

"The State of Pennsylvania spent during the year 1870 for liquors of all kinds, \$152,663,145; and for schools and teaching, \$5,863,729. She had 78,650 persons engaged in the liquor business, 24,000 criminals—four-fifths of whom were made by strong drink,—and 16,370 school-teachers.

"The city of Philadelphia had 4,160 drinking-places, and spent for intoxicating drinks \$30,000,000 in one year. Chicago had 2,300 liquor saloons, and spent for intoxicating liquors \$15,000,000. Newark had 864 drinking saloons, and spent for strong drinks \$4,500,000.

"The city of New York had 7,000 licensed drinking saloons, which, if placed in rows in direct lines, would make a street like Broadway thirteen miles long. She spent for intoxi-

cating liquors \$60,000,000 during the year 1870, and there were employed in the business 36,000 persons. She had 450 churches and chapels, and there were engaged in preaching and teaching the public and private schools 3,000 persons, all of which to support cost \$4,500,100. The total sum invested in the liquor business of all kinds amounted to \$140,000,000; in the manufacturing business, \$60,000,000; and the banking business, \$80,000,000. The police department cost \$3,000,000; and in public amusements \$5,000,000 were spent. The meat bill was \$30,000,000; flour bill, \$28,000,100; and the daily consumption of beer was 20,000 kegs. There were 65,000 arrests for intoxication and disorderly conduct, and 80,100 persons were in institutions under care of the Commissioners of public charities."

"Having Eyes, See ye Not?"

BY D. M. CANRIGHT.

JESUS rebuked those of his time in the above language for their stupidity in not observing the things which were done before their eyes. He declared that they had eyes, but did not see, and ears, but did not hear. This is not only true in spiritual things, but of many persons it is also true in temporal things. Some persons will travel through a country and yet see little or nothing of it. True, the things pass before their eyes; but they do not observe them so as to remember anything concerning them. After they have passed them, they cannot describe them. They have learned nothing by seeing them. So a person may read a book through by course and still know but little about what he has read.

It is very unfortunate for a person to be thus constituted, or to form such habits. They will go through the world blind, as it were. God's open book of nature they never read. The richest treasures may lie all around them unobserved, hence, unobtained. The most valuable lesson in life is to learn how to learn; how to make everything we see, or hear, or have to do with, yield us some knowledge, some truth, some valuable lesson. All knowledge and wisdom are not inclosed in college walls nor bound up in books. These are good as mere *helps*; but the great field of knowledge lies outside of these, in nature, in daily life, in the common affairs of common men, in our own experience, in the living realities around us. Any person who is familiar with Mr. Beecher's writings will see that he has drawn the most of his thoughts from practical life, not from books. He says that he makes it a point to let nothing pass him without carefully observing it. Does he see a horse, he marks his color, his size, his gait. Does he ride with a ferry-man or a stage driver, he learns all about his work. Thus

he learns important facts, and gains much knowledge from even ignorant persons. So of Franklin. He was always inquiring the *why* and *wherefore* of everything he saw, and would not rest till he knew. In this way he made his great discoveries. Patrick Henry, while keeping a country store, would spend hours questioning idlers who sat in his shop. In this way he learned human nature and how to deal with it.

It does not follow, then, because a man has not the time or opportunity to obtain a school education that he should be ignorant or uninformed. Probably most of the readers of the REFORMER have to spend much of their time in physical labor on the farm, in the shop, in household duties, etc., and, hence, have but a limited time for reading books. Such should learn to observe and study the things around them. For instance, are you sick? Do not rest satisfied with the conclusion that disease is one of the hidden mysteries known only to the M. D.'s, and that sickness is a dispensation of Providence to which you must humbly submit. No, no; search for the cause of it. Think back a few days. What have you eaten? What have you been drinking? How have you exposed yourself? Have you overworked? or have you not exercised enough? Having learned the cause, mark it down, and avoid it in the future. This will be a much better way than to "go it blind," eating and drinking everything that tastes good, and then send for the doctor and swallow his powders every time you are unwell.

I once met a gentleman in Maine who furnishes a striking illustration of my text, "Having eyes, see ye not?" He was full of scrofula, had a severe cough, and was far gone with consumption. He said he had tried all kinds of medicine without effect, and feared he must die. I suggested that the large amount of pork he was eating was injuring him. Oh! no; he knew better than that. He had eaten it for fifty years and it had never hurt him. I told him that his excessive use of tobacco was one cause of his disease. Pshaw! he had used it over thirty years and he knew that he could not live without it. He argued the same for his tea, coffee, fine flour, hot biscuit, etc. There he was, almost dead; yet nothing hurt him! He was trying to be resigned to the mysterious providence of God!

One object of the REFORMER is to teach us to open our eyes and ears and see and hear for ourselves, to observe the causes and mark the effects of the phenomena around us; but it requires us to *think*, to *see*, to *notice* for ourselves. Anciently, the Lord upbraided his people thus: "Israel doth not know, my people doth not consider." So it may be said of many people now concerning the most familiar things around them—things which they see, handle, eat, and drink daily.

Is it True?

How often we hear it said by those who use tobacco and alcoholic drinks, tea and coffee, pork and lard, and other health-destroying agents, "It is nobody's business what I eat or what I drink; if I get sick, I will suffer the consequences, and that is my own lookout. Why all this meddling with other people's business?" But stop! think a moment. Are there no other sufferers but those who are the direct transgressors? Do not our friends and our neighbors share largely in our sufferings? Most certainly they do. There is a human tie, a social cord, a "Siamese link," which may not be ignored. We have a striking illustration of this principle in the death of the Siamese twins. One became intemperate and destroyed his own life, and likewise that of his brother. Who cannot see the fallacy of this popular assertion; or who is so impotent, intellectually, as not to discern the relation between the transgression on the part of the one, and the inevitable suffering on the part of the other, in the case above cited? Some will say this is an exceptional case. So it is; but it furnishes a good picture for those who are morally blind upon this point to gaze upon.

G. S. HONEYWELL.

Rumsellers.

HISTORY proves that Tullia, wife of Tarquinius, was the incarnation of iniquity. Her name has come down to us associated with deeds that are infamous beyond description. All nations and ages loathe the memory of her guilty career. Scarcely a woman has lived so thoroughly bedeviled and iniquitous since Mary Magdalene walked the streets of Jerusalem.

It is told of her that she was riding through the streets one day, when the dead body of her father, weltering in its gore, was lying across the way. Her charioteer reined up his horses, and was about to stop, when the unnatural daughter cried out at the top of her voice, "Drive on! drive on!" With the crack of the whip, the fiery steeds sprang forward, and dashed over the lifeless body, crushing it to pieces, and spirting the blood upon the daughter's dress. How shameful has been the name of Tullia for this dreadful deed! The blood curdles in our veins when we think of the cruel wretch. Mankind can scarcely find language to express their detestation of the worse than murderer.

Yet this deed is not more heartless and cruel than the acts of many a rumseller, running his traffic in spite of virtue, happiness, and tears. Dead men do not stop them; no, nor live men going down to ruin and shame. Point them to the bloated, staggering wreck of manhood,

still dear as life to some heart-broken wife or mother, and beseech them to stop their traffic that not merely mangles dead men, but kills live ones, and they cry out, in utter defiance of appeal and threat, "Drive on! drive on!" and away dashes the Juggernaut of rum through town and city, crushing hearts and hopes, life and limb, rich and poor, high and low. Every rumseller in the land is plying his trade in spite of entreaties and appeals more powerful than dead men's mangled forms. The crushed hopes and happiness of the living are really a louder call to cease their traffic than any fact or reason belonging to the dead.

If the rumsellers' business were only insult to the dead, even robbing the graves of loved ones, and dragging the mute tenants forth in fiendish derision, it could be borne. But the traffic lures and destroys the living. It enters blessed homes, and curses them. It attacks happy hearts, and crushes them. It degrades manhood, womanhood, everything. It puts vice in the place of virtue, poverty in the place of riches, misery in place of bliss. There is nothing fair, noble, just, or lovely in mankind that it does not blight and wither. It transforms kind fathers and husbands into demons. It converts sons into brutes, and makes daughters more remorseless than Tullia herself. It not only inebriates but murders six hundred thousand men and women of our land annually. And what a wail of lamentation and mourning ascends from the wretched families which these dead men represent! It is a long, loud appeal from one end of the land to the other for rumsellers to desist. But they sell on, bidding defiance to God and man, and cry, "DRIVE ON! DRIVE ON!" Pulpits interpose and plead; churches exhort and pray; legislators enact laws to prohibit the sale; authorities denounce it; prisons threaten; officials arrest and incarcerate; the courts condemn; governments punish. And still the rumsellers, defying all that is good and true, snap their fingers at public benefactors, and shout madly, "DRIVE ON! DRIVE ON!"—*National Temperance Advocate*.

Looking Back.

It will not do to be irresolute and wavering in any good purpose we may have in view. If a thing is good, if a principle of morals, or a principle in hygiene, is correct, let us hold fast to the same.

A health reformer, be he ever so thorough, may have an appetite for unhealthy articles of food. The devotee of tobacco, after he has been thoroughly convinced of the inutility of that article, after he has broken off from its use, may be almost overcome by the sight of a Havana cigar, or a paper of fine-cut tobacco.

Or the lover of alcoholic liquors may heave a sigh of regret at the smell of brandy, or the sight of a beer barrel, yet it would be folly for him to give way to this appetite, and again sit down in the saloon, or wallow in street filth.

So a health reformer should look at his appetite as an unsafe rule of action. Appetite is like fire—good as a servant, but bad as a master.

There is nothing so tempting to the appetite as those articles of food interdicted by the rules of hygiene—it is needless to name them—and even the most hygienic table may become a trap to him who would gluttonously swallow more than nature demands.

But to relapse from our good reforms back to Egypt again, and sigh for the greasy flesh-pots of that dark locality, will never do. Manfully manage your appetite as you would fire, or powder, however hard the battle may be.

JOS. CLARKE.

Hygiene and Superstition.

THE adoption of hygienic principles, especially from moral or conscientious motives, is regarded by some persons as evidence of superstition, and those adopting them sometimes become subjects of ridicule, or at least, of unkind remark. But a little reflection will suffice to satisfy the candid of the fallacy of the one and the injustice of the other.

In nearly every community are persons whose digestive organs are so impaired that they are in a measure compelled to observe the strictest regimen, as the simplest food taken into the stomach causes irritation and distress. No one thinks, under such circumstances, of attributing abstemiousness to superstition. Then why should those be accused of it who, having learned by the aid of scientific research and observation that such a condition is but the result of gross habits of living, prefer to reform their habits in time to save their health and avoid the sufferings of the dyspeptic, instead of waiting until, by the loss of health, they are driven to the necessity of doing so.

That such a course will secure this result is proved by the experience of thousands who are already, in a greater or less degree, enjoying the benefit of improved health and exemption from disease as the reward of their efforts to control their appetite and make it subservient to the design of the Author of life.

From this, it would appear that the superstition is really on the other side, and that this, armed with the clamors of perverted appetite, is what is preventing so many from receiving the light of health reform and the benefits and blessings which it so generously offers. On this account they cling to long-established habits and customs, ignorant of the occasion of their sufferings, and very likely to remain so, because

their prejudices and diseased imaginations will not allow them to reason correctly upon their own condition, or properly examine the laws of life and health.

S. B. WHITNEY.

Smoking Statistics.

WE copy the following statement from a fine work entitled, "Smoking and Drinking," by James Parton:—

"It is gravely asserted, in Messrs. Ripley and Dana's excellent and most trustworthy Cyclopaedia, that the consumption of cigars in Cuba—the mere consumption—amounts to ten cigars per day for every man, woman, and child, on the island. Besides this, Cuba exports two billions of cigars a year, which vary in price from twenty cents each (in gold) to two cents. In the manufacture of Manilla cheroots—a small item in the trade—the labor of seven thousand men and twelve hundred women is absorbed. Holland, where much of the tobacco used in smoky Germany is manufactured, employs, it is said, one million pale people in the business. In Bremen there are four thousand pallid or yellow cigar-makers. In the United States the weed exhausts four hundred thousand acres of excellent land, and employs forty thousand sickly and cadaverous cigar and tobacco-makers. In England, where there is a duty upon tobacco of seventy-five cents a pound, and upon cigars of nearly four dollars a pound, the government derives about six million pounds sterling every year from tobacco. The French government gets from its monopoly of the tobacco trade nearly two hundred million francs per annum, and Austria over eighty million francs. It is computed that the world is now producing one thousand million pounds of tobacco every year, at a total cost of five hundred millions of dollars.

Cuisine and Civilization.

EVEN the most imperious natural appetite comes in for its share of artistic culture. We must all eat, and if we cannot say with Feuerbach that a man is what he eats, we must allow that what he eats has a great deal to do with making him what he is. If he feeds upon blood, he is not likely to be a lamb, and if he lives upon milk and water, he is not likely to be a lion. What we should eat, and how we should prepare it for our eating, whether by the processes of nature or the art of cookery—this is not merely an alimentary, but an æsthetic question. The farm and the kitchen, the arts that are agricultural and those that are culinary, touch closely upon the arts that are called beautiful. The sunshine and the rain season and ripen the fruits of the year in the ovens of the earth, and without them, where is

the bloom upon the cheek, the light in the eye, or the music in the step and voice? The cook carries out the hint of nature, and matures over the fire the transformation of elements into food which the sunshine began.

We need to study this matter more thoroughly, and give the table its true æsthetic dignity. It is well that we have a magazine given to this subject directly, and that several periodicals are devoted to the laws of health which deal with it indirectly. The cook is a rising power in our civilization, and he ought to be. His mission it is, not to pamper dainty appetites or to stuff exacting stomachs, but to provide the food that is best for mind and body, and most adapted to secure the highest health and joy of nerve and muscle, thought, feeling, and will. A good cook is a loyal servant of God and nature, and when God and nature send meat, we ought not to allow the devil to send cooks. What is worse for body and soul than dyspepsia? and how much of it comes from bad cooking! Saleratus bread, greasy pastry, and the like American abominations of the table, have written themselves in dark lines upon the faces, and even upon the faith, of thousands, and half-poisoned whole generations of hopeful girls and boys. Away with all the miscalled food that lies like lead upon the stomach and like sin upon the soul! Let us have things to eat and drink that are nourishing, strengthening, and pleasant.—*Harper's*.

Too Much Joking.

SLANG is not wit. Neither is the misspelling of words humor. And we may go even further and say that the prevalent disposition to present everything, serious as well as trifling, in a ridiculous light, is also bad as a matter of morals. Yet there are many people whose sole effort in writing and in conversation appears to be in the direction of what they consider "smartness." That constant trifling with the sad realities of human life; with the serious work of human kind; with the events of the day and with the facts of history; with the character of the living and with the memory of the dead, is lowering the tone, not only of literature, but of morals. The world itself is not a huge joke, however some people may so affect to consider it.

A LADY once asked C. Simeon if teachers ought always to be talking about religion. "No, no!" answered the good man, rather precipitately, "let your speech be *seasoned* with salt, madam; not a whole mouthful."

IT is one of the first effects of prosperity to make a man a vortex instead of a fountain, so that, instead of throwing out, he learns only to draw in.

Harmony of the Scriptures on Eating and Drinking.

BY D. T. BOURDEAU.

WE should adopt only such interpretations of the Scriptures as will make them harmonize with their connection and with the general tenor of the Bible, and will not conflict with reason and science. For instance, when Christ says: "It is not that which goeth into the mouth that defileth a man," Matt. 15:11, he does not give men license to eat and drink what they please and as they please, but refutes a tradition of the Jews, by which they condemned as unclean those who did not wash their hands immediately before eating, whether they were soiled or not. Healthful food partaken of, regardless of this tradition, would not defile a man. To claim that Christ permitted men to eat and drink what they pleased would make him contradict those scriptures which enjoin temperance and command us to eat and drink to the glory of God—would justify the Chinese in eating rats, mice, and puppies, and would approve the crime of murder by the use of arsenic or any other deadly poison.

When Peter was told to slay and eat the beasts that he saw in vision, the Lord did not design to teach him and Christians that they should eat all the abominable creatures, "creeping things," toads, lizards, etc., that had been presented in vision, or that they were deprived of the right of discriminating between diseased meats and healthful meats, but that they should not call any man common or unclean, Acts 10:28, but should preach the gospel to the Gentiles as well as to the Jews. When Paul says, "Whatsoever is sold in the shambles, that eat," 1 Cor. 10:25, he does not oblige us, or even give us license, to eat of all the articles that are sold in the various meat markets in the world; but refers to eating things offered to idols. As "an idol is nothing" (verses 26-28; chap. 8:1), it was lawful, so far as idols were concerned, to eat of all sanitary articles that were sold at the shambles.

When Paul forbids judging Christians "in meat or in drink," Col. 2:16, or for eating and drinking, margin, he certainly does not encourage gluttony and the use of hurtful foods and drinks, but gives full liberty to eat and drink without reference to those typical laws respecting the partaking of certain foods and drinks on certain occasions; such as eating the passover with bitter herbs and unleavened bread, drinking bitter water when under trial for jealousy, etc. Ex. 12; Num. 5. It is with reference to such practices that it is written that advanced Christians ate "all things," irrespective of feast days, etc., while weak Christians ate "herbs." Rom. 14. Let it be remembered that those laws respecting eating

and drinking, etc., which were abolished, "were against us, and were contrary to us." But it were unreasonable to represent that it would be against us to heed those sanitary instructions that God gave his ancient people, and which are in strict harmony with reason and the laws of nature.

Natural Duration of Life.

THE greatest example of renovation in old age is a Frenchman, named De Longueville, who lived to the age of 110. He had been married to ten wives; his last wife he married when in his ninety-ninth year, and she bore him a son when he was in his hundred-and-first year.

More women than men become old; but men only attain to the utmost extent of longevity. The equilibrium and pliability of the female body seem, for a certain time, to give it more durability, and to render it less susceptible of injury from destructive influences. But male strength is, without doubt, necessary to arrive at a very great age. More women, therefore, become old; but fewer very old.

In the first half of man's age, an active, even a fatiguing, life is conducive to longevity; but in the last half, a life that is peaceful and uniform. No instance can be found of an idler having attained to a remarkably great age.

Rich and stimulating food, and an immoderate use of flesh, do not prolong life. Instances of the greatest age are to be found among men who from their youth lived principally on vegetables, and who perhaps never tasted flesh.

A certain degree of cultivation is physically necessary for man, and promotes duration of life. The wild savage does not live so long as a man in a state of civilization.

To live in the country, and in small towns, is favorable to longevity; to live in great towns is unfavorable. In great cities, from one in twenty-five to one in thirty die every year; in the country, from one in forty to one in fifty. Mortality among children is in particular much increased by living in great cities, so that one-half of those who are born die generally before the third year; whereas, in the country, the half are not carried off until the twentieth. The smallest degree of human mortality is one in sixty annually; and this proportion is found only here and there among country people.

Among some men a kind of renovation seems to be really possible. In several instances of great age it has been remarked that persons in their sixtieth or seventieth year, when others cease to live, acquired new teeth and new hair, and commenced as it were a new period of life, which continued twenty or thirty years longer: a kind of self-reproduction which is to be observed only among the more imperfect part of the creation.

The most remarkable instance of this kind, with which I am acquainted, is an old magistrate, named Bamberg, who lived at Rechingen in the Palatinate, and who died in 1791, in the 120th year of his age. In 1787, long after he had lost all his teeth, eight new ones grew up. At the end of six months they again dropped out, but their place was supplied by other new ones, both in the upper and lower jaw; and nature, unwearied, continued this labor four years, and even till within a month of his death. After he had employed his new teeth for some time with great convenience in chewing his food, they took their leave, and new ones immediately sprang up in some of the sockets. All these teeth he acquired and lost without any pain; and the whole number of them amounted at least to fifty.

By the observation already made, we are now enabled to come to a conclusion respecting the important question, What is the proper term or boundary of human life? One might believe that some degree of certainty could be acquired on this point; but it is incredible what difference in opinion respecting it prevails among philosophers. Some allow man a very long, and others a very short, duration of life. Some are of opinion that, to determine it, nothing is necessary but to examine to what extent it is carried among savages, because in that state of nature the utmost period of life must be discovered with the greatest precision. This, however, is false. It ought to be considered that this state of nature is likewise, for the most part, a state of misery, where the want of society and civilization obliges men to waste themselves, and to undergo fatigue superior to their strength; and where, in consequence of their situation, they are exposed to more destructive influences, and enjoy much fewer means of restoration. We must not take our examples from the classes of savages; for these, in their properties, participate with the inferior animals; but from that class where man, by culture and civilization, has really become a rational being; for he has then in a physical sense first attained to his destination and pre-eminence, and, by the help of reason, has procured those means of restoration from without, and that happiness of situation, which it is possible for him to acquire. It is then only that we can consider him as a man, and collect examples from his condition.

One might also believe that death by marasmus, that is, by old age, is the true boundary of human life. But this reasoning, in the present times, is attended with great deception; for as Lichtenberg says, men have found out the art to ingraft old age upon themselves before the time; and one may see very old people of thirty or forty, who have every symptom of extreme age, such as stiffness and aridity, weakness, gray hair, ossified cartilages, &c.,

which are observed very rarely but among persons who have attained to the age of eighty or ninety. This, however, is an artificial, relative old age; and such a standard cannot be employed in a calculation which has for its object the duration of the life of man in general.

Some, therefore, have invented the most singular hypotheses to answer this question. The ancient Egyptians, for example, believed that the heart increased two drachms annually in weight for fifty years, and decreased again fifty years in the same proportion. In the hundredth year, according to this supposition, no more heart remained, and, consequently, the hundredth year was the term or boundary of human life. To answer this question in a satisfactory manner, one must, in my opinion, make the following essential distinction:—

1. How long can man exist in general, considered as a race; and what is the absolute duration of his life? We know that each class of animals has a certain absolute duration of life, and the case must be the same with man.

2. How long can man live as an individual; and what is the relative duration of his life?

With regard to the first question, the research respecting the absolute duration of human life, there is nothing to prevent us from giving it the utmost extent to which, according to experience, it is possible for it to attain. It is here sufficient to know what man's nature is capable of; and a man who has attained to the farthest boundary of mortal existence may be considered as a pattern of human nature in its utmost perfection, and as an instance of what is possible for it under favorable circumstances. Now, experience incontestably tells us that a man still may attain to the age of 150 or 160 years; and what is of the greatest importance is, that the instance of Thomas Parr, whose body was opened in his 152d year, proves that, even at this age, the state of the internal organs may be so perfect and sound that one might certainly live some time longer; and that no doubt would have been the case with him, had not the manner in which he lived, by his not being accustomed to it, brought on a plethora which proved mortal. We may, therefore, with the greatest probability, assert that the organization and vital power of man are able to support a duration and activity of 200 years.

This assertion acquires some weight by our finding that it agrees with the proportion between the time of growth and the duration of life. One may lay it down as a rule that an animal lives eight times as long as it grows. Now man in a natural state, when the period of maturity is not hastened by art, requires full twenty-five years to attain his complete growth and conformation; and this proportion also will give him an absolute age of 200 years.

It needs not be objected that great age is the

unnatural state, or an exception from the rule; and that a shorter life is properly the natural condition. We shall see hereafter that almost all those kinds of death which take place before the hundredth year are brought on artificially,—that is, by disease or accident; and it is certain that the far greater part of men die an unnatural death, and that not above one in a thousand attains to the age of a hundred years.

But with regard to the relative duration of human life; that, indeed, is extremely variable, and as different as each individual. It is regulated according to the goodness or badness of the mass of which the person is formed; his manner of living; speedier or slower consumption; and a thousand internal and external circumstances which may have an influence on the continuance of his existence. We must not imagine that every man, at present, brings with him into the world a vital stock capable of lasting 150 or 200 years. It is unfortunately the fate of our generation that the sins of the father often communicate to the embryo a far shorter *stamen vite*.* Let us only reflect on the innumerable host of diseases and accidents which openly and secretly prey upon our lives, and we shall clearly see that it is now far more difficult than ever to attain to that term which human nature is really capable of reaching. That term, however, we must make our foundation; and we shall afterward examine how far it may be in our power to remove those obstacles which prevent us at present from arriving at it.

The following table, founded on experience, may serve as a proof of the relative duration of human life at present.

Of a hundred who are born,	
50 die before the 10th year,	
20 between 10 and 20	
10 between 20 and 30	
6 " 30 " 40	
5 " 40 " 50	
3 " 50 " 60	

Therefore, 6 only live to be above the age of 60.

Haller, who collected the greatest number of instances respecting the age of man, found the relative duration of life to be in the following proportion:—

Of men who lived from 100 to 110 years the instances have been	1000
110 to 120	60
120 " 130	29
130 " 140	15
140 " 150	6
169	1

—Hufeland.

* Thread of life.

The Joys of Health.

BY NELLIE F. HEALD.

SEE that little child! Her bright young face is flushed with the rose-tint of health. In her clear, sparkling eyes, love, laughter, and beauty smile. Her little form is erect and graceful; her step firm and elastic. Every motion betokens a heart brimful of childish joy and gladness. What is the secret spring of all this joyous activity and spontaneous delight? We answer, Health.

Let the little child be touched by the withering hand of disease; let sickness prey upon the little form, and how soon will the bright eye lose its luster, the rosy cheek become pale with pain and suffering. The lithe, active form will droop, and the bounding footstep become slow and faltering. No longer does her joyous laughter echo through the house. Health has flown, and with it the joy.

How much of the joy of maturer years springs from the same source—health! It renders toil and activity a pleasure, and relieves the burdens of life of half their weight. With how much greater satisfaction can we perform life's varied duties when in the possession of health and vigor than when worn with pain and weakness; and how much better fitted for the exercise of faith and love toward God. If all the organs of our bodies were kept in tune and in harmony with nature's laws, how much it would brighten the joys of existence. Truly health is one of Heaven's choicest blessings. And yet we are not apt to appreciate its value but from its loss. How "blessings brighten as they take their flight!" Did we possess perfect health, and perfectly obey the laws of our physical and moral being, we should be perfectly happy. Then the nearer we approach this state of obedience, the greater must be our joy. Though none may possess perfect health, yet a fair degree of this precious treasure is within the reach of most of us. And there are none who do not desire to be happy. This desire is implanted in every human heart. And did not the loving Author of our being make it possible for this ardent longing to be gratified? He has made it possible only on condition of obedience. "Obey and live" is the true motto for our physical as well as moral nature. And is it not as truly our duty to study and try to understand natural as well as moral law, since the two are so closely connected? And yet many seem to think it of no importance. They are content to remain in ignorance of the laws of health. They care not to understand the relation which their own wrong habits of living sustain to their mental and moral condition. Urge upon them the importance of reform in any of

their dietetic habits, and they at once assure you that they have no faith in it, and attach to the subject no importance. They are wedded to their old customs; and because they do not directly feel the bad effects of any injurious article of food or drink, they argue that it is good and possibly essential, to health, or perhaps they prefer the transient pleasures of self-indulgence to the reward of self-denial and the joys of health.

But there are others who would gladly become instructed in the laws of health, and exchange their wrong habits for those which are more in harmony with reason and true piety. For such there is great encouragement. They may yet learn to "obey and live," to preserve their bodies in health, their minds clear, and their spirits pure. For the miserable dyspeptic, whose wasting form and pallid cheek denote the presence of disease and suffering, whose irritable nerves and exhausted vitality render life almost a burden, for you there is hope. Your irritable nerves may be soothed into calmness and patience, your despondency exchanged for the brightness of hope; your languor and weariness for buoyancy and strength. The poor invalid may yet taste the joys of returning health. Only "obey and live." And for those to whom this world promises but little, to whom the precious boon of health with its attendant joys must ever be denied; for you there is hope and promise of joys untold in that bright land where "the inhabitant shall not say, I am sick." If true to yourselves and to God, you may rejoice in hope of a home in Heaven, where is perfect health and, consequently, perfect joy.

FEMALE DRUNKENNESS.—The late report of Commissioner Stern, of the Board of Charities and Corrections of New York City, reveals some most significant and astounding facts.

"The tale it tells of male drunkards being recommitted to prison from one hundred times down to six times, of whom one hundred and eighty-one offenders were recommitted ten times, is dreadful to contemplate. But this tale of horror is put entirely in the shade, it is lost sight of, if placed side by side with the statistics of female arrests. While five hundred and sixty male persons were committed for intoxication during the past three years, there were arrested nine thousand and six females—sixteen times as many. Of the former, one was rearrested one hundred times for the same offense; of the female drunkards, twenty-nine had to be rearrested one hundred times; and this fearful proportion is observed all through. Is not this sufficient evidence of a deplorable defect in the present law, and which we must by all means try to remedy?"

Lord Derby's Advice to Young Men.

THE following passages from an address delivered before the students of Liverpool college by Lord Derby are well worthy of being considered by American as well as English students:—

"First, let me congratulate the winners of the prizes. They will not often again enjoy a success, unless their lives are very different from those of most men, as to which they can feel so sure that it has been fairly earned, and which will come to them accompanied by so few drawbacks. The victories of mature life, in whatever sphere of action, are for the most part gained with effort, disputed while their novelty remains, and admitted only when, with their novelty, whatever enjoyment they could bring, has for the most part passed off. It is not so with those whose success we recognize to-day. They may well feel glad, and perhaps a little proud, of what they have done. But let them recollect as a caution, and let the losers also recollect by way of encouragement, that an early success, although it gives a lad a good start, gives him little else; that the race of life is a race which tests endurance more than speed; that some of the most hopeless failures in mature years have been of the dashing, brilliant, clever young fellows who seemed at school and college to carry everything before them; and that the slow, plodding lad who seems to have nothing in his favor except a dogged determination to go on, often comes out better than either he himself or any of his friends expected. There occur to me the cases of two men, one within my own personal recollection, the other belonging to the preceding generation, who rose in due course to fill some of the highest offices in the State, and filled them not unworthily; who were at college, as I have been informed, almost the habitual objects of good-natured ridicule among their acquaintances for what was considered to be their exceptional slowness of comprehension; and, on the other hand, I really should not like to inquire—for, though an interesting piece of social statistics, it would be a very painful one—how many high wranglers at Cambridge, and first-class men at Oxford, how many winners, in their day of prizes and scholarships have seen their boats go down when they have pushed out into the rough, open sea of the world, and are now painfully struggling for bare subsistence, perhaps at some wretched, literary hackwork, or possibly keeping sheep in Australia, and doing odd jobs for an employer who very likely can neither read nor write.

"Now, the moral I wish you to draw is this: do not any of you be disheartened because you

think yourselves slow or stupid, even though you may really at present appear to have good ground for the belief, and do not, on the other hand, any of you be confident of the future merely because you know or believe yourselves to have what is called cleverness. If I were to tell you that in my belief that particular quality of intellectual quickness and sharpness is by no means the first qualification for a successful career, many people would consider, in these days of competitive examinations, that I was willfully indulging in a paradox. But I believe it is the truth. Talent is the edge of the knife which makes it penetrate easily, but whether it penetrates deeply or not depends quite as much on the force applied to it as on the sharpness of the blade. What a man really takes a keen interest in, he is seldom too dull to understand and to do well; and, conversely, when a man does not care to put the best of his brains into a thing, no amount of mere cleverness will enable him to do it well if it is a thing of any real difficulty, or unless it is one which he has trained himself to do easily by much previous practice, in which latter case he is really reaping, in present ease, the fruit of past exertion; living, so to speak, upon the capital which he has accumulated by early industry. The most conspicuous instance of complete efficiency and success in active life recently witnessed is that which was obtained by the military organization of Germany; and I am told by those who ought to be the best judges that, both among Germans themselves and among other foreign critics, efficiency and success are ascribed, not so much to any extraordinary display of genius or originality of design on the part of some few individuals as to the generally diffused habit of minute and almost microscopic attention to every detail of duty, however apparently small, which has become a tradition in that service.

"I believe that everywhere the same result will follow from the same cause. But to acquire and keep up in every-day work that habit of concentrated attention on details, two things are necessary—training and energy. The training you can all give yourselves; the energy which is necessary to maintain it is in part, no doubt, a gift of nature. Men possess it, to begin with, in very different degrees; but it may be lost where it naturally exists, and it may be enormously increased where it originally was but feeble. And in that connection it is important to notice how much depends on what students and young men are apt to despise as below their notice—I mean a perfectly sound physical condition. Take two men, if they could be found, exactly alike in mental and bodily aptitudes, and let the one go on carelessly and idly, indulging his appetites, and generally leading a life of what is called pleasure, and let the other train himself

by early hours, by temperate habits, and by giving to muscles and brain each their fair share of employment, and at the end of two or three years they will be as wide apart in their capacity for exertion as if they had been born with wholly different constitutions.

"Without a normal, healthy condition there can, as a rule, be no good work, and though that qualification cannot absolutely be secured or preserved by any rules, a little common sense and care will go a long way both in securing and preserving it. On that point I would give you these hints: First, that it is not mental labor which hurts anybody unless the excess be very great, but rather fretting and fidgeting over the prospect of labor to be gone through; so that the man who can accustom himself to take things coolly, which is quite as much a matter of discipline as of nature, and who, by keeping well beforehand with what he has to do, avoids undue hurry and nervous excitement, has a great advantage over one who follows a different practice.

"Next, I would warn you that those students who think they have not time for bodily exercise will sooner or later have to find time for illness. Thirdly, where an opportunity of choice is given, morning work is generally better than night work; and, lastly—a matter which I should not stop to allude to but that I know the dangers of an over-driven existence in a crowded town—if a man cannot get through his day's labor, of whatever kind it may be, without artificial support, it should be a serious consideration for him whether that kind of labor is fit for him at all."

The Weakness of our Girls.

WE have in this city an army of dependent, unmarried women, who, if brought up individually, would, in reply to certain questions, answer as follows:—

"What can you do?"

"Oh, most anything you please."

"But tell me particularly."

"Why, I can do all sorts of work."

"Well, there's dentistry, teaching, type setting, watch cleaning, engraving, and—"

"Oh, I don't mean such things, but I can do any common work."

"Can you cook?"

"Well, not much; and then I don't like cooking."

"Can you do fine needle-work?"

"No, but then I can do plain sewing."

"Can you make men's shirts?"

"Oh, no, I can't do that; but then I can sew on pillow-cases and sheets, if you will show me just what you want me to do."

"Can you do chamber-work?"

"A little, but then I don't like going out to service."

"I don't see, then, that you can do anything but a little plain sewing, and for that you want a superintendent. There are at least five hundred occupations in this city which women could follow and earn an independent living thereby. You come seeking employment, and finally inform me that with superintendence you can do a little plain sewing, a thing which a young man can learn in three days."—*To-Day*.

A Towel for Each.

It is not uncommon, in country houses, for all the members of the family to use the same towel for wiping their hands and faces. I am often surprised to see how this practice prevails even among people of considerable cultivation; frequently the towel is made of three yards of good crash, sewed together at the ends, and hung over a roller. This seems very generous and nice when it is clean, but not so after it has hung there two or three days, used morning, noon, and night, by half-a-dozen persons.

We may be able to endure a great deal of our own dirt, when we are obliged to, but it is not a morbid delicacy that shrinks from using a towel soiled by other persons. Each human body gives forth its own peculiar excretions from every pore of the skin, waste matter, more or less filthy, so it is not merely the impurity derived from external sources that we wash and wipe away when we perform our ablutions. It is also this one's dyspepsia, that one's biliousness, the other one's tobacco; ugh!

Give me a clean towel, please! And please give every child its own towel and its own comb as soon as it is old enough to use them, and now I want to add—please, O fellow-citizen! give every human being a chance to bathe the whole body, privately, whenever one wishes to do so, in a comfortable bath-tub, and all the clean towels desired.—*American Agriculturist*.

Idleness.

MANY young people think that an idle life must be a pleasant one; but there are none who enjoy so little, and are such burdens to themselves, as those who have nothing to do. Those who are obliged to work hard all day, enjoy their short periods of rest and recreation so much that they are apt to think if their whole lives were spent in rest and recreation, it would be the most pleasant of all. But this is a sad mistake, as they would soon find out if they made a trial of the life they think so agreeable. One who is never busy can never enjoy rest; for rest implies a relief from previous labor; and if our whole time were spent

in amusing ourselves, we should find it more wearisome than the hardest day's work. Recreation is only valuable as it unbends us; the idle can know nothing of it. Many people leave off business and settle down to a life of enjoyment; but they generally find that they are not nearly so happy as they were before, and they are often glad to return to their old occupations to escape the miseries of indolence.—*Sel.*

Be Cheerful.

Look happy, if you do not feel so. Present a cheerful exterior, though your heart and mind be troubled. Never wear a face which, as Sidney Smith says, "is a breach of the peace." Dr. Johnson used to observe that the habit of looking at the best side of a thing was worth more to a man than a thousand pounds a year, and Samuel Smiles observes: "We possess the power, to a great extent, of so exercising the will as to direct the thoughts upon objects calculated to yield happiness and improvement, rather than their opposites. In this way, the habit of happy thought may be made to spring up like any other habit. And to bring up men or women with a genuine nature of this sort, a good temper and a happy frame of mind is, perhaps, of even more importance in many cases than to perfect them in much knowledge and many accomplishments."—*Sel.*

EATING WHEN SICK.—It is the custom among a certain class of people, when a member of the family falls sick, to begin at once to ask, "Now what can you eat?" Every one has heard of the old story of the man who always ate eighteen apple dumplings when he was sick. On one occasion when he was engaged upon the eighteenth, his little son said, "Pa, give me a piece." "No, no, my son," replied the father, "go away; pa is sick." When a young man has surfeited in season and out of season, until exhausted nature gives way, and a fever is coming on, the good mother is in trouble. She anxiously inquires, "Now, John, what can you eat? You must eat something! People can't live without food!" Then comes toast and tea, etc. The stomach is exhausted, and no more needs stimulation or food than a jaded horse needs the whip. What is needed is rest, complete rest. Nine-tenths of the acute diseases might be prevented by a few days' starvation when the first indications appear. I don't mean complete abstinence in every case, but perhaps a piece of coarse bread, with cold water for drink. If such a policy were generally adopted, what ruin would overtake the medical profession. How many physicians would lack patients.—*Bistoury*.

DIETETICS.

Sugar.

SHOULD hygienists use sugar? If not, why? These are questions we frequently receive, and now purpose to answer.

We do not say that hygienists should never use sugar, nor that a person who does so is not a hygienist. So far as we have been able to get at the truth by a somewhat careful investigation of the subject from hygienic, physiological, and chemical standpoints, we believe the following to be the truth in regard to sugar:—

1. It is not an *inorganic* substance like sand, pounded glass, salt, and similar substances, as claimed by some; but it is an *organic* substance, or one which is intermediate between inorganic and organized matter.

2. Although not to be depended upon as an article which is capable of supporting life when used exclusively any more than pure starch, yet we must grant to it some nutrient value, or some useful office in the vital economy, as well as starch, which is eventually converted into sugar by the digestive process. However, it must be acknowledged that sugar is a very poor kind of aliment.

3. Sugar cannot reasonably be considered to be essentially different from that element which gives to sweet fruits and juices their characteristic flavor. In fact, in raisins, dates, and nearly all dried sweet fruits, the saccharine element exists in its crystalline form, just as we find it in ordinary sugar. Consequently, if we entirely exclude sugar from our dietary, as wholly unfit for food, the reasons for so doing would require us to also discard dates, raisins, figs, and all other sweet fruits.

Some of the arguments which sustain these positions have been previously given, and there are many others quite as conclusive, but it is not our purpose to rehearse them here.

"There, now," says one, "that's just what I always thought about sugar. I was always very fond of it, and my children like it, and I always let them have all they want. Prof. Liebig says it is good for them, and that cakes and tarts are very valuable articles of food for children, and that it is cruel to deprive them of such articles. My children are rather sickly, all the time troubled with 'worms' and complaining of stomach-ache. I guess I don't give them sugar enough. Dr. Adams, a noted English

physiologist, says that sugar is converted into an acid in the stomach and helps dissolve the food (as sulphuric acid dissolves marble dust), and so aids digestion. I wondered why that piece of cake I ate the other day made me feel so wretched. It lay in my stomach all night, and I thought it never would digest. I think it must have had too little sugar in it. Sugar is a very essential article of diet, and then it is such a splendid thing to neutralize the acid of sour fruits, so they won't eat the coating off one's stomach. Ugh! how blackberries and lemons, and sour apples, do taste without sugar. I tried it once, just to test the thing, and it fairly took the skin off my throat. What foolish ideas some people do have about sugar, such a sweet, harmless, innocent thing."

Hold a moment, my friend, don't draw such hasty conclusions. We wish it distinctly understood that we do not *tolerate* (we never *advocate*) the use of sugar on any such basis as this. Every one of the popular reasons for using sugar urged in the preceding paragraph are radically absurd. Now hear a little on the other side of the question. People say, "You think sugar not such a very bad thing, why do you not recommend it in the Hygienic Cook Book? and why don't you eat it yourself?" Here are the reasons:—

1. Perhaps the most weighty reason of all is that when we use it in so concentrated a form as that in which we usually find it, excess is almost certain to be indulged in, and when used in excessive quantity, sugar becomes the cause of an infinite variety of unpleasant, painful, and frequently fatal maladies. Dyspepsia in its myriad forms, liver complaints, "biliousness," rheumatism, etc., etc., require no other exciting cause than the large use of sugar in any of its commercial forms.

2. Another objection to the use of sugar is the fact that as an aliment it is wholly unnecessary. By this we mean that all the wants of the system may be fully supplied without it. This is obvious when we consider the well-established fact that in the system the starchy portions of the food are converted into identically the same substance as is sugar, both being changed to glucose, or grape sugar, by the process of digestion. Starch constitutes about three-fourths of all the food we eat, many grains being almost wholly starch, as rice. Potatoes, also, contain little else. The only necessity for sugar is to render palatable food which would otherwise not be relished. It serves as a natural seasoning of food, just as do the various flavors of the different fruits. A person, then, who can relish food without the use of sugar has no possible need for its use.

3. There can be little doubt that the original design of the Creator with reference to the food

of man was that it should be taken by him without artificial preparation, just as other classes of the animal kingdom take their food. The degeneration of many of the vegetable productions intended for man's diet, together with the long-continued habit of cooking food, may have somewhat modified our capabilities, and created a necessity which did not originally exist; but even now, when we use only such food as man's structure indicates to be his natural diet, as fruits, nuts, and soft grains, we find that cooking can be very well dispensed with without damage to health. Viewing the matter in this light, it is exceedingly probable, to say the least, that the Creator put into the food designed for man just those elements which would the best nourish his system, and those in just the right proportions. Every genuine hygienist should keep in mind, as an ideal standard toward which he should aim to make constant, gradual approximation, the greatest degree of simplicity consistent with circumstances. In short, our fruits and grains contain just those elements necessary for our sustenance, plenty of oil, and the right proportion of sugar. The sour fruits can be rendered more palatable by using sweet fruits with them. It is wholly a mistaken notion that sugar neutralizes the acid of sour fruits. Chemically considered, sugar is itself an acid, and hence cannot neutralize another acid, as that is a property possessed only by alkalies.

4. The last objection we will offer against the use of sugar is one which, although it will doubtless receive the most practical consideration, is the least worthy of receiving it, since it involves no important principle; viz., the fact that the sugar of commerce is exceedingly liable to adulteration. Many of our most popular and reliable journals are now calling attention to this fact, which has several times been noticed in the REFORMER. Sulphuric acid, lead, nitric acid, and many other poisonous substances, are now largely employed in sophisticating sirups and sugars; and to such an alarming extent is the adulteration practiced that the editor of the *Chicago Tribune* finds evidence for the statement that "nearly fifty per cent of the material sold under the alluring names of golden drip, silver drip, etc., contains rank poison." It is then hardly prudent to use sugar obtained at the groceries, unless we are willing to subject our stomachs to the action of an agent which is said to have nearly destroyed the cork of a sirup jug while the latter filled with golden sirup was being conveyed to a lumberman's camp.

To sum up, our position on the sugar question is this: Get along without it if you can. If sweet fruits cannot be conveniently obtained, or if some sugar is considered indispensable, use it in moderation, never buying any but the very best.

J. H. K.

Salt.

"I CAN get along without sugar very well. Butter, and lard, and old cheese, I don't care anything for, and as for meat, I have not eaten a particle for several years; but when you come to salt, well that's one of the things I can't give up, and I am about coming to the conclusion that some constitutions require it, or that mine does, at least. I can even spare salt in bread, but potatoes and graham pudding do taste so flat without it that I would almost starve before I would eat them."

So said a person who is, in many respects, a staunch health reformer; and so a good many persons have said in substance. Now what shall we do with this salt question? Have we not been a little extreme on this subject, as well as on the sugar question? Let us examine it a little and see.

In the first place, what useful office does salt perform in the body? Can any one tell? Does it contribute to the nourishment of the system? Is it converted into tissue? We must answer, No, to both of these questions, and every respectable physiologist will sustain the statement. Is salt digested like proper articles of food? No; it is not digested itself, and hinders the digestion of the food. Does it assist any vital process? How can it do so when its chief property is that of preventing vital changes! Is it not acted upon by the system, and so changed that it can be of some benefit! No; it enters the mouth as salt, is salt in the stomach, salt in the blood, and salt in the excretions. The system sets to work to get it out as quickly as possible, just as soon as it is taken in; and so we find it in the perspiration which runs down into the eyes and makes them smart on a hot summer's day. We find it in the fluids of the eye, also, and thus hear people talk about the "briny tear."

Now what is all this evidence of? If salt is a useful agent, why does nature make such a fuss about getting rid of it? Does it not indicate pretty strongly that salt is an agent that is antagonistic to the interests of the body? and that there is a general action against it by the whole vital economy? It would certainly seem so, and yet we hear physiologists of repute expatiating upon the dietetic value of salt, and wondering what it does in the body of such great importance. One analyzes the flesh of an old salt-eater, and finding salt in it, which the system had been unable to get rid of before he died, he concludes that salt is one of the essential constituents of the body, and so must be a necessary article of food. As well might he conclude that people need to eat calomel because he finds mercury in the bones of a man who died of mercurial poisoning. But all agree that some use for salt

must be found, and so another sets to work at the stomach; and because he can make hydrochloric acid from the gastric juice of a man whose system is filled with salt, or chloride of sodium, he concludes that salt is necessary for the system to manufacture its hydrochloric acid from to dissolve the food! A half dozen others laugh at this idea, declaring that lactic acid dissolves the food, and that is made from sugar. An ingenious theorist comes to the rescue in the midst of all this muddlement, and declares that salt is a sort of a tinker that travels about the system and puts things to rights generally. This position was actually taken a few months since in our hearing by a learned professor in one of our first medical colleges.

The train of logic by which this astounding conclusion is reached is precisely like that adopted in the following instance: Many years ago a fossil was found in Europe which looked like a petrified baby. It excited much speculation and wonderment, and no one could tell where it came from. At last it was proposed that it was Noah's baby which fell out of the ark. Said the projector of this theory, "If it is not Noah's baby, what is it?" No one could tell, and so the imaginative speculator responded, "Then of course it must be Noah's baby!" and the "baby" was consequently carried to Rome, and there exhibited as Noah's baby until the great naturalist, Cuvier, examined it, and found that instead of a baby, it was a salamander! Since then, we have heard no more of Noah's baby, and upon taking a second thought consider it quite doubtful if such an individual was found in the ark. The fitness of the illustration is so obvious we need not point out its application.

We do n't find anything *useful* for salt to do then; does it do *anything*? In a strictly proper sense it is of course inert; but in a popular use of the term, it does do much *mischievous*. It vitiates the taste; it irritates the stomach; it impairs digestion; it poisons the blood; it clogs the liver; it produces a feverish condition of the whole system, producing thirst; it excites the passions; and, in fact, its work of mischief is universal in the vital domain. Every fluid is deteriorated, every delicate tissue inflamed and irritated, every function disturbed.

To be sure, all of these evil results are not always apparent to the superficial observer, and the system may become so accustomed to the use of salt that its deleterious effects will not appear to be produced, just as habitual sinning will sear the conscience and silence its warning voice; but the penalty of every physical law inevitably follows the transgression, sooner or later.

"This is all very fine in theory," says one, "but it do n't agree with facts. My *experience* teaches me that I cannot relinquish the use of salt without suffering in consequence. If salt

is so injurious, why do we suffer when we discontinue its use? and if it hinders or prevents digestion, why are we troubled with indigestion as the result of discarding it?" These questions and some others we will answer next month as this article is already too long.

J. H. K.

Hints to Cooks.

ONE of the secrets of hygienic cookery is the production of a good variety of tasty and palatable dishes which are free from contamination by hurtful condiments. In order to secure this, the cook must be on the alert, especially in the summer and autumn, to procure an abundance of such fruits as can be made available at seasons of the year when fresh fruits and vegetables are less easily obtained.

PIE PLANT.

Just now, pie plant is in its prime, the first two or three cuttings being more tender than that which is produced later in the season. This plant furnishes a very excellent acid which makes a good dressing for various dishes requiring sour sauce. A liberal supply should be immediately secured by canning, as directed in the new Cook Book. Too much sugar should not be used with pie plant, since its tartness is one of its most excellent properties, and we do not wish to entirely obscure it.

STRAWBERRIES.

This delicious fruit will also soon be here in abundance, and during its short stay should be thoroughly enjoyed. The free use of acid fruits in the spring is one of the best antidotes for what many people term "biliousness," which simply means the effects of improper diet. Strawberries are excellent without any sugar if eaten when fully ripe, but a little may be used if thought necessary. It is a little curious that we can eat them with a fine relish with no sort of dressing when we pick them from the vines and eat them from the hand, but just as soon as they are placed upon the table and served in sauce dishes, we think a considerable quantity of sugar indispensable to render them palatable. Perhaps Dr. Brown-Séguard would make our curious nervous mechanism somewhat responsible for this inconsistency. Using both milk and sugar with berries is a very poor plan. Use no dressing except a moderate amount of sugar.

One important point with strawberries is to pick them carefully, and keep them as clean as possible, so that they may require little washing, as they lose much of their natural flavor by washing. It is a good plan to spread clean straw about the hills to keep the berries out of the dirt.

K.

SEASONABLE HINTS!

House Cleaning.

PERHAPS our advice will be rather late for this year, but the season has been so backward that it may still be of service to some. The importance of the subject, from its intimate relation to health, demands careful attention. Be sure to give every part of the premises a thorough ventilation. Pull up and wash all the carpets that have been down during the winter, for they are completely saturated with accumulations of foul matter which are constantly being stirred up and mingled with the air you breathe by every step as you walk across the carpeted floor. After thoroughly cleansing the living rooms, don't forget the closets. People have even lost their lives by neglecting this precaution. If new paper is to be put on the wall, don't put it on over the old, but pull the old, soiled paper off and burn it. Only a few months ago a whole family were made dangerously sick, and several of its members died, as the result of ignorantly disregarding this important sanitary measure. The old paper, when moistened by the paste with which the new is attached to it, sends out poisonous gases into the room for its occupants to breathe.

Make thorough work of the cellar, for we have several times heard very painful accounts of the mischief worked by "death under the house." Remove every particle of decaying vegetable matter, if there should be any present, carry out all the rubbish, and whitewash the walls. Open the windows, also, and let the sunshine in. It is a most excellent disinfectant. Remove the banking, and thoroughly ventilate during all the warm months.

Clean out the well and cistern, also, and cleanse the out-houses before the cholera season arrives. But perhaps we are getting a little beyond the province of house cleaning. However, all these matters must be attended to in the spring, before warm weather fairly begins, or health will inevitably suffer. One more thing should not be neglected. It often happens that during the winter some animal, a rat, cat, possum, or other unfortunate beast, will select a secluded spot under the porch, or the house itself, as a place to die; and when the hot days of summer come, the dead carcass will begin to send out its putrid gases laden with death and disease. Be sure to remove anything of this sort that may exist.

Poisonous Wall Paper.

THE dangers of life, at the present time, seem to be increasing on every hand; and it seems to be the effort of a large portion of mankind to make human existence as perilous as possible. Poisoning is becoming quite fashionable,

and is practiced on an immense scale. Our food is poisoned by noxious and deadly drugs. Our water is poisoned by lead pipes and other artificial means. The free air of heaven no longer comes to us pure and untainted; we find it loaded with poisonous gases, the products of man's chemical operations. Even our clothing is poisoned. A few days ago we read of a case of poisoning resulting from wearing red flannel. But that to which we wish to call especial attention, just here, is the fact that much of the wall paper sold at the stores and commonly used is wholly unsafe. The same is also true of green window curtains. The following paragraph is from the *Galaxy* for May:—

"ARSENICAL POISONING.

"Two persons in Lima, Ohio, were a short time since fatally poisoned by arsenic in wall paper. They were preparing to paper a room in their house, and in tearing down the old paper, which was of a deep green color, a dust was created which, on being inhaled, poisoned them. They died within a short time of each other. Thus, notwithstanding the fact that many cases of death and of serious injury to health have been traced to arsenic-colored papers, the use of such hangings persists. The most dangerous of these papers, says the *Lancet*, are those covered with a thick, unvarnished, loosely-coherent layer of Scheele's green. When the walls of sleeping rooms are hung with paper of this kind, the attrition of the bedclothes easily removes portions of the poisonous coloring matter. The fine cupro-arsenical dust which thus becomes diffused through the air occasionally produces in children symptoms resembling those of a violent catarrh. Arsenic occurs not only in the bright green papers, but also occasionally in the white or cream-colored enamel papers so frequently used for drawing-rooms, and in drab papers tinted with native ochre."

Cholera and Yellow Fever.

VERY soon we shall hear again of the ravages of that much dreaded disease which yearly sends so many victims to their long home, Asiatic cholera. Yellow fever will also soon begin its work of destruction. Who will the victims be? They will be,

1. Those who by habits of dissipation have weakened their systems and prepared the way for disease.
2. Tobacco-users, pork-eaters, moderate drinkers and those who indulge in late suppers.
3. Those who drink, without filtration, water contaminated with the drainage from sewers, barn-yards, privies, and cemeteries.
4. Those who use green, unripe fruits, highly seasoned with condiments.
5. Those who do not keep their bodies clean by frequent bathing.
6. Those who breathe foul air in factories, private houses, lecture halls, or churches.

We feel very safe in prophesying that all who obey the laws of health strictly and uninterruptedly during the coming season will be exempt from all of the epidemics which usually prevail.

To Correspondents.

[OUR space is too limited to allow us to give, in answer to the many questions we receive, anything more than a very brief reply. In many cases this is also made necessary by the meager description of symptoms which we receive. This being the case, we can usually only mention the treatment indicated, when giving prescriptions, and must refer our correspondents to the various works recommended in our Book List, which give full and minute descriptions of the various methods of administering hygienic treatment. When this is not sufficient, application should be made for a home prescription.]

DISCHARGE FROM EAR.—W. C., Ind., presents the case of a little child which is suffering of discharge from the ear as the result of spotted fever.

Ans. The difficulty may be caries of the bones of the head. You should have the child examined by a competent physician. Little can be done by way of treatment but to attend to the general health of the child, carefully washing out the affected ear daily with tepid water. The ear syringe may be used if convenient.

DEFECTIVE CIRCULATION.—O. A. F., Maine, writes that her daughter, aged sixteen, has been seriously troubled for three years with gradually increasing weakness of the left arm. The flesh is not as warm as it should be, and no pulse can be felt at any time. During the past year the right arm has become as bad as the left one. General health pretty good. Some scrofulous tendency, and pain between the shoulders.

Ans. There is, evidently, obstructed circulation in the arms, which results in defective nutrition, and consequent weakness. The precise cause of the obstruction is somewhat obscure from your description. It may be some disease of the organic nerves which control the nutrition of the parts, or some other organic difficulty may exist; nothing but a very careful examination could determine.

Treatment. Attend well to the general health. Give plenty of nourishing, hygienic food, with abundance of out-of-door exercise. Occasional packs, dripping-sheet, baths, and daily dry-hand-rubs will be good constitutional treatment. As local treatment, we would recommend the alternate hot and cold arm-bath. Immerse the arms first in warm water, say 100° temperature, for two or three minutes; then quickly change them to a bath of cool water 40° or 50° lower temperature. After two or three minutes replace them in the warm bath. After alternating in this way several times, conclude by dip-

ping the arms in cool water, and then wipe dry, rubbing them well. This course of treatment may relieve the difficulty if carefully followed out in connection with careful diet and regular habits.

INFLAMED EYES, "CRICK IN THE BACK," AND PARALYSIS.—J. K. wishes information respecting the following difficulties:—

1. Had inflammation of the eyes last fall and cannot read much since without its returning. Lids stiff in the morning and evening.
2. What is the immediate cause, nature, and relief for what is frequently called, "crick in the back"?

3. My wife had paralysis in the right side of her face three years ago, and it is now somewhat shrunken as the result, although she has recovered the use of it. Can anything be done for her?

Ans. 1. Your liver is doubtless the cause of the difficulty in your eyes. Milk and sugar are rather objectionable for you to use, as they are quite liable to clog the liver. A pack once a week followed by a vigorous wet-sheet-rub would be beneficial to you.

2. The cause of "crick in the back" is irregular contraction of some of the hundreds of muscles which center there. Alternate hot and cold applications applied for fifteen or twenty minutes once a day for two or three days, and followed by vigorous rubbing will usually give relief.

3. The local application of electricity skillfully administered might restore your wife's cheek; but this cannot be successfully applied except in some good health institution where the necessary appliances are at hand. Attention to the general health may do something toward restoration.

BOSWELL'S ROOM HEATER.—H. M.: We have had no personal experience with this apparatus, and can express no opinion concerning it.

WEeping SINEW.—P. C., Ga.: The tumor of which you speak is probably caused by an enlargement of the bursa of some of the tendons of the fore-arm. The case demands surgical treatment. Apply to a skillful surgeon.

PHILOSOPHIC SPECULATION.—A. H., Mich., wishes to know if we can explain how the light of distant stars has reached us during the brief period of the world's existence when they are so far away that light traveling at its enormous speed would require 60,000 years or more to span the distance.

Ans. The REFORMER does not devote much space to scientific speculation; but we may perhaps remind our correspondent that there is no conclusive evidence in the Bible that any-

thing more than our own solar system was formed at the creation of the world. It is quite possible that the light of these distant stars was already shining upon the space our earth now occupies when it was first formed, as described in Genesis.

SALT.—Several correspondents wish information on this point, and we will refer them to an article on the subject in the present number.

MICROSCOPES.—A correspondent wishes to know where to obtain a good microscope. Send to McAllister, Optician, 49 Nassau St., N. Y., for a circular.

SULPHUR—ITCH.—C. R. O.: The use of sulphur may have had something to do with producing the symptoms which you describe. Itch is not very successfully treated with water. Water is a *curative* agent; itch requires a *killative* treatment, being caused by the burrowing of a little animal beneath the skin. Almost any kind of itch ointment may be used; but care must be exercised not to take cold. Treatment should be vigorous and expeditious, as less poison will thus be absorbed into the system.

FISH, BEEF, SWEET POTATOES, TWO MEALS.—D. W. W. makes the following inquiries: 1. Are fish of any kind a healthy diet? 2. Is beef really an unhealthy diet? 3. Are sweet potatoes healthy? 4. How shall a laboring man manage with reference to two meals a day when he works for those who eat three, at the usual hours?

Ans. 1. Fish are not the best food, not even so good as beef. 2. Beef is nutritious, but is far inferior to fruits, grains, and vegetables; and any one who wishes to eat only the *best* food will discard it. However, a person who is living with those who do not adopt the hygienic method of cooking will do much better to eat some meat than to indulge in the rich sauces, pies, and cakes, often set before him, or to depend entirely upon such a poor diet as fine bread and potatoes. 3. Sweet potatoes are considered a healthful article of food for most people. 4. If a person has become thoroughly accustomed to the two-meal system, he may take breakfast at 6 or 6½ o'clock in the morning, dinner at 12 M., and then suffer no inconvenience from the omission of the third meal. This plan is much better than to eat only breakfast and supper. Still, when breakfast is eaten at 6 A. M., and dinner at 12 M., a light supper at 5 P. M., is not nearly so bad a thing as many habits which people who think themselves quite rigid hygienists are addicted to. It is much preferable to overeating, or eating large quantities of milk and sugar, food seasoned with butter, and similar habits.

LITERARY NOTICES.

LAW OF FERMENTATION: By Rev. Wm. Patton, New York: National Temperance Society. 139 pp. Price, 60 cts.

This work gives every appearance of having been prepared with great care and laborious research. Its statements are very fairly and candidly made, and produce the most convincing evidence that the Bible recognizes two kinds of wine, one of which was ordinary fermented wine, and the other the sweet juice of the grape, unfermented. All of the passages of the Bible which mention wine or strong drink are critically examined with constant reference to the original Hebrew and Greek terms, so that the work is very exhaustive in its character, and is a very important addition to temperance literature.

THE PHYSIOLOGICAL ACTION OF ALCOHOL: By Henry Munroe, M. D., F. L. S. New York: National Temperance Society.

This is a most excellent pamphlet, and can hardly be too highly recommended. The author deals with the subject in an interesting, but purely scientific manner. We cannot better give an idea of the nature of the work than by quoting a few sentences.

"What is alcohol? or, specifically, is it food, poison, or medicine, or a luxury?" "Alcohol is a powerful narcotic poison." "A small quantity of pure alcohol injected into the veins of an animal would cause immediate death, showing alcohol to be a dangerous and deadly poison." The author closes his work with these pertinent and sensible words: "I cannot but believe that a **TEETOTAL CHRISTIANITY** is the *special* need of our age."

THE WOMAN'S TEMPERANCE MOVEMENT: Issued by the same publishers.

A very interesting history of the wonderful movement which has been in progress during the past few months, and even yet continues with greater or lesser activity in many places.

METHOMANIA: By Albert Day, M. D. Boston: James Campbell.

This is a very excellent little work, the author of which was for a number of years the superintendent of the Washington Home, Boston, an institution especially devoted to the care of drunkards. This position gave him the best of opportunities for observing the effects of alcohol in all their different phases; and he has done good service to humanity in embodying in this volume the results of his extensive experience.

THE ENTAILMENTS OF ALCOHOL: The annual address of the president of the Michigan State Board of Health.

This is a pamphlet containing thirty-two pages of most useful information on the subject of which it treats. It reflects much credit upon its able author, and also upon the Board of Health under whose auspices it is published.

SCIENTIFIC.

Cremation.

CREMATION, or disposal of the bodies of the dead by burning, is a subject which is exciting much interest, at the present time. Nearly all the scientific journals seem to be decidedly in favor of this ancient mode of disposing of the dead. The chief arguments adduced in its favor are,

1. By this means the organic matter of which the body is composed is very speedily converted into fixed, inorganic matter, and so rendered incapable of putrefaction. In other words, the process of decomposition which, when allowed to take its natural course, is extended through scores, and perhaps hundreds of years, is completed in a few hours.

2. As a valuable result of this rapid process, the living are protected from the calamitous effects which so often follow the use of water which has been contaminated by the drainage from cemeteries, and from inhaling the poisonous gases which always emanate from the burying places of the dead. It is well known that in large cities these two causes often become the exciting agents of fatal epidemics.

3. By the process of cremation the matter which is essential to vegetable life is speedily returned to the earth, to be again utilized.

This subject was revived by the will of an eccentric individual in England who directed that his body should be placed in a gas retort that it might contribute to the illumination of the world. Many experiments respecting the most convenient and expeditious means of performing the operation of cremation are being performed in England, but so great is the popular prejudice that it is exceedingly doubtful if its general adoption ever occurs, whatever may be the justice of its claims.

A Curious Animal.

The chameleon is one of those curious creatures whose very existence has come to be doubted by many people, so wonderful and various are the accounts and descriptions of the animal. One traveler gives it one color, another quite a different one, and a third declares that it takes any color which its fickle fancy may dictate. Its real existence is now well established, however; and its habits and peculiarities are being attentively studied by a number of scientific men.

M. Paul Bert has recently found that the changes of color which this animal has the power of effecting so rapidly, are produced by the passions and emotions of the little creature. In other words, they are wholly due to nervous influences working either in connection with, or independent of, the circulatory system.

One interesting peculiarity of the animal is the fact that its two eyes act wholly independent of each other, receiving entirely distinct impressions. When it wishes to catch an insect with its prodigiously long tongue, it watches it intently with one eye, while carefully approaching within range, as a pampas Indian slowly steals up to a herd of

wild cattle with his coiled lasso. It keeps its tongue rolled up in a little pouch in its mouth, meanwhile, until within three or four inches from its victim, when the latter suddenly disappears from sight, nobody knows exactly how. The tongue is thrown out in much the same way that little boys sometimes shoot pumpkin seeds by pinching them between the thumb and finger.

As an evidence of the entire independence of the eyes, it is asserted that if a sleeping chameleon be awakened by holding a light first to one eye and then before the other, the two sides of the body will assume different colors corresponding to the different impressions which the eyes receive.

Plants in Sleeping-Rooms.

THE question whether or not plants are unwholesome in a sleeping-room has called forth a curious diversity of opinion. It is agreed that by day they emit oxygen, and are therefore eminently healthful; but it is generally believed that by night they give out carbonic acid, and are consequently prejudicial to animal life. Recent experiments by Professor Kedzie, of Michigan Agricultural College, may perhaps be regarded as conclusive on the subject. The professor analyzed volumes of air taken about noon from different parts of the college greenhouse, containing 6,000 plants, after it had been closed for twelve hours, and found that the carbonic acid amounted on the average to 1.39 in 10,000 parts. He then did the same just before sunrise, and found the average to be 3.94, thus, he thinks, clearly demonstrating that the accumulation of noxious gas was greater in darkness than in daylight. At the same time, however, out-door air contains four parts of carbonic acid in 10,000. At the worst, therefore, the air in the greenhouse was actually better than "pure country air," and the emission of carbonic-acid gas was barely sufficient to counterbalance the production of oxygen during daylight. Professor Kedzie concludes that, these being the facts of the case where 6,000 plants are collected, a dozen or two in a bedroom cannot possibly be injurious.

A LIVE DISTILLERY.—A polyp of the Medusa species was recently placed in an aquarium in a public garden in Paris. The next day, all of the other animals in the same tank were found dead. An examination into the cause of this strange fatality revealed the fact that the newly arrived polyp had changed the water to vinegar, and thus poisoned his companions. This peculiar animal has the power of manufacturing alcohol within itself. The alcohol soon becomes converted into vinegar by fermentation, which is fatal to other denizens of the sea, no matter how refreshing it may be to this whisky-loving polyp. "The poisonous Medusa was at once removed to a tank by itself, where it will be permitted to carry on its cheap vinegar-manufacture as long as it pleases."

"At a recent Scientific Congress at Rome, two Neapolitan physicians exhibited a liquid preparation for stopping, instantaneously, the flow of blood from wounds of every description." It is considered by eminent medical men to be a very valuable discovery.

Items for the Month.

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

The address of the editor, Eld. James White, is Oakland, Cal. We regret that the REFORMER is obliged to go to press this month without the usual editorial.

We are informed that the leading members of the State Microscopic Society are perfecting arrangements for a grand microscopic exhibition in this city some time during the summer.

The Health Institute is in a flourishing condition, and offers with its increased facilities and moderate prices, great inducements for invalids to come and be cured of their maladies. Come before your vitality is so exhausted by disease that recovery is impossible. Remember that "health is wealth;" and that money expended in securing health is safely and economically invested.

We take pleasure in calling attention to an article in this number entitled, "Care of the Teeth." The author, Dr. Hawxhurst, purposes to contribute an article on this subject for each of the remaining numbers of the volume; and we hope our readers will carefully peruse them and profit by the valuable instruction they will contain. Health reformers have neglected this subject quite too much.

The New Cook Book.

THIS long-delayed work is now completed, and orders are promptly filled. The delay has been unfortunate and unpleasant while so many have been eagerly calling for it; but many causes have combined to make its earlier publication nearly, if not quite, impossible.

As many of our friends seem quite curious to know what principles are advocated in the new book, we will give something of a description of it.

It has been the constant aim to avoid extremes. By this we do not mean, however, that any position susceptible of being sustained by science and practical sense has been abandoned. While radicalism has been shunned, equal care has been exercised that no true principle should be sacrificed to depraved appetites and morbid tastes.

The first twenty pages consist of an introduction in which the subject of "Food and Diet" is carefully discussed. The truth is plainly told, and then the responsibility of action is left upon each individual. The general aim has been to

provide such a profusion of attractive, palatable, and hygienic dishes that there would be found no necessity of resorting to the "flesh-pots of Egypt," or the harmful condiments of modern cookery to obtain something "good" (?).

Judicious advice is given relative to the best method of effecting a change in diet, and many recipes not *strictly* hygienic are given for the benefit of such as are making such a change.

Scores of new recipes are given, and we hope those of our friends who wish to keep up with the times will procure this little work as soon as possible and give their families the benefit of a change of regimen, and a more liberal dietary.

The book contains ninety-six pages of solid, valuable matter, and yet is offered at the small sum of 25 cents. Send for a copy at once.

Proper Diet for Man.

THIS is a pamphlet of 48 pp. devoted to an investigation of the diet question as relating to vegetable and animal food. It is a concise summary of the principal arguments in favor of a purely vegetable diet. The whole subject is treated in a terse, common sense way, without circumlocution, and in as candid a manner as possible.

The most common objections against vegetarianism are also considered and answered.

The pamphlet has been prepared with special reference to the wants of those who are ignorant of the scientific arguments upon this subject, and is just the thing to circulate among the people to call their attention to the subject, and if possible persuade them to exchange their erroneous dietetic habits for better ones. Price only 15 cts. A liberal discount by the quantity.

POISONOUS ANILINE COLORS.—We have before published accounts of cases where poisonous aniline dyes used on stockings and other garments have produced dangerous effects. A Cleveland, O., correspondent of the *Scientific American* writes that journal:—"I recently ate about three inches of a stick of candy, of a red color, and was taken sick with a burning pain in the stomach and upper intestines. I grew worse, and in three days I was not able to walk without being faint and giddy, and had much pain all the time. A doctor prescribed for aniline poisoning."—*Western Rural*.

We love to make people think; it is only the thoughtful who are of any account in a world like this; it is the thoughtless, the heedless multitude, who heap want, and calamity, and disease, on themselves, and on too many of those with whom they are brought in frequent association.

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