

The Health Reformer.

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

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The Health Reformer.

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Health and Religion.

"God is love" is the unqualified statement of the beloved John. And in love God created man, and richly endowed him with physical and mental power. This was for the glory of the Creator, and the happiness of the creature man. God is the author of life, health, strength, and true happiness. Death, sickness, sorrow, physical and moral wretchedness, are the legitimate offspring of the transgression of moral and natural law instituted by the divine Author of all good.

"God is love." He is not the author of sickness, sorrow, and death. In a general sense, sickness is no more a necessity than sin. At a funeral a sensible minister once made the startling assertion that it was a disgrace to die. He did not mean that death was avoidable at a good old age; but that its existence, even in ripe age, was the result of the first great transgression on the part of the representatives of the dying race. And he might have added that premature death, in childhood, youth, or in the strength of middle life, was the result of continued transgression.

"God is love." He is not the author of our woes. And it is a stupid reflection upon the divine character to lay our sicknesses, pains, bereavements, tears, and sorrows, to the mysterious dealings of his providential hand. It may, however, be fashionable, on funeral occasions, for ministers, in their words of condolence with the bereaved, to charge the progress of disease and the ravages of death, in those who should live to bless society, to the wise dealings of the loving Disposer of events. They may gravely state that for very good and wise reasons, he has removed dear friends from us by death. Fashion and custom may dress and decorate corpses of the youth with muslin and flowers; taste and expense may adorn our cemeteries

with the sculpture of art and the glory of nature; yet we hear the voice of revelation and of reason declaring that death is the reward of sin, and is man's dreaded foe. Poets may sing:—

"Why do we mourn for dying friends?
Or shake at death's alarm?
'Tis but the voice that Jesus sends,
To call them to his arms.

"Why should we start, and fear to die?
What tim'rous worms we mortals are!
Death is the gate to endless joy,
And yet we dread to enter there."

And yet the great apostle, when speaking of the resurrection of the just to the joys of eternal life, says, "The last enemy that shall be destroyed is death." 1 Cor. 15: 26.

Sacred song is the echo of popular theology. And theologians, having stolen the glories of the resurrection of the just to life eternal, with which to clothe and beautify death, have led the sweet singers in Israel to express unscriptural and senseless sentiments. But what is to be deplored in the practical bearing of these popular errors is that, while they exalt death as a desirable condition, they have a strong tendency to lower the Bible estimate of the real value and importance of the life that now is. And this may lead to the neglecting of the body with many under the *dual*-nature system. The body may be regarded as only the prison-house of clay, in which the real Christian sojourns for awhile, as expressed by the poet:—

"The pains, the groans, the dying strife,
Fright our approaching souls away;
And we shrink back again to life,
Fond of our prison and our clay."

A Canadian preacher, a backwoods genius, recently set this view of matters before his hearers, in the fervor of his soul, in language by which the poet is outdone. He said:—

"A real Christian cannot die. You cannot kill a Christian. They once tried it on good old Stephen. They took up stones and stoned him. But did they kill him? No! They

only stove a hole in his mud cabin, and Stephen was out and off."

But the voice of revelation is still heard: "The wages of sin is death; but the gift of God is eternal life through Jesus Christ our Lord." Rom. 6:23. When is this gift bestowed upon the just of all ages? Let revelation answer:—

"Behold, I show you a mystery: We shall not all sleep, but we shall all be changed, in a moment, in the twinkling of an eye, at the last trump; for the trumpet shall sound, and the dead shall be raised incorruptible, and we shall be changed. For this corruptible must put on incorruption, and this mortal must put on immortality. So when this corruptible shall have put on incorruption, and this mortal shall have put on immortality, then shall be brought to pass the saying that is written, Death is swallowed up in victory. O death, where is thy sting? O grave, where is thy victory?" 1 Cor. 15:51-55.

True religion leads men to seek for a good hold on both worlds. This sentiment has full sanction of the apostle in these words: "Godliness is profitable unto all things, having the promise of the life that now is, and of that which is to come." 1 Tim. 4:8. The sanctification of the Bible is nothing short of the sanctification of the entire man. The religion of the Bible respects the body, as well as the mind and spirit. Paul, in his earnest labors and prayers for the church, uses these emphatic words: "And the very God of peace sanctify you wholly; and I pray God your whole spirit and soul and body be preserved blameless unto the coming of our Lord Jesus Christ." 1 Thess. 5:23.

We never could see the harmony of the divine word with the idea of the sanctification of the inner man, and the pollution of the outer man with tea, coffee, tobacco, swine's flesh, and the broth of abominable things, so that the two-fold, living machine at the same time is breathing forth hallalujahs to the Lamb from the inner man, while tobacco spittle or smoke is poured out from the mouth of the outer man. If this can be, why may not the inner man worship devoutly on Sunday, and the outer man, on the other six days of the week, play all the games of the sharper, and roll in intemperance and the gratifications of the lusts of the flesh?

We repeat it: True religion, the religion of

the Bible, respects the body, as well as the mind and spirit. It accepts of nothing short of the purity of all there is of man. "For ye are the temple of the living God; as God hath said, I will dwell in them, and walk in them; and I will be their God, and they shall be my people. Wherefore come out from among them, and be ye separate, saith the Lord, and touch not the unclean thing; and I will receive you, and will be a father unto you, and ye shall be my sons and daughters, saith the Lord Almighty." "Having therefore these promises, dearly beloved, let us cleanse ourselves from all filthiness of the flesh and spirit, perfecting holiness in the fear of God." 2 Cor. 6:16-18; 7:1.

Would we be members of the heavenly, royal family, and heirs to the inheritance of the saints in light, then we must cleanse ourselves from all filthiness of the flesh, as well as of the spirit. And the like sentiment is expressed by the same apostle, in a similar manner, to the Hebrews, where the value of the bath is introduced in connection with the virtues of prayer, faith, and the blood of sprinkling. "Let us draw near with a true heart in full assurance of faith, having our hearts sprinkled from an evil conscience, and our bodies washed with pure water." Heb. 10:22.

Paul here honors the body, which popular theology degrades to the prison-house of clay. "What!" he exclaims, "know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own? For ye are bought with a price; therefore glorify God in your body, and in your spirit, which are God's." 1 Cor. 6:19, 20.

Again, the apostle makes a most fearful appeal to Christians who dare defile their bodies. Hear him: "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you? If any man defile the temple of God, him shall God destroy; for the temple of God is holy, which temple ye are." 1 Cor. 3:16, 17.

"God is love." "In him we live, and move, and have our being." And the religion of the Bible, of the Old and the New Testaments, respects the body, the noblest work of God, and expresses the greatest solicitude for its purity, health, happiness, and longevity. True religion, which pertains to the sanctification of the whole man, spirit, and soul, and body, and has to do with the things of both earth and Heaven,

is personified in the Proverbs under the figure of Wisdom.

"Happy is the man that findeth wisdom, and the man that getteth understanding. For the merchandise of it is better than the merchandise of silver, and the gain thereof than fine gold. She is more precious than rubies; and all the things thou canst desire are not to be compared unto her. Length of days is in her right hand; and in her left hand riches and honor. Her ways are ways of pleasantness, and all her paths are peace." Prov. 3: 13-17.

And to this agree the words of the apostle Peter: "For he that will love life, and see good days, let him refrain his tongue from evil, and his lips that they speak no guile. Let him eschew evil, and do good. Let him seek peace, and ensue it." 1 Pet. 3: 10, 11. J. W.

Proper Food for Man.—No. 1.

WHAT shall we eat? is a question which at the present time seems to be asked with greater solicitude than almost any other which has any bearing upon physical comfort or enjoyment. Judging from the almost universal practice of people with reference to diet, we are led to believe that this question is usually answered, practically, at least, by saying, in popular parlance, "Anything that tastes good!" or, in other words, Anything that pleases a perverted taste and pampered appetite. The disastrous results of this unwise course are everywhere apparent in the numerous and direful maladies which arise from indigestion, torpid liver, etc., to which an immense army of dyspeptics, rheumatics, and hypochondriacs can testify.

But let us attempt to answer the inquiry in a more rational manner by an investigation, the object of which shall be to determine what *should* be eaten. We will not stop here to consider the propriety of eating *inorganic* substances, since it is generally admitted that man can subsist only upon such substances as have been derived, directly or indirectly, from the vegetable kingdom. The question then resolves itself into this form: Which is the better food for man, *animal* or *vegetable* food? In treating this subject, we shall consider it from three principal stand-points: viz.,

1. Anatomy.
2. Physiology.
3. Experience.

ANATOMICAL EVIDENCES.

The first question we will consider, then, shall be, Does anatomy indicate that vegetable food is the most proper diet for man, or does it indicate the reverse of this; viz., that such is the case with animal food? Now as all will be ready to admit that the *natural* diet of man must be the *proper* diet, since he must have been created with appetites and wants in perfect harmony with his nature, all we have to do in answer to this question is to determine by anatomy, if possible, man's dietetic character. The only way in which anatomy can throw any light upon the subject is this: It acquaints us with the structure of the various classes of animals, herbivorous, frugivorous, carnivorous, and omnivorous. In so doing it reveals the fact that as the character of the food of these several classes differs in being herbs, fruits, flesh, or a mixture of all these, the structure of their alimentary organs also differs correspondingly. Thus, the lion, tiger, cat, panther, etc., all subsist upon flesh. An examination of their organs of alimentation, the teeth, jaws, and alimentary canal, shows a remarkable similarity. The same is found to be true in the case of all known flesh-eating animals. Hence, all animals of this character are called carnivorous. In this way the principle is established that all animals having alimentary organs of the same kind as those mentioned, are carnivorous. In the same way the principle is established that all animals having alimentary organs like those of the ox, cow, sheep, horse, etc., are herbivorous. And so with each of the classes mentioned.

All of these principles have been developed by studying the teeth and other alimentary organs of these animals after their dietetic habits were known by observation. The method of reasoning followed has been purely inductive. With animals in a state of nature, in which condition their appetites are acknowledged to be unperverted, this method is admitted to be entirely sound and reliable; but we cannot so determine the dietetic nature of man because we do not find him in that same normal and unperverted condition. In this case, then, we must pursue a different course.

As an illustration of the principles upon which this method of reasoning is based, we will suppose that we have found the bones of some animal which has become extinct, so that its natural history is unknown. Upon examin-

ation of its teeth, and other alimentary organs as far as practicable, we find a striking resemblance to the corresponding organs of the lion, tiger, cat, and other carnivorous animals. Since these animals subsist upon flesh food, we at once very properly conclude that such was also the natural food of the animal in question. Had the alimentary organs been like those of a sheep, an ox, a horse, or a deer, we should have been obliged to class it as herbivorous. A similar course would have been pursued in relation to either of the other classes had there been a resemblance requiring a different conclusion. The study of animals in this manner is called "comparative anatomy."

To ascertain, then, in accordance with the above principles, to which of the several classes the human animal belongs, and thus determine his dietetic character, we must carefully compare the structure of his alimentary organs with that of the corresponding organs of each of the classes of animals referred to. In this examination we must be constantly on our guard lest we allow ourselves to be influenced in our verdict by prejudice in favor of the diet which we see in such common use at the present time. As we have seen, however, this must be made no criterion whatever; for man, unlike animals possessed of less reasoning capacity, but perhaps, at the present at least, of more fully developed and reliable instinctive impulses, has departed widely, as we shall show hereafter, from that state of natural simplicity and normal condition in this particular in which the Creator placed him. Whatever we learn, then, from anatomy, of the natural food of man, must be determined by just such a comparison of his organs of alimentation with those of other animals as would be resorted to in order to settle the same question in regard to an animal whose natural history was entirely unknown, nothing being discovered but the fossil remains.

If we can find, then, a class of animals in which the organs of alimentation are like those of the human species, we shall be obliged to place man in that class, dietetically, and shall then have solved the whole problem; but if we find in man a great likeness to one class in certain particulars and as great differences in others, while the same is true of some other class also, we must not hastily conclude that he partakes of the nature of both. We must consider that, since he is like neither one, we have not

yet found the parallel for which we were looking, and so must continue the search until such a one is found. This principle is important, and its truth will become more apparent as we advance in this investigation. Let us, then, begin our comparative examination with the organs of mastication, the first of which are the

TEETH.

The teeth of man are thirty-two in number, sixteen upon each jaw, each set consisting of four incisors or front teeth, two cuspids, sometimes erroneously called canine teeth, four bicuspids or small cheek teeth, and six molars or large cheek teeth. These teeth, unlike those of any other known animal, are arranged in the jaw in close juxtaposition. Another fact worthy of notice is that the teeth of man are all of the same height, or at least so nearly so that an argument based upon the difference could have little weight. The surface of the incisors is such as to make them well adapted for the purpose of cutting the food, while the molars appear to be specially adapted for the purpose of triturating or grinding substances placed between them. Now let us briefly compare these organs of mastication with those of other animals.

In herbivorous or ruminating animals we find the incisors much longer and stronger than in man. The molars are also better adapted for grinding than those of man. In fact, the whole structure of the teeth is different. Instead of being completely encased in enamel, as is the case in man, they are made up of alternate layers of bone and enamel arranged vertically. As the soft bone wears away much faster than the enamel, the surfaces of the teeth constantly present a rough, uneven surface. There seems to be, however, considerable resemblance in the incisors of each. The teeth of gnawing animals, like the rat, beaver, etc., also differ from those of man to such an extent as to leave no possibility of establishing any dietetic relation between them.

Many, however, profess to find a remarkable resemblance between human teeth and those of the carnivora. Let us consider this matter with some attention. The incisors of flesh-eating animals are usually very sharp, round, and pointed, or acuminated. In man the opposite is the case. Then, when we look at the back or molar teeth, we again find a vast difference. In

the carnivora they present a saw-like surface, and the two jaws shut together like shears. But, says one, there is certainly a great likeness in the eye or corner teeth, usually called canine teeth from their supposed resemblance to the cuspids of the dog. Upon examination, however, we find even still less resemblance here than in the incisors and molars. In man the eye-teeth are a little more pointed than the incisors, it is true; but this is merely the result of a gradual transition from the chisel-like incisors in front, to the rough, jagged molars of the back portion of the mouth.

Again, in man the cuspids or eye-teeth are seldom longer than the other teeth, and when there is any difference it is not sufficient to be in any degree appreciable. On the other hand, the carnivora have these teeth very long and powerful, often protruding from the mouth, as well as being very sharp and pointed. Any one who doubts the truth of this statement can easily satisfy himself by looking into the mouth of a cat or dog. Upon doing so he would find not the slightest resemblance to his own. It is, indeed, surprising that any scientific man who cared anything for his reputation as an accurate observer should claim to find such a resemblance here.

But suppose we grant, for argument's sake, what we do not admit by any means, that the similarity is sufficient to establish man's carnivorous character, then in what a predicament do we find ourselves. Upon a little investigation, we observe that many animals which are universally acknowledged to be herbivorous, observation of their habits for centuries having fully established the fact, not only have teeth of this kind also, but have them developed to an extent incomparably greater than they are in the human species. Let the reader who is sufficiently interested in this matter to wish to investigate it, take the pains to examine the mouth of a horse. If he has never before thought of the matter, he will be surprised to see the wonderful similarity between the bridle teeth of the horse and the cuspids of the dog. He will find in the horse two long teeth in the upper jaw, occupying the same position in the mouth and presenting much the same appearance as the canine teeth of carnivorous animals. The stag also has canine teeth, and the camel is furnished with four such teeth in each jaw, presenting very much the same appearance as

the teeth of predaceous animals. Judging, then, by the canine teeth alone, we should be obliged to consider the camel even more of a carnivorous animal than the dog.

Then we are brought to the inevitable conclusion that if the so-called canine teeth of man prove him to be a flesh-eating animal, it must also prove the same of the horse, camel, stag, etc., and not only so, but the evidence in case of the latter animals is much more ample and conclusive. Being brought, then, by fair and logical reasoning, to a conclusion at once so absurd as well as fallacious, we cannot do otherwise than decide that the cuspids in man and herbivorous animals are provided for some other purpose than that of tearing meat, and consequently that they were in no way indicative of a carnivorous character.

Again, the canine teeth of the carnivora are for the express purpose of seizing and holding their prey, and tearing the flesh from the bones. These teeth in man are evidently utterly worthless for this purpose, and consequently they must have some other for which they are adapted.

Here, we see this favorite and much-vaunted argument for man's carnivorous character fall to the ground when subjected to the test of careful criticism. It, in fact, destroys itself; for it proves altogether too much if it proves anything at all. It is indeed astonishing that so whimsical an argument should ever have been seriously urged by rational men.

J. H. KELLOGG, M. D.

Hard Water.

A CORRESPONDENT sends us the following paragraph, requesting our opinion of it:—

“Hard water has sometimes been thought unhealthy, and people have taken great pains to build cisterns in their houses, where rain water, purified, might be had for the table. But nature rarely makes mistakes, and spring water is always most uniformly hard. It is found, on extensive and careful inquiry, that hard water is more healthy than soft. The body needs some of the salts held in solution in hard water, and suffers if they are not supplied in some way. In England, the counties where hard water abounds are more healthy than those where soft water is used. The same fact appears in cities, where the mortality is least in the sections supplied with hard water. Contrary to the general impression, soft water acts on lead pipes more powerfully than hard, and

induces danger. Those who have built rain-water cisterns, thinking them more healthy than wells, will need to study the wiser methods of nature."

The arguments adduced in the above paragraph have a certain appearance of soundness, but their logic is only in appearance, notwithstanding the frequency with which they are urged. In considering these objections, we may briefly state them as follows:—

1. Nature provides hard water, and hence it must be more natural to employ it than to use soft water artificially purified.

2. The body needs some of the salts held in solution by hard water, and is consequently deprived of them when soft water is used.

3. People who use hard water are more healthy than those who employ soft.

4. Hard water is less liable to become poisoned by passing through lead pipe.

The first objection disappears when we consider the fact that with man drinking is a practice which is largely the result of other unnatural habits and forced conditions. Comparative anatomy clearly proves that man is naturally frugivorous in dietetic character, his natural diet being mostly fruits, with a few of the most easily masticated grains. This being the case, it is evident that so far as the provisions or intentions of nature are concerned, the evident design was that man should obtain all the watery elements he requires from the juices of succulent fruits. That this may be done without inconvenience or failure of perfect nutrition, has been again and again demonstrated by actual experiment. Indeed, hygienists who have discarded from their dietary salt, pepper, spice, and all other irritating substances of like nature, often find that they have no necessity whatever for drinking, and that weeks and months pass without the thought of drinking.

In regard to the second objection, we may say that there is no evidence that water was ever intended as a medium of conveying to the body those elements of a mineral character which are thought to be necessary to the proper maintenance of the body. And, furthermore, there is no satisfactory evidence that the system can ever appropriate as nourishment any kind of mineral matter, either in solution or any other form; but there are many facts which indicate very conclusively that the human system can only assimilate such substances as have been organized by the action of vegeta-

ble life and growth. On this point, an eminent surgeon, lecturing before his class in a celebrated western medical college, remarked, The administration of mineral salts in the form of solution will occasion an increase of their quantity in the excretions of the body, but will not remedy any deficiency of this kind of material which may be supposed to exist in any portion of the system.

Again, the mineral matter found in hard water is of a character which would render it of little value to the system were it capable of assimilation—judging from analysis of the bones—since the principal constituent of bony tissue is phosphate of lime, while the chief ingredient of hard water is carbonate of lime, a substance which is found in the bones only in small quantity, and which may be by no means essential.

Nothing could be more uncandid and deceptive than the manner in which the statistics have been collected which seem to show that hard water is more conducive to health than soft water. The varying conditions of the inhabitants of the districts compared, as relates to other circumstances which affect health, have been entirely ignored. Thus, the claim for the superior character of hard water is made when it is found that the inhabitants of elevated mountainous districts, where the advantages of a pure and invigorating atmosphere, together with constant and vigorous exercise, are ever present, are more healthy, notwithstanding the use of hard water, than those who use soft water, living in low, malarious districts, or situations otherwise unfavorable to health. Or, again, a similar comparison is made between those who use hard spring water, free from organic impurities—as decaying vegetable and animal matter—and those who are compelled to use soft water which is filled with the many poisonous substances and compounds resulting from the decomposition of organic substances. Thus, it is found that the inhabitants of London, who use the imperfectly filtered water of the Thames River, into which are poured all the filth and offal of that great city, are much less healthful than the sturdy highlanders of Scotland who use hard water as it bubbles cool and pure from the springs of their native mountains.

The fourth objection is hardly worthy of notice, though not unfrequently urged. It is true that hard water, in passing through lead pipes, after a time deposits a coating of lime

upon the interior, thus protecting the water from contamination by the lead; but this advantage is by no means sufficient to render it advisable to adopt the use of hard water, since poisoning from lead pipes may be still more effectually prevented by a lining of glass, as is now quite extensively practiced.

The evils resulting from the use of hard water are numerous and many of them exceedingly painful. Some of the most common are torpid liver, biliary, renal, and urinary calculi.

The best advice we can give those who cannot obtain from wells water which is nearly soft, is that they should by all means resort to the use of rain water, cleansing it from impurities by means of a Kedzie filter (which may be obtained at this Office), or a home-made one which may be easily constructed.

The idea that the lime, magnesia, iron, and other minerals found in water are beneficial to the human system is as absurd as that the carbonic acid, ammonia, sulphureted hydrogen, and other noxious gases found in the atmosphere, are necessary for the maintenance of animal life. Pure air and pure water are nature's most potent remedies.

J. H. K.

Cheese and Rennet.

SEVERAL lady correspondents of the REFORMER seem to consider the remarks made in a recent number on the subject of "Cheese" as hardly compatible with the results of their personal experience. Several scraps of rennet and dried curd from the stomach of the calf have been received, being accompanied with detailed accounts of the methods of manipulation with milk in order to produce cheese.

With all due respect to the opinions and experience of all, I am still unable to find any reason for withdrawing from any of the statements made in the article referred to. The essential point which appears to be questioned is the statement that the curding of milk by the rennet is not due to the action of gastric juice remaining in the mucous membrane of the stomach of the calf or hog. This idea, although a quite popular one among the people, was discarded by scientists many years ago, and no respectable writer upon chemistry at the present time attempts to explain the action of rennet in this manner. The only theory now advanced is the one I gave; viz., that the rennet acts, as will all decomposing animal membranes,

by inducing fermentation, and thus producing lactic acid. The objections to the old view are such as to render it entirely untenable, and even place it in the light of an absurdity. Much might be said against the old theory and in favor of the new; but the discussion would probably be of little interest to most of the readers of the REFORMER, and so I will simply refer those who wish to investigate the subject further to the works of Liebig, Youmans, Miller, and Bloxam, where they will find it fully discussed. What I wished to show, and still conceive to be true, was that cheese-making can in no sense be called a natural or physiological process. It is entirely artificial, and involves destructive changes.

Under the heading "Cheese from Tallow" an exchange gives the following paragraphs, from which we may well entertain fears that the old-fashioned tallow candle will soon become an expensive luxury:—

"Since the genius got a patent for making butter from tallow, it seems attention has been turned to manufacturing grease into cheese. *Iron*, an English journal, says that a Surrey gentleman has patented a process for making 'cheese of rich quality' from skim milk and tallow. The two are beaten into an emulsion, then treated with rennet in the usual way, and the outcome is fine Cheshire. The plan is not new. This is the first time it has been made 'patent' to the public.

"To our simple mind there seems some anomaly in granting this gentleman a patent, and denying one to the genius who some years ago made a machine for casting imitation coffee berries from chicory, though it did not prevent the process being adopted. For our part we prefer the genuine article under any circumstances; but we do not for an instant assert that tallow-cheese is not worthy to be placed alongside Battersea-butter, kiln-dried bacon, lie tea, starch sugar, and the thousand and one factitious articles which now-a-days constitute an Englishman's *cuisine*.

"It is well known that the finer kinds of foreign tallow never see a wick, and that a goodly proportion of it is burnt in children's stomachs under the omnigenous term of 'dripping;' still the question remains whether the petty purveyor of 'vulgar fractions' of cheese, under the name of 'arf-quart'ns,' will be compelled to label the new compound as a 'mixture,' or, under cover of Her Majesty's Letters Patent, be able, like quacks, to baffle the law and defy the analyst."

J. H. K.

It is more difficult, and calls for higher energies of soul, to live a martyr than to die.

MRS. WHITE'S DEPARTMENT.

TRUE GREATNESS.

SAY, where doth greatness dwell? In courts
 On thrones of glory seated,
 'Mid glittering ranks of bright cohorts,
 By pomp and grandeur greeted?
 A crown, indeed, may make a king,
 But crowns true greatness cannot bring.

Or shall we find on battle-field,
 By victory attended,
 The truly great, unless the shield
 The cause of right defended?
 For oft hath might the battle gained,
 While nations wept th' escutcheon stained.

Shall hoarded riches greatness grant
 Where moral worth is needed,
 What time the sons of woe and want
 In vain their sorrows pleaded?
 True greatness surely must be more
 Than misers seek and fools adore.

But he who feels another's woe,
 And strives to soothe his sorrow,
 Whose sympathies spontaneous flow
 To brighten his to-morrow,
 Shall be esteemed both good and great,
 And Heaven shall bless his last estate.

Good service makes the meanest great,
 Zeal purest shines, and brightest;
 Devotion smiles at frowning fate,
 Love's labor is the lightest;
 Who lives to purpose lives indeed,
 And good works best adorn his creed.

Then say not wealth, or rank, or power,
 Or crowns, confer true glory;
 'Tis goodness that survives the hour,
 And reads the best in story;
 And though obscure the good man's name,
 'Tis glorious still, though lost to fame.

—*American Odd Fellow.*

That Spare Bed.

WHILE traveling in the Eastern States we have experienced the results of sleeping in the spare bed, so that I have a terror of sleeping in rooms that have not been ventilated for weeks, and in beds that have not been used, but have been left until they have accumulated dampness and a moldy odor. We should visit many more families in our travels, if we were not fearful of being obliged to sleep in that spare bed.

I cannot see why men and women who are intelligent upon other subjects do not understand the necessity of thoroughly ventilating their houses. It is at the risk of health and life itself to venture a visit among friends whose society we enjoy. We are often obliged

to make careful inquiry in reference to the condition of their beds, and are frequently assured that all is right. But soon after retiring we are convinced that we are in a damp bed, taking cold.

At times, when we desire above all others to be in the best health, with clearness of thought and healthful vigor, prepared for public labors, we are suffering with aching head for want of rest, and from the effects of cold by sleeping in that spare bed. Although unfitted to address the people, we cannot be excused. We must nerve ourselves for the task, and, by will power, rise above languor and depression, and do the best we can. The extra exertion we are obliged to make on a single occasion tells more upon our strength than to labor weeks free from the difficulties brought upon us by sleeping in that spare bed.

Rooms that are not freely ventilated daily, and bedding that has not been thoroughly dried and aired, are not fit for use. We feel confident that disease and great suffering are brought on by sleeping in rooms with closed and curtained windows, not admitting the pure air and the rays of the sun.

Some seem to think that rooms that have not been used, and daily ventilated, need only to have the windows raised a short time before the sleeping hour. The room may not have had a thorough airing for months, and has not had the advantages of a fire for weeks, if at all. It is dangerous to health and life to sleep in these rooms until the outside air shall have circulated freely through them for several hours, and the bedding shall have been dried by the fire. Unless this precaution is taken, the rooms and bedding will be damp. Every room in the house should be thoroughly ventilated every day, and in damp weather should be warmed by fires.

I observe in California that many, during the rainy season, are suffering with colds, catarrh, sore throat, lung difficulties, neuralgia, and rheumatism. I can understand the reason of these maladies. The main parts of most of the houses are destitute of fire-places and stoves. In the rainy season dampness must affect rooms that have no fires. These sleeping apartments cannot be dried in continuous wet weather. The bedding must become damp, and will be musty unless dried before a fire. This is sel-

dom done. In addition to this neglect of fires in sleeping apartments, air and light are generally excluded by closed windows and heavy curtains. But few seem to understand that the air in these closed rooms becomes impure and unfit for the lungs. Those who occupy such apartments cannot have health. The emanations from damp, moldy rooms and clothing are poisonous to the system.

Many seem to think that if they exclude the air from their rooms because it is damp and foggy, they have an atmosphere in their houses perfectly safe to breathe. But we have to breathe in damp and foggy days as well as in pleasant, sunny weather. We must accept the air which God gives us, which is subject to atmospheric changes, sometimes dry and invigorating, while again it is damp, chill, and penetrating. We must meet these changes as they come, and make provision the best we can to guard ourselves from the effects of damp and chilly atmosphere, and not subject ourselves to a greater evil by breathing air over and over again that has lost its vital properties.

I find it almost impossible to convince those who are accustomed to live in rooms from which the fresh air has been excluded, of the unhealthfulness of such rooms. Like faithful sentinels they guard windows and doors as if fearful the impure air would escape and fresh air take its place. When we enter such houses the confined air of unventilated rooms meets us with sickening odors of mildew and mold, and the impurities exhaled from its inmates. I could not live in such an atmosphere. It is painful for me to remain there even but a short time.

During the rainy season in California, or anywhere else, when the sun does shine, we should make the most of it. Every room in our dwellings should be daily thrown open to the healthful rays of the sun, and the purifying air should be invited in. This will be a preventive of disease. We would say to our friends, If you think that clouds and rain bring dampness and endanger health, God sends to you his blessed, healthful sunshine, and pure, dry air. Will you welcome these great blessings by opening to these guests every room in your dwellings? If all would appreciate the sunshine, and expose every article of clothing to its drying, purifying rays, mildew and mold would be prevented.

The idea that night air is unhealthful and must be excluded from our sleeping apartments, is a mistake. In the night God designed that we should breathe night air, for we have no other. Our Creator would not make night air dangerous to health and yet compel us to breathe it. Night air is as healthy for us to breathe in the night as day air is in the day.

I plead for fresh air in the night—fresh air during the day—in storm as well as in sunshine. It is certainly more pleasurable to have days of sunshine than those that are damp and foggy. But we must breathe in damp, unpleasant weather as well as in sunshine. We should labor to have the air in our houses pure as possible. Even during the rainy season of California, I shall plead for fresh air, and to be excused from sleeping in the spare bed.

Those who occupy the same beds every night near a fire cannot understand the dangers of that spare bed. If they think that there is needless fear of it, we propose that they take the spare bed, and let their visitors sleep in their beds, and thus test the matter. After they have tried this a few times, they may become enlightened in regard to the danger of that spare bed.

My mind goes back to Oak Hill Cemetery in Battle Creek, Michigan. I see there two graves. My noble first-born son fills the long grave. Next comes a short grave where lies my darling babe, my last-born. The first died of inflammation of the lungs after a sickness of eight days, in consequence of thoughtlessly resting his head upon a pile of damp charts and falling asleep. The second died from sleeping in a room that had not been used for two weeks. A fire was kept burning for two hours in this room which was thought sufficient to warm it. The bed had accumulated dampness. Myself and child took cold; he was a great sufferer for four weeks, and died in consequence of that damp bed.

CHILDREN should always be made to understand distinctly what it is that we require of them, and in what way we shall be satisfied with them; for it is of great importance that their ordinary disposition should be cheerful and confiding; otherwise their understandings are clouded, and their spirits depressed; if possessed of quick feelings, they are irritated; if weak and timid, they are rendered stupid.—*Seb.*

Health of Women—Air and Sunshine.

WE can perform no action and think no thought without using muscle or brain. And in using we waste them. In fact, the ordinary vital action necessary to sustain life does this. And the waste matter must be carried out of the system. For this there are three or four outlets—the skin, kidneys, bowels, and lungs. In the lungs the venous blood, which is charged with this impure matter, rushes into a myriad vesicles, and the air comes into corresponding vesicles, separated only by a thin membrane, through which the waste matter passes into the air mostly as carbonic acid, and is discharged.

Not only then is it necessary to perfect health that the lungs work up to their natural capacity; but the inhaled air must be pure, must have the right proportion of oxygen and nitrogen, nearly unmingled with other gases, or the work will not be properly performed. It is the oxygen that does the work in the system, and if the air does not contain enough of this, the wants of the system are not met. It becomes languid, weak, spiritless. Neither, on the other hand, can we increase the proportion of oxygen much without deleterious results. This, however, occurs only in artificial preparations. Do not take them.

Our divine Creator has made the proportion in the air perfectly adapted to our wants, and in order to preserve it perfect and pure he has created the wonderful system of currents or winds which stir up and dissipate hurtful gases wherever they can be reached. What we have to look out for, then, is that we do not prevent this circulation of air so that hurtful vapors shall accumulate. This we do, however, very frequently in our dwellings and elsewhere, taking sometimes as much pains to shut out the fresh, pure air as if it were a deadly enemy. It would be very amusing were it not annoying to see how much afraid some people are of fresh air. Let a car or an omnibus be ever so much crowded, and if the weather be at all cool, some one will be sure to close all the ventilators, without so much as saying, "By your leave." Remonstrate, and very likely some great coarse man will say, as I heard one once,

"I don't care so much about fresh air, but I must keep my feet warm." (Probably it would have taken some arithmetic to compute the time since his feet had been into a pail of warm water.) "Oh! well," exclaimed a lady who heard the remark, "when I want a breath of fresh air I can always get one behind the back of the seat!"

And did n't she want the fresh air every five or six seconds? I suppose neither she nor the man ever heard that every person needs seven cubic feet of fresh air every minute. Where

was this car full of people to get anything like an adequate supply? Not knowing what they were doing, they would go on breathing the impure air over and over for an hour, and feel the effects of it for a day or more afterward.

"What is to be done?"

Well, you have a right to insist on the ventilators remaining open, and further, if you can *face* the current you can often have the window open next above you. I say often, not always; for persons may object who do not understand that when the car is in motion those only are likely to feel the draft from an open window who sit between it and the rear of the car.

The ventilation of public halls and audience rooms is now receiving much attention from builders and designers, and it is much needed, as is not unfrequently shown by the fainting of ladies in public assemblies, where the oxygen of the air has been rapidly used up. Our private dwellings, however, are yet largely neglected. Every room in every house should have one or more registers near the middle or lower part of the room for the admission of pure air, and near the upper part for the egress of foul air. When this is not practicable, windows should be let down at the top. If the house is so old-fashioned that the windows cannot let down at the top, modernize them till they can—it does n't cost much—and put in pulleys too; then keep them down a little in all weathers. This leaves two open spaces, one in the middle of the window and the other at the top, and gives at least better circulation than one space only.

At night the lower sash should be raised, and just as much air as you can accustom yourself to enjoy should be freely admitted. The best time to begin this practice is in warm weather, and then not close the windows much as cold weather advances. If you can have a fire in a stove, well; in an open fire-place, much better. You may even keep it burning all night, provided you admit plenty of fresh air; but the latter is indispensable. It is best not to have the current blow upon you, but if it must do so, cover up and *face* it.

Open doors will not answer, unless they open out of doors somewhere, and that not through the cellar nor some close alley. For this reason, as well as for safety from intruders, upper rooms are the best for sleeping rooms. People in the East sleep on the house-tops, and it would be much more to our health to do it here than in the close, unventilated rooms we sometimes occupy. Many of our delicate women would be made strong by this change only in their habits. We breathe slower in our sleeping than in our waking hours; we are also quiet then, and we ought to be all the more careful, and to see that the best air is brought to us abundantly.

In the daytime we should have the doors open

as much as consistent with comfort, and especially see that every occupied room in the house is well aired. As for smoking rooms, do not have them, nor the smoke either. It is not fit to be brought into a decent house, and no decent man would bring it. The smoker not only degradingly narcotizes himself, but in doing it he suffuses the whole surrounding atmosphere with a vile, offensive odor, every whiff of which says, "Take my breath after me." Gross insulter is a mild epithet to apply to a man who would intentionally and repeatedly breathe in our faces, and I fail to see that it betters the matter when he fouls his breath with the nauseous odor of a poisonous drug with which he is intoxicating himself, and then breathes in our faces.

Besides its indecency, it is seriously hurtful. It is not enough that a man has so taken advantage of his wife's affection, or of the toleration of other ladies, that they will not object to his smoking, they may come to like it even at second hand on the same principle if not to the same extent of his liking. But it hurts them nevertheless.

The air is seriously poisoned, and the lungs refuse to take in any poisoned air freely. In this way they become contracted. Serious diseases of the lungs have been known to follow, bad blood must inevitably result, and many a man who habitually smokes in his house thus virtually kills his wife and his children.

The poor wife often bears patiently with the smoke that is very offensive to her at first, because she does not wish to drive her husband off to bad companions, or because she does not wish in any way to abbreviate his enjoyments. A pitiful "Queen of the Home" is such a wife.

"What shall she do?" Become intelligent as to the mischiefs that tobacco entails upon him, upon her, and upon their children, and bring her influence and intelligence to induce him to stop using it entirely in any shape, for this is the only proper remedy. If men knew how often they coarsely crush out the tenderness of conjugal love by this one personal impurity, a great many would quit it forever; and if they knew how inevitably it does, in one way or another, poison the blood of their children, there are some, at least, who would sooner cut off their right hand than to be guilty of such crime.

Some sitting-rooms and studies are so saturated with the odor of smoke that in spite of airing they will not be sweet and cleanly. No woman who cares for health and cleanliness will sit in such a room if she can help it; though some do it until they are no longer able to notice an offensive odor in any part of the house. This is no slight misfortune. It is well worth while to train the olfactories to notice the air of any room we enter. We make little use of

them to any good purpose. More than half their acuteness depends on their training. Notice the difference in the morning between the sitting room when you have left the window down over night and when you have not, and return to your bedroom before airing it to criticise the air in which you have been sleeping. Hang your bedding out of doors (or out of the window) an hour or two in the morning to air, and it will smell so sweet and fresh that you will be willing to take some trouble to do it every day thereafter. In cold weather, when the family are at their meals, have the empty parlor or sitting room windows widely opened, and you will smell the difference in the air when you come back. The sense of smell carefully cultivated will do excellent service for health in many directions.

Dress warm. Spend your money for coal rather than for a doctor's bill. Do not huddle down over a register and call out to shut the door. Bustle about and open it sometimes yourself. Make a point of going out once a day at least, in all sorts of weather, and remain out as long as circumstances will permit. In cold weather you will be obliged to keep in motion to be comfortable, but in warm weather sit out of doors whenever you can. Cozy little places for sitting out of doors ought to come into the plan of every house and its surroundings—arbors, summer-houses, shaded lawns. The nearer the house they are, the more frequently will they be occupied by busy people. Others more remote will suit a more leisurely moment. If it can possibly be arranged, set the table out of doors. The practice is really delightful. And it will not make much additional work if placed near the open piazza, where you do as much of your work as possible, dressing vegetables, churning, washing dishes, laundry work, etc.

Do not be afraid of a little sunshine either. It may increase your color, but a nut-like brownness is more becoming to a woman's face than the deathly whiteness of the lily. Sunshine is quite as good in its way as fresh air, and it should come into every room in the house. Does it fade the carpet? Then spread down a rug or a piece of drugget. A better way is to select colors that will not run away from the sunshine. For bedrooms, Canton matting is good. It will not fade; it is easily swept; it will not hold dust readily, nor contract bad smells; it can be taken up and cleaned and the floor washed every month if desired.

I like painted floors too, and, better still, I like the hard wood inlaid floors. Rugs may be placed where wanted to stand upon. It is said that the French very seldom carpet a whole house, and laugh at the idea as a New-World notion. True, "French" is out of fashion now, but I take a good thing wherever I find it, put my own common sense to it, which I am

obliged to do in order to make it serve me harmoniously, and then make the most of it.

Does it require argument to show that sunshine is healthy? Terrible stories are told about sun-stroke, as if the sun had done a wicked thing, but I think true science will bear us out in saying that in some way the sufferers have put themselves in very unnatural conditions. By far the greater proportion are intemperate men, and the overheated condition of the streets of our cities increases the difficulty. Our sturdy, temperate farmers, and the animals when left to themselves, seldom suffer from this cause. Dr. Bellows says the sun has nothing to do with it beyond raising the system above its normal temperature, and that this can be and often is done without the presence of sunshine.

The sun is, in fact, the great life-bringer to the animal and vegetable world. Invalids are sometimes treated with sunshine now instead of medicine—those I suppose who have suffered most from lack of it. Women may well be counted among these. We stay in the house too much. We carefully close and darken our rooms, and into many of those which we occupy most the sun never enters but by stealth.

"The sun brings flies," says the tidy housekeeper. Well, flies are good scavengers, but while it is true that the tidy housekeeper does not need their services, it would be well to take some more sensible means to get rid of them than to make for ourselves an atmosphere that flies will not live in. It is better to kill them off with fly-traps or poison, better still to keep them out with screened doors and windows. When we are wise enough we shall not always be obliged to permit the conditions which produce flies. If we live near neglected stables, etc., we must take the consequences. We are making improvement in this direction however. It is not so bad now as it was when the stable was under the same roof with the house. So we will make it a rule to let the sunshine into every room of the house some part of every day.

As for curtains, lace is quite heavy enough for shade. For living rooms the fashion adopted in some of our city basements is excellent (though I should not like to live in a basement), that is, to have only the lower half of the window curtained with Swiss lace or a wire screen. This is certainly the most in accordance with out-of-door arrangements where the light comes from above. It is best for the eyes, it does not hinder the sunshine, it shuts out earth, it lets in heaven. For effect, a little frill of Swiss across the top of the window, two or three fingers deep, and bordered with lace, is a pretty addition. Where the window is small and a blind can be closed for evening privacy this frill alone makes a neat and sufficient trimming for the window.

A south window, on which I have been experimenting for a few months, pleases the eyes of all beholders, and meets every requisition of health and comfort. It is bordered and festooned with English ivy, and on a trellis placed in a movable flower stand are trained petunia, Madeira, and some other delicate vines. This screen is sufficient for the daytime. The sunlight coming through the green is softened and adapted to the eye just as in nature. Another window is shaded by an orange tree. I lately saw a window somewhere "up the Hudson" about a foot deep, the sides of which were decorated with brackets containing pots of plants and hanging vines, while the window seat was partly occupied by a pot containing a screen of German ivy. The effect was delightful. Larger screens and stands may be placed on rollers on the floor, and the experiment varied easily and most satisfactorily.

So we will receive the truth that fresh air and sunshine, those blessed things that Providence has given us so bountifully, are our best friends, and we will enjoy them fully. We will go out of doors freely if we are well, and all the more if we are invalids. If we can ride and walk, well, but that will not satisfy us. If the weather will allow, our lounging chair shall be in the piazza or under the trees all the day. Better still, we will spread a comfortable on the grass and lie down on it and let the sun shine on us through the shimmering leaves all we can take of it without discomfort. Or we will shade our eyes with a big hat or a parasol and then bask in the sun as we can bear it; and wherever we are we will see to it that no one shall shut away from us the fresh air and the blessed sunshine.—*Julia Colman.*

Courtesy at Home.

SOMETHING is wrong in those families, says the *Bazar*, where the little courtesies of speech are ignored in the every-day home life. True politeness cannot be learned, like a lesson, by one effort, any time in one's life; it must be inbred. "Well meaning, but rough," is said of many a man; and too often the beginning of the difficulty lies with the parents in a family. Is it hard for the husband to give a smiling "Thank you" to his wife as she brings his slippers on his evening return home? Is it more difficult for the mother to say, "John, will you shut the door please?" than to use the laconic phrase, "Shut the door!" When Tom knocks over his sister's baby-house, why should not "Excuse me, I did n't mean to," be the instinctive apology?

Many who would not be guilty of discourtesy to a stranger, or to a friend in the world without, lay aside much, if not all, their suavity of manner on entering the home circle. The hus-

band and wife dispense with those little graceful attentions which, though small, are never unimportant. The children are ordered hither and thither with crusty words; no "Thank you" rewards the little tireless feet that run on countless errands. The dinner is eaten in silence, broken only by fault-finding and reproof from the parents, and ill-humor and teasing among the children. In the evening, the father devotes himself to his newspaper, and the mother to her sewing, interrupting themselves only to give such peremptory orders as "Less noise, children;" "Stop quarreling;" and, finally, "Go to bed."

In many families, there is no positive rudeness among the members, only a lack of those simple, affectionate attentions which awaken a spontaneous return; a want of that consideration and gentleness of demeanor which are well-springs of comfort in every household. The well-bred host does not fail to bid his guest "Good night," and "Good morning;" why should not this simple expression of good feeling be always exchanged between parents and children? The kindly morning greeting will often nip in the bud some rising fretfulness; and the pleasant "Good-by," from old and young, when leaving the house for office, shop, or school, is a fragrant memory through the day of separation. When the family gather alone around breakfast or dinner table, the same courtesy should prevail as if guests were present. Reproof, complaint, unpleasant discussion, and scandal, no less than moody silence, should be banished. Let the conversation be genial, and suited to the little folks as far as possible. Interesting incidents of the day's experience may be mentioned at the evening meal, thus arousing the social element. If resources fail, sometimes little bits read aloud from the morning or evening paper will kindle the conversation.

No pleasanter sight is there than a family of young folks who are quick to perform little acts of attention toward their elders. The placing of the big arm chair in a warm place for mamma, running for a footstool for aunty, hunting up papa's spectacles, and scores of little deeds show unsurpassed and loving hearts. But if mamma never returns a smiling "Thank you, dear," if papa's "Just what I was wanting, Susie," does not indicate that the little attention is appreciated, the children soon drop the habit. Little people are imitative creatures, and quickly catch the spirit surrounding them. So, if, when the mother's spool of cotton rolls from her lap, the father stoops to pick it up, bright eyes will see the act, and quick minds make a note of it. By example, a thousand times more quickly than by precept, can children be taught to speak kindly to each other, to acknowledge favors, to be gentle and unselfish, to be thoughtful and considerate of the comfort of the family. The boys, with inward pride in their father's

courteous demeanor, will be chivalrous and helpful to their young sisters; the girls, imitating the mother, will be gentle and patient, even when big brothers are noisy and heedless.

Scolding is never allowable; reproof and criticism from parents must have their time and place, but should never intrude so far upon the social life of the family as to render the home uncomfortable. A serious word in private will generally cure a fault more easily than many public criticisms. In some families, a spirit of contradiction and discussion mars the harmony; every statement is, as it were, dissected, and the absolute correctness of every word calculated. It interferes seriously with social freedom when unimportant inaccuracies are watched for, and exposed for the mere sake of exposure. Brothers and sisters also sometimes acquire an almost unconscious habit of teasing each other, half in earnest, half in fun. This is particularly uncomfortable for everybody else, whatever doubtful pleasure the parties themselves may experience.

In the home where true courtesy prevails, it seems to meet you on the very threshold. You feel the kindly welcome on entering. No rude eyes scan your dress. No angry voices are heard up stairs. No sullen children are sent from the room. No peremptory orders are given to cover the delinquencies of house-keepers or servants. A delightful atmosphere pervades the house—unmistakable, yet indescribable.

Mothers Slaves to their Children.

A SILLY mother thinks she can make more than women out of her daughters. She toils in the kitchen, and they simper and drawl nonsense in the parlor. She rises with the sun to get their breakfast, while they read the last novel in bed. She toils over the washtub, while they drum on the piano. The earnings of the farm are squandered to put clothes on their backs, and to put them through a fashionable school. They are reared in idleness, and become accomplished babies, utterly ignorant of all that womanly knowledge so creditable to the sex, unfit for anything but to dress finely, talk nonsense, and marry simpletons, like themselves. It's of no use, mother; your silly dreams will never be realized.—*Herald of Health.*

It is not what we have or what we have not which adds to, or subtracts from, our felicity. It is the longing for more than we have, the envying of those who possess more, and the wish to appear of more consequence than we really are, which destroys our peace of mind, and eventually leads to ruin.

GENERAL ARTICLES.

THE LIGHT OF HYGIENE.

Our sickly race in gloom of night,
In darkness long have been
Groping the way without the light,
The light of hygiene.

CHORUS.—The light! the light! the cheering light!
The light of hygiene!
'Tis this alone dispels the night,
By this the truth is seen.

Experiments have long been tried
With every poisonous drug;
The poisoned ones of course have died—
These many a grave have dug.

If nature had been left alone,
To battle with her foes,
She might have conquered many a one,
And from her couch arose.

The healing power within is found,
There ever it abides;
We need not roam the earth around
To find where it resides.

The "acts" of drugs! 'tis all a hoax,
Dead matter cannot act;
Their hated presence but provokes
The system to eject.

These vile intruders have no right
Within life's citadel;
So nature rallies in her might
These aliens to expel.

A man has broken nature's laws
By living far too quick;
Must he be poisoned just because
He's taken very sick?

Reason would say, "Your ways amend,
Cease from each vile abuse;
On this alone can you depend,
In drugging there's no use.

"You cannot an indulgence gain,
From some renowned M. D.,
To break life's laws, escape the pain,
Evade the penalty."

Then let us study nature's laws,
And as we learn, obey;
Espouse the hygienic cause—
Good bye to drugs for aye!

R. F. COTTRELL.

The Hygiene of the Ear.

(Concluded.)

ALL sorts of substances are sometimes put into the ear by children, who do it to themselves or to each other in ignorant play. If every parent and teacher warned his children against doing this, it would not be a useless precaution. When the accident happens, the chief danger is that of undue haste and vio-

lence. Such bodies should be removed by syringing with warm water alone, and no attempt should be made to lay hold of them or move them in any other way. It is enough to reflect, again, that the passage of the ear is closed by a delicate membrane to show the reason for this rule. When no severe pain follows, no alarm need be felt. It is important that the substance should be removed as speedily as is quite safe, but there need never be impatience; nor should disappointment be felt if syringing needs to be repeated on many days before it effects its end. It will almost invariably succeed at last in the hands of a medical man, and is most effective if the ear is turned downward and syringed from below.

Now and then an insect gets into the ear and causes great pain; the way to get rid of it is to pour oil into the ear. This suffocates the insect.

There is another danger arising from boyish sports. Snowballs sometimes strike the ear, and the snow remaining in it sets up inflammation. This danger is increased by a practice which should be inadmissible, of mixing small stones with the snow, which thus effect a lodgment in the ear.

Among the causes of injury to the ear must unfortunately be reckoned bathing. Not that this most healthful and important pleasure need, therefore, be in the least discouraged; but it should be wisely regulated. Staying too long in the water certainly tends to produce deafness as well as other evils; and it is a practice against which young persons of both sexes should be carefully on their guard. But, independently of this, swimming and floating are attended with a certain danger from the difficulty of preventing the entrance of water into the ear in those positions. Now, no cold fluid should ever enter the ear; cold water is always more or less irritating, and, if used for syringing, rapidly produces extreme giddiness. In the case of warm water, its entrance into the ear is less objectionable; but even this is not free from disadvantage. Often the water lodges in the ears and produces an uncomfortable sensation till it is removed: this should always be taken as a sign of danger. That the risk to hearing from unwise bathing is not a fancy, is proved by the fact, well known to lovers of dogs, that those animals, if in the habit of jumping or being thrown into the water, so that their heads are covered, frequently become deaf.

A knowledge of the danger is a sufficient guard. To be safe, it is only necessary to keep the water from entering the ear. If this cannot be accomplished otherwise, the head may be covered. It should be added, however, that *wet hair*, whether from bathing or washing, may be a cause of deafness, if it be suffered to dry by itself. Whenever wetted, the hair

should be wiped till it is fairly dry. Nor ought the practice of moistening the hair with water, to make it curl, to pass without remonstrance. To leave wet hair about the ears is to run great risk of injuring them. In the washing of children, too, care should be taken that all the little folds of the outer ear are carefully and gently dried with a soft towel.

But I come now to what is probably the most frequent way in which the ear is impaired: that is, by the attempt to clean it. It ought to be understood that the passage of the ear does not require cleaning by us. Nature undertakes that task, and, in the healthy state, fulfills it perfectly. Her means of cleansing the ear is *the wax*. Perhaps the reader has never wondered what becomes of the ear-wax. I will tell him. It dries up into thin fine scales, and these peel off, one by one, from the surface of the passage, and fall out imperceptibly, leaving behind them a perfectly clean, smooth surface. In health the passage of the ear is never dirty; but, if we attempt to clean it, we infallibly make it so. Here—by a strange lack of justice, as it would seem, which, however, has no doubt a deep justice at the bottom—the best people, those who love cleanliness, suffer most, and good and careful nurses do a mischief negligent ones avoid.

Washing out the ear with soap and water is bad; it keeps the wax moist when it ought to become dry and scaly, increases its quantity unduly, and makes it absorb the dust with which the air always abounds. But the most hurtful thing is introducing the corner of the towel, screwed up, and twisting it round. This does more harm to ears than all other mistakes together. It drives the wax down upon the membrane much more than it gets it out. Let any one who doubts this make a tube like the passage, especially with the curves which it possesses; let him put a thin membrane at one end, smear its inner surface with a substance like the ear-wax, and then try to get it out so by a towel! But this plan does much more mischief than merely pressing the wax down. It irritates the passage, and makes it cast off small flakes of skin, which dry up, and become extremely hard, and these also are pressed down upon the membrane. Often it is not only deafness which ensues, but pain and inflammation, and then matter is formed which the hard mass prevents from escaping, and the membrane becomes diseased, and worse may follow. *The ear should never be cleaned out with the screwed-up corner of a towel.* Washing should extend only to the outer surface, as far as the finger can reach.

Ear-picks, again, are bad. If there is any desire to use them, it shows that the ear is unhealthy; and it wants soothing, not picking. And there is another danger from introducing any solid thing into the ear. The hand may get a push, and it may go too far. Many is the

membrane that has thus been broken by a bodkin. Sportsmen sometimes have their membrane pierced by turning suddenly while getting through a hedge. And it even happens that a boy at school may put a pen close to another's ear, in play, and call to him to make him turn his head; and the pen pierces the membrane. Very loud sounds may cause deafness, too. Artillerymen, and also eager sportsmen, and very zealous volunteers, incur a danger from this cause. It is well to stop the ears, when exposed to loud sounds, if possible; also to avoid belfries when the bells are about to ring. A man who was once shut up in one became stone-deaf before the peal was done. The sound of guns is more injurious to those who are in a confined space with them, and also if the mouth be open. Injury from loud sounds, also, is much more likely to occur if they are unexpected; for, if they are anticipated, the membrane is prepared for them, without our knowledge, by its muscles. At certain points on the Rhine, it is, or was, the custom of the captain of the steamboat to fire a small cannon, to exhibit the echo. When this has been done without due warning, it has proved more than once a cause of lasting deafness. Sometimes these loud sounds rupture the membrane; sometimes they deaden the nerve: the former is the least evil.

It is a bad practice, also, to put cotton-wool soaked in laudanum or chloroform into the ear for the relief of toothache. It may be sometimes effectual, for the nervous connection between the teeth and the ear is very close. But the ear is far too delicate and valuable an organ to be used as a medium for the application of strong remedies for disorders of other and less important parts; and laudanum, and more especially chloroform, is a powerful irritant. The teeth should be looked after in and for themselves, and, if toothache spreads to the ear, that is the more reason for taking them thoroughly in hand; for prolonged pain in the head, arising from the teeth, may itself injure the hearing. When a child's ear becomes painful, as it so often does, everything should be done to soothe it, and all strong, irritating applications should be avoided. Pieces of hot fig or onion should not be put in; but warm flannels should be applied, with poppy-fomentation, if the pain does not soon subside. How much children suffer from their ears, unpitied because unknown, it would probably wring the hearts of those who love them suddenly to discover. It is often very hard, even for medical men, to ascertain that the cause of a young child's distress is seated in the ear, and frequently a sudden discharge from it, with a cessation of pain, first reveals the secret of a mysterious attack which has really been an inflammation of the drum. The watchfulness of a parent, however, would probably suffice to detect the cause of suffering,

if directed to this point, as well as to others. If children cry habitually when their ears are washed, that should not be neglected; there is, most likely, some cause of pain. Many membranes are destroyed from discharges which take place during "teething." Whenever there is a discharge of matter from the ear, it would be right to pour in warm water night and morning, and so at least to try to keep it clean. But into the treatment of diseases of the ear it would not be suitable to enter here.—*People's Magazine.*

Lack of Knowledge.—No. 12.

BY J. N. LOUGHBOROUGH.

SHORTLY after my arrival in California, about six years ago, I became acquainted with a family in which there was a puny girl about two years old. In a conversation on health matters, the father told me that he thought the theory taught in the HEALTH REFORMER was all wrong, that there was virtue in medicine, and especially in calomel. In fact, he *knew* there was; for he had tried it upon his little girl, and, by its use, had saved her life. He said he had "no idea but she would have been dead" before that if he had not given her calomel. He advised me to use it for my children, who, though they started in life with poor health and puny frames, have, nevertheless, by carefully observing the laws of life and health, attained to nearly the ages of ten and seven with tolerably good health and strength. During the time my children have lived in California, although exposed to various ills and diseases common to children, the only disease they have had is a slight touch of the measles, and that not until they had been exposed the sixth time. With hygienic treatment, they got along so well that the elder said, "If this is all there is to the measles, I don't think it amounts to much."

While we have seen our feeble children steadily climbing the hill of health, I have been watching the case of the calomel girl. She seems to take almost every epidemic that is going with even a slight exposure, easily takes cold, and, in fact, is sick about three-fourths of the time; and still that father deals out the calomel to his child for every ill, in doses that startle the fond mother, who, thinking it is not all as it should be, says, "If there is so much more virtue in calomel than in healthful living, why don't we begin to see some of its benefits?"

I would not intimate that that father has no affection for his darling child. He has; but it seems strange that people will not let old, stereotyped theories alone long enough, at least, to give the mind opportunity to take in a wider scope by comparing the results of different

processes in the treatment of disease. If they did so, we should much sooner attain the epoch of the reign of good sense. This child's system is filled with mercury, and its appearance does not indicate anything very favorable for future health.

We contend that if hygienic treatment has a fair chance, it will establish its own merits every time. It is true in most cases, as we have already said, that "the odds are against it," in that so many persons who consent to try the hygienic system of treatment have their systems filled with medicine already, or are suffering from inherent diseases, which are the result of the use of drugs. If patients regain health under such circumstances, what might we not expect when hygiene has a fair chance with humankind before they are subjected to drugging?

One thing I have frequently noticed: While those who indulge in the use of medicines, stimulants, and rich and fatty foods, are frequently troubled with lassitude and lack of appetite, those who pursue an opposite course, abstaining from stimulants and medicines, and living mainly on simply cooked grains, fruits, and vegetables, come to their meals with a keen relish for food every time.

My children have not lost five meals for lack of appetite during the whole period of their residence in California. They come to their meals with good appetites, and enjoy their food every time. We only have to caution them not to eat too fast nor too much. We claim that too much of even healthful and nutritious food is a disadvantage to the body, as the vital economy can only use that amount of nutritive elements which it needs in its building-up processes. All else has to be carried along in the circulation and expelled from the system with the waste material, and hence its presence can but retard the healthy action of the vital organs.

About three weeks since, I had occasion to call upon a family where was a lady who had the care of a little four-year-old child whose parents were absent. This child was attacked very violently with erysipelas in one of its limbs. The lady is a strict health reformer, and had great confidence in water treatment. She gave the child warm baths, at the same time showering the head with cool water, saw that its bowels were in an active condition, and applied cool compresses on the spot of erysipelas which first appeared, which was about as large as the palm of the hand. For about twelve hours, under water applications, its spread was hardly perceptible. The kind neighbors came in and talked doctor. "It's such a dangerous disease, send for the doctor." Well, we said, what shall we send for the doctor for? "To find out what ails the child." We told them we knew what ailed the child;

for we could open Dr. Trall's "Hydropathic Encyclopedia" and read a description of erysipelas, and the symptoms were so well described that, in this case, we could easily tell what the matter was. Still they plead to have a doctor. "But," said the lady, "I am more afraid of the doctors than I am of the disease." "Well," they said, "the doctor don't give much medicine." It placed this lady in a somewhat trying position, as she was away from the child's parents, who had some confidence in drugs, while she herself had none. If the child should die, she might be blamed for not getting a drug doctor. Still she decided to give hygiene a fair trial. Perseveringly she stood her ground, faithfully applying the wet compresses directly on the inflamed part, and applying pounded fresh cranberries above the inflamed part to prevent the spread of the inflammation to the bowels and head. It covered the entire right limb and foot, and then appeared upon the left limb. Finally, it appeared upon the face and back; but the inflammation was by this time very slight.

Three weeks was this course pursued with the water, and the erysipelas ceased its ravages; and now it is a matter of surprise to the neighbors to see how rapidly this child is gaining in strength. Why should it not gain fast? There are no medicines to be expelled from the system as the sequela of the disease, and nature can now engage in the building-up processes with all the rapidity of childhood's growth.

But while writing the above, my eye rested upon a paragraph in a popular journal, concerning which I think one versed in the true healing art must be strongly tempted to say, after reading it, "*Silly twaddle.*" But it occupies a conspicuous place in a popular journal, so thousands will read it and believe that *Hostetter's Bitters* can do all that is claimed for it. The following is the paragraph:—

"The food taken into our bodies must be cooked in the stomach before it can be appropriated to the nourishment of the body. As a means of facilitating this second cooking, in cases where the process is slow and imperfectly performed, *Hostetter's Stomach Bitters* is invaluable. It promotes the generation of heat in the living laboratory, in which the crude materials for building up and recruiting the human frame are turned into convertible aliment. But this is not all. It acts beneficially upon the cellular membrane, which secretes the gastric juice; upon the liver, which produces that natural laxative, the bile; upon the vessels which receive the digested food; and upon the absorbents, which connect the digestive organs with the channels of circulation. If any portion of this complex machinery is out of order, the Bitters will set it right, thus promoting vigorous digestion, healthy secretion,

and the production of pure, rich, life-sustaining blood."

How wonderful! Great is *Hostetter's Bitters*! How accommodating! If your stomach is inactive, it will heat it up to cook your food. If it is fevered, of course it will cool it. If any of your organs are out of order, it will set them all right. In fact, it will go all over you in its wonderful mission, for \$1.00 per bottle. And they might have added in their notice that, if you will take it in doses of the same amount as you would drams of brandy, it will cause a peculiar discomfuddlement in your head, the same as is produced by the excessive use of brandy. For be it known, as stated by one advertiser of bitters in giving notice, "It is known to all that alcoholic liquors are the foundation of all genuine bitters; and these are permitted to be used by temperance societies." It might be well for such vendors of bitters to say, in connection with their notices, that if under the use of their bitters, the patient feels that their heads are being cured too fast, they must take to their beds suddenly, otherwise, their condition may be misjudged by the vulgar, and they pronounce them intoxicated. Stop! Not intoxicated on medicine? Why not, if the foundation, and in fact, the whole nearly, be liquor?

Conditions Favorable to Life.

THE age of the world hitherto has had no perceptible influence on that of man; and people may still become as old as in the time of Abraham, and even of earlier epochs. There certainly have been periods when men lived sometimes longer and sometimes shorter; but this evidently did not arise from the world, but from man himself. When men were in a savage state, simple, laborious children of nature, and much exposed to the open air, as shepherds, hunters, and farmers, great age was very common among them; but when they began gradually to despise the dictates of nature, to study refinement, and to indulge in luxury, the duration of their life became shorter. The same people, however, restored by revolution to their former rude state, and to manners more agreeable to nature, can again attain to their ancient longevity. These, consequently, are unsettled periods, which only pass away and return. Mankind, in general, do not suffer by them, and retain that duration of life which is appointed for them.

Man, as we have above seen, can, in almost all climates, in the frigid or torrid zone, attain to a great age. The only difference seems to be, that this is the case in some much more than in others; and that, though man can attain to a great age, people in general do not attain to the greatest.

Even in districts where mortality in general is very great, individuals may attain to a greater age than in places where general mortality is less. I shall, by way of example, mention the warm countries of the East. There mortality, upon the whole, is very small; hence their extraordinary population; and infancy, in particular, suffers there much less, on account of the continually uniform and pure temperature of the atmosphere. Yet a much smaller proportion of old people is found in these countries than in the northern, where mortality in general is greater.

Places, the situation of which is high, have, in general, more and purer air than those which stand low; though here, also, there is a certain limitation, and the rule cannot be thus laid down; the higher the better. The greatest degree of height, the glaciers, is, on the contrary, prejudicial to health; and Switzerland, without doubt the highest land in Europe, has produced fewer instances of longevity than Scotland. For this there are two reasons: First, the atmosphere at a great height is too dry, ethereal, and pure, and consumes, therefore, speedier. Secondly, the temperature of it is too variable; heat and cold succeed each other too rapidly; and nothing is more unfavorable to duration of life than very sudden changes.

In cold climates, men in general become older than in warm; and for two reasons: First, because, in warm countries, vital consumption is greater; and secondly, because in cold countries, the climate, being more temperate, checks vital consumption. This, however, is the case only in a certain degree. By the highest cold, such as that of Greenland, Nova Zembla, &c., the duration of life is shortened.

Uniformity in the state of the atmosphere, particularly in regard to heat, cold, gravity, and lightness, contributes, in a very considerable degree, to the duration of life. Countries, therefore, where sudden and great variations in the barometer and thermometer are usual, cannot be favorable to longevity. Such countries may be healthy, and many men may become old in them; but they will not attain to a great age; for all rapid variations are so many internal revolutions; and these occasion an astonishing consumption, both of the powers and the organs. In this respect, Germany is particularly distinguished; for its situation renders it subject to a continual mixture of heat and cold, of northern and southern climate, where one often experiences, in the course of the same day, both frost and the utmost heat, and where the month of March may be extremely warm, and that of May accompanied with snow. This uncertainty of the climate of Germany is undoubtedly the principal cause that, notwithstanding the healthfulness of its situation in other points of view, and though

in general people attain there to a considerable age, instances of very great age occur much more rarely than in neighboring countries lying almost under the same degree of latitude.

Too high a degree of dryness, as well as too great moisture, are unfavorable to duration of life. Air, therefore, which contains a mixture of fine moisture, is the best for attaining to a great age. The reasons are as follows: Moist air, being in part already saturated, has less attractive power over bodies; that is, consumes them less. Besides, in a moist atmosphere, there is always more uniformity of temperature, and fewer rapid revolutions of heat and cold are possible. Lastly, an atmosphere somewhat moist keeps the organs longer pliable and youthful; whereas that which is too dry brings on much sooner aridity of the vessels, and all the characteristics of old age.

A most striking proof of this is afforded by islands; for we find that these, as well as peninsulas, have at all times been, and still are, the cradles of old age. In islands, mankind always become older than in continents lying under the same degree of latitude. Thus men live longer in the islands of the Archipelago than in the neighboring countries of Asia; in Cyprus, than in Syria; in Formosa and Japan, than in China; and in England and Denmark, than in Germany.

A great deal seems to depend, likewise, on the ground and soil, in a word, on the whole *genius loci*; and in this respect a cold soil appears to be the least calculated to promote longevity.

According to experience, England, Denmark, Sweden, and Norway, are the countries where men attain to the greatest age; and we find by accurate observation, that all the before-mentioned properties are in these united. On the other hand, Abyssinia, some parts of the West Indies, and Surinam, are countries where the life of man is shortest.

The more a man follows nature, and is obedient to her laws, the longer he will live; the further he deviates from these, the shorter will be his existence. This is one of the most general of laws. In the same districts, therefore, as long as the inhabitants lead a temperate life, as shepherds or hunters, they will attain to old age; but as soon as they become civilized, and by these means sink into luxury, dissipation, and corruption, their duration of life will be shortened. It is, therefore, not the rich and great, not those who take gold tinctures and wonder-working medicines, who become old; but country laborers, farmers, mariners, and such men as perhaps never in their lives employed their thoughts on the means which must be used to promote longevity. It is among these people only that the most astonishing instances of it are to be observed.

The most dreadful degree of human mortal-

ity, occasioned by two inventions of modern times, is to be found among the slaves in the West Indies, and in hospitals for foundlings. Of the negro slaves, one in five or six dies annually; a proportion equal to that which takes place during the ravages of the most inveterate pestilence. And of 7000 children who are every year brought into the foundling hospital at Paris, 180 only are alive at the end of ten years; so that 6820 perish, and no more than one in forty escapes from that sepulcher. Is it not highly worthy of remark, and a new proof of our former position, that mortality prevails in the greatest degree where men deviate farthest from nature, where her most sacred laws are despised, and where her first and strongest bonds are torn asunder; where man, in the most evident manner, sinks below the brute; where the child is dragged from its mother's breast and consigned to the care of hirelings; where one brother is separated from another, from his home, from his native soil, and transferred to a strange and unhealthy climate, where, without hope, without comfort, and without enjoyment, while his heart continually sighs after those he left behind, he pines to death, oppressed with severity and labor. I am acquainted with no contagion, no plague, no state of mankind, either in ancient or modern times, during which mortality prevailed to the degree which it does in orphan-houses. To produce this evil required an excess of refinement reserved only for the most modern times. It required the aid of those wretched political calculators who can assert that the State is the best mother, and that nothing more is necessary to increase population than to declare children to be its property, to place them under its protection, and to establish a public abyss, which may swallow them up. People now see, when it is too late, the horrid consequences of this unnatural maternity—this contempt of the first grand pillar of human society, *marriage* and *parental duty*. In so dreadful a manner does nature avenge every transgression of her most sacred commands.

Moderation in everything, so much extolled by Horace, and which Hume calls the best thing on earth, is indeed of the utmost efficacy in prolonging life. In a certain mediocrity of condition, climate, health, temperament, constitution, employment, spirits, diet, &c., lies the greatest secret for becoming old. By all extremes, either too much or too little, too high or too low, prolongation of life is impeded.

The following circumstance also is worthy of remark. All those people who have become very old were married more than once, and generally at a very late period of life. There is not one instance of a bachelor having attained to a great age. This observation is as applicable to the female as to the male sex.—*Hufeland.*

“Waste Not, Want Not.”

BY J. N. ANDREWS.

THIS homely maxim is spoken with reference to money; but it is equally true with respect to health. Wastefulness, either in time or money, or both, is the almost universal cause of want. Poverty comes, not from the inscrutable judgment of God, but from the wasteful habits of mankind. Many men waste their time, either because they are unwilling to perform toilsome labor, or because they think work beneath their dignity, or because they cannot command as high wages as they think they should secure. They do not understand that labor is more honorable than idleness or sham dignity, and that it is far better to labor for small wages than to do nothing. Nor do such persons generally understand how to use wisely the money which they earn; and so, while finding money for the circus and for tobacco, or for other follies, they see many times when the actual necessities of life are wanting. The remedy for such suffering is within their own power; but few of them can be taught the real truth in the case.

Now, as men waste their money and bring needless poverty and want, so do they waste their health, and bring upon themselves sickness and suffering that they need not have. God is not chargeable with this suffering. Men bring it upon themselves by their own folly. God has given us a nature capable of adjusting itself to, and bearing up under, the unavoidable ills of life to an extent that is wonderful. Few of our real troubles as to health come from these sources. The changes of the weather, and the unhealthfulness of certain districts of country, and other things of a like nature may give us some inconvenience, and bring upon us some trouble. But all that comes upon us from such sources, compared with what we bring upon ourselves, is hardly worthy of notice. Men are their own worst enemies. They act as if anxious to use up the vitality which God has given them as rapidly as they can by any means do it. They have no just idea of the priceless value of the restorative power which God has planted in their being. They do not understand that the preservation or destruction of this power is mainly in their own hands, and that they can husband it if they will act as God intended that they should, and that when they live otherwise, they are most foolishly wasting what is worth to them more than all the gold of California. There is a vast amount of needless poverty in the world; but it does not compare in extent with the needless prevalence of feebleness and ill health. Wastefulness is the most general cause of poverty; and wastefulness in something not to be compared in value with money

is the almost universal cause of ill health.

Men do not fully understand that vitality is wasted by wrong habits of life, nor even by what are termed vices; nor do they realize that when vitality is wasted, it is gone forever. So they waste as if they had an infinite stock, or as if it were the easiest thing in the world to regain the lost treasure. More properly speaking, they waste their vital forces without being aware of what they are doing.

God made the machine of life to run with a motion that should be almost free from friction. He has not made it necessary that every little while some part of the machinery should need repair. Even in man's fallen state, the machinery of life should run with a steady and comparatively undisturbed motion till it runs down; that is, till the vital forces have slowly consumed, as a candle burns down in its socket.

It is plain that God designed to sustain man by food, air, water, light, heat, exercise, the protection of clothes and of houses, and by refreshing sleep. Now, as these are all necessities of his nature, he should so use them as to secure the end designed by the Creator in their use. It is the strange perversity of man's evil nature that enables him to turn all God's blessings into curses, or to use the good things which God has given him in such manner as to make them productive of serious evil. Men should govern their appetites as to the kinds of food, the quantity eaten, the times of eating, etc. If these things alone were regarded, there would be no dyspepsia and very little headache in the world. From the first sin in Eden till the present time, men have been constantly engaged in destroying themselves by what they put into their mouths. They cannot, or rather they will not, be persuaded that there is any importance attached to the government of their appetites. And so they act with reference to all the things which God has made necessary to human life.

If people could realize the value of pure air, and of plentiful sunlight, and of sufficient and suitable exercise, or of keeping within the bounds of moderation where one's employment is severe manual labor, and of wearing such clothing as shall furnish necessary protection to the person, especially to the feet and limbs, and that shall not hinder the free circulation of the blood, and of securing sufficient and refreshing sleep, and would be careful in all these things, they might avoid a very large part of the physical troubles they now suffer, and might save a large measure of vital force which they now prodigally waste.

Perhaps no one item is worthier of attention than that concerning the value of good sleep. Every reader of the REFORMER may be presumed to understand that our sleeping rooms should be well ventilated, and that the sunshine should most certainly have free access to

them; also, that our beds should be composed of proper materials, and the quantity of bed clothing suitable to the temperature of the room. But there is one item that should be very distinctly stated respecting sleep. It is with respect to the state of mind in which we lie down to sleep. Quite as much depends on this as on anything else.

We should never lie down to sleep in an irritated, fretful, peevish, or impatient state of mind. Sleep, under such conditions, is not worth half what it was designed of God to be worth to us. It is our duty when we give ourselves up to sleep to do it with serenity, and peacefulness, and trust. This is the way to have sleep that will renew our strength, as God designed that it should be renewed each night for the labor and toil of the day to come.

But how shall we secure this condition for our sleep? Evidently there is but one way for this. We must live each day in this frame of mind from morning till night. This is what Paul means by having the peace of God rule in our hearts. In truth, it is worth as much to our health through the day as it is during the night. It does not follow that we are never to feel pain because of things that go wrong, nor never to take burdens caused by the wrong courses of others, which it may be our work to correct and put away; but all this may be done without fretfulness and peevishness on our part. If we fall into this, we wound our own souls, and we do not thereby benefit others, or in any way contribute toward the removal of the evil.

It is folly to fret over things that we cannot help. No one will deny this. It is also folly to fret over things we can help; for a wiser course would be to attend to the correction of them. And these two classes of things are all that there is for us to fret over. The burdens of life are heavy enough without our adding to them by fretting. No small share of the friction which deranges the vital machine comes directly from fretfulness.

It is our duty, as it is our privilege, to preserve our vital forces. We can do this by regarding the laws of our being. We need not waste our life forces. If we will carefully preserve what we now possess, there are few of us who may not even now secure to ourselves a good measure of health. Let us be true to ourselves, and we shall find that God will co-operate with us by the restorative power he has put within us.

ANGER never does any good—it always does harm. The generous-hearted may compassionate and pity, but they never descend so low as to get angry. Anger debases always, unless there is strength of character enough to conceal it; but the misfortune is, the weakest-minded are the most passionate.

Scene in an Opium Shop.

ONE who has never visited an opium shop can have no conception of the fatal fascination that holds its victims fast bound—mind, heart, soul, and conscience, all absolutely dead to every impulse but the insatiable, ever-increasing thirst for the damning poison. I entered one of these dens but once, but I can never forget the terrible sights and sounds of that "place of torment." The apartment was spacious, and might have been pleasant, but for its foul odors and still fouler scenes of unutterable woe—the footprints of sin trodden deep in the furrows of those haggard faces and emaciated forms. On all four sides of the room were couches placed thickly against the walls, and others were scattered over the apartment wherever there was room for them. On each of these lay extended the wreck of what was once a man. Some few were old—all were hollow-eyed, with sunken cheeks and cadaverous countenances; many were clothed in rags, having probably smoked away their last dollar; while others were offering to pawn their only decent garment for an additional dose of the deadly drug.

A decrepit old man raised himself as we entered, drew a long sigh, and then, with a half-uttered imprecation on his own folly, proceeded to refill his pipe. This he did by scraping off, with a five-inch steel needle, some opium from the lid of a tiny shell-box, rolling the paste into a pill, and then, after heating it in the blaze of a lamp, depositing it within the small aperture of his pipe. Several short whiffs followed; then the smoker would remove the pipe from his mouth and lie back motionless; then replace the pipe, and with fast-glazing eyes blow the smoke slowly through his pallid nostrils. As the narcotic effects of the opium began to work, he fell back on the couch in a state of silly stupefaction that was alike pitiable and disgusting.

Another smoker, a mere youth, lay with his face buried in his hands, and as he lifted his head there was a look of despair such as I have seldom seen. Though so young, he was a complete wreck, with hollow eyes, sunken chest, and a nervous twitching in every muscle. I spoke to him, and learned that six months before he had lost his whole patrimony by gambling, and came hither to quaff forgetfulness from these Lethean cups; hoping, he said, to find death as well as oblivion.

By far the larger proportion of the smokers were so entirely under the influence of the stupefying poison as to preclude any attempt at conversation, and we passed out from this moral pest-house sick at heart as we thought of these infatuated victims of self-indulgence and their starving families at home. This baneful habit once formed, is seldom given up, and from three

to five years' indulgence will utterly wreck the firmest constitution, the frame becoming daily more emaciated, the eyes more sunken, and the countenance more cadaverous, till the brain ceases to perform its functions, and death places its seal on the wasted life.—*Lippincott's Magazine.*

The Sunny and the Shady Side.

THE health reform is not that gloomy, brown-bread, starving-to-death system that some would have us believe. It opens the blinds and lets the sunshine into our hearts and homes. It lets down the windows, that we may breathe heaven's pure atmosphere. To the filthy it says, Wash and be clean; to the sick, Be healed. It bids the glutton to eat and drink to the glory of God, and not simply for the gratification of a perverted appetite. To the poor, desponding dyspeptic, it says, "Hope thou in God, for thou shalt yet praise Him who is the health of thy countenance." It enters the sick chamber, casts aside the poisonous drugs, and brings relief to the suffering. In short, it places men and women on the sunny side of life.

The above is the experience of thousands. A Mrs. B. of my acquaintance, who lives in one of the eastern cities, a few years since was a nervous dyspeptic, and hence very gloomy in mind. Judging from her general appearance, one would think she had buried her last friend and never expected to have another. Her husband was very much alarmed for her, fearing her health would fail entirely, of which there was certainly great danger. Her mind was bordering upon despair. She seemed to think her case was an exception to mankind in general, and while others might indulge in a Christian's hope, she could not; and yet she was a conscientious, God-fearing woman. Her diet, as is usual in such cases, was beef, pork, tea, coffee, etc. She was finally prevailed upon to subscribe for the HEALTH REFORMER.

They had a child which they almost idolized. It grew feeble in health, and, from information they obtained by reading the REFORMER, they concluded it would be better for the child to abandon the use of pork. The change was accordingly made. The health of the child improved immediately, as also did the mother's.

They were then led to take another step. Tea was laid aside. Mrs. B.'s sick headache now disappeared, although before, tea had been the only remedy she had found for it. Slowly and cautiously they took other steps. Coffee and condiments were also laid aside. Her despondency began to disappear, and hope revived. As she read the word of God, rays of light entered her heart, and instead of seeing nothing but the threatenings of wrath, she

could appreciate the promises of our divine Lord. Soon her soul was drawn out for others. She could not rest satisfied until her friends, far and near, could see beauty in Christ and the truth of God.

She thus found there was a sunny side to life, as well as a shady side, and the health reform became to her a pathway from the shady side to the sunny side. When the blood is filled with impurities, and sluggishly courses its way through the system, causing the brain to become confused, the sunny side of life disappears like the morning dew; but in the return of health the mind has clearer views of things, and the soul is led out to take in more of God and his work. The religion of Jesus Christ then ceases to be that gloomy affair adapted only for old people and consumptives. Christ did not come to this world to introduce a system that would add a single pang of sorrow to the human family; but to bring light and joy, and to set the captive free. It was to light up the darkened heart, wipe away the falling tear, and cause sorrow and sighing to flee away. It was to lift up the fallen, bring hope to the desponding, and thus introduce a sunny side to lost humanity. And I am led to believe that one great cause of the prevailing idea that the Christian religion robs the one that embraces it of happiness and joy in this life, is attributable to the fact that many who profess it are in that physical condition in which their mind is cast down and desponding. Who ever knew a nervous dyspeptic that could talk faith and hope, and give words of cheer to others? The Saviour instructs us to be of good cheer; and his invitation is, "Come unto me, all ye that are weary and heavy laden, and I will give you rest."

There is, therefore, a moral bearing to the subject of health reform. It places men and women on the sunny side of life; not in imagination, but in reality. And as it is viewed from a moral standpoint, it will contain a power to keep those that embrace it from being led captive by their appetite. We appeal especially to Christian men and women who are groaning and desponding under the power of disease, while consulting only their taste in eating and drinking.

Why was Christ tempted in point of appetite, when he was tempted in all points as we are, unless there were lessons of importance for us to learn upon this very point? And why does the apostle say, "Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God," unless there is a sin that is liable to be committed in eating and drinking?

The Lord who made man and gave him the original bill of fare while he was in the garden of Eden (See Gen. 1:29), knew what was for his good, and desired his happiness. An improper diet will bring about that state of health

in which it is morally impossible to serve God with that cheerfulness that they otherwise might. We know from what our eyes have seen and our ears have heard that there is a sunny side to life with which the health reform has much to do.

S. N. HASKELL.

More about Tobacco.

THE *British Medical Journal* quotes the following description of "The Nemesis of Tobacco," from the nineteenth observation of Theodorus Kerckringins, M. D., Amsterdam, 1670, describing the *post-mortem* appearance of an inveterate smoker:—

"Too greatly, now, alas! in Europe, prevails that cacoethes of sucking up the smoke of the herb, tobacco, as they call it, through tubes actually manufactured for that special purpose! In consequence, what a perversity of morals has arisen, they must have noticed whose duty it is to attend to the public morals, whether they be politicians or theologians. How noxious it is to the health of those who indulge in the habit of sacrificing so often to Vulcan, or rather to Charon, I shall not here explain. Let it suffice that I adduce the case of a man whose body I opened before the faculty. He, ordinarily given to these fuliginous delights, had scarcely ever engaged in any kind of work, as it appeared, without inhaling this fatal juice. When, however, at length, nature, assailed by frequent attacks, began to fail, and to give way to disease, he ejected for so long a time a black looking matter, both upward and downward, that at last he vomited forth his dusky soul; which to accompany to the realms of Pluto would be far from agreeable, for, I suspect, it would greatly, and that from habit, have preferred those black lakes, streaming with the bubbles of Stygian vapors to the lucid stars of heaven, inasmuch as it had long been fed, though not nourished, by smoke; the abode, however, it had relinquished, I visited and examined by the aid of the scalpel of the anatomist. What did I observe, you ask? It appeared to me that I was passing into the very house of Pluto himself; even the entrance doors were tinged of a black color, and the tongue, imbued as it were with the poisonous juice, was in a state of tumefaction. What as to the windpipe? It was like the inside of the chimney, coated completely with black grime. The lungs were dry, sapless, and scarcely at all friable. The liver, as if it, beyond all other organs, had attracted the fire, was altogether inflamed; from the flames of this fire, not even the bile in its receptacle had been safe, for its color had changed from purple to green. In the intestines, however, the drains of the body, the carbonaceous matter of the whole combus-

tion had become concentrated, for they were full of a black substance which exhaled no milder stench than that of hell itself. Such, of this frequent suction, are the *medicinal* fruits!"

And yet the medical profession of to-day attribute a greater variety of *healing* properties to tobacco than to any other drug or poison! Notwithstanding this awful description of the terrible effects of tobacco-using, which can hardly be called exaggerated, a recent number of the *London Lancet*, one of the leading medical journals of the world, contains the following paragraph which speaks for itself:—

"Tobacco, it is well known, is often serviceable to the soldier on the march and on sentry duty, and above all when provisions become scanty. Beside conserving tissue, it has a soothing and solacing influence—facts which did not escape the keen eye of the first Napoleon in the Russian campaign. Medical authority has prescribed its use in the Ashantee war, and, accordingly, supplies of it are now on their way to be served out to the troops."

So long as such men as the medical authority referred to have the privilege of not only undermining the constitutions of individuals by their enormous drugging, but also of casting their baneful influence over a whole army at one fell swoop by such infamous advice, what hope can be entertained for the progress of reform? Well might we say, None, did we not find, occasionally, a man with common sense and enlightenment sufficient to enable him to take the course which has been pursued by the estimable superintendent of the penitentiary of this State (Michigan), as is shown by the following paragraph clipped from his recent report:—

"Our bill for this article [tobacco] has grown beautifully less, and we look upon its denial to prisoners as an experiment no longer, but a wise, sound, and judicious measure of prison discipline. The idea that it is essential to the health of any man, and more especially for those who have *indulged in it for years*, is one that I have very little respect for. After closely watching its effects for over two years, my convictions are only strengthened that it has no business in a prison, and, next to whisky, I would prohibit it entirely. It has nothing to do with any man's health, only to destroy it, as most certainly the health of many of our men has improved, and not one, to my knowledge, has ever been injured by losing it. Maniacs, idiots, and men with muddled intellects and nervous systems all shattered, at the insane asylum, call for it. Its footing will grow less and less every day that I stay here." K.

Tape-Worms.

THE origin of these parasites is a vexed question. It is said that they originate from ova deposited upon the hair of the mouse, which, being licked off by the animal, are carried into its stomach, and thence to the liver, whence they are transferred to the stomach of the cat; and afterward to the pig, being through this medium conveyed to the human viscera.

It is also stated that the ova may be swallowed in drinking water, and that those who eat raw meat, raw fruits, roots, and vegetables, are more subject to these animals than those who use cooked food.

Each joint is said to contain 125,000 eggs, and that the entire body is capable of producing 12,500,000 ova.

Helminthologists tell us that they have double-circle hooks by which they fasten themselves to the mucous membrane, and that they are nourished by absorbing food from the body of the animal in which they are found. While some physicians maintain that they have four suckers by means of which their food is imbibed.

Measly pork is thought to contribute to their development. The symptoms of their presence are variable; none, however, are reliable, except the passage of some of the joints.

The following case, related by one of our patients, will give some idea of our success in removing these unwelcome lodgers.

J. H. GINLEY, M. D.

"It is no less a pleasure than a duty for me to write a few words for the benefit of the readers of the HEALTH REFORMER. I had been suffering from some intestinal difficulty for a year, had consulted a number of physicians in Chicago, and having had evidence of the existence of worms, was apprehensive of tape-worm. None thought so, however, and various remedies were prescribed, among which, spirits of turpentine stood as the only effectual one. This I took until I felt my strong constitution giving way; then my friends, perceiving that unless immediate relief could be obtained, my failing faculties would soon cease to act, hurried me off to the Health Institute, where I was among entire strangers. Feeling myself to be in the hands of my Heavenly Father, I cheerfully yielded to their wishes, and found, dear readers, a true home for the ailing. The institution itself, I believe, is sustained by the power of God. The physicians are skillful, ever watching with anxious interest the condition of their patients. The helpers, never weary with well-doing, minister to the various wants of the suffering in Christian tenderness, and by the combined and harmonious action of all belonging there it is made a miniature paradise.

"Within a week from the time they began to treat me for worms, I expelled a tape-worm

thirty feet long. I can assure you my heart will never cease to be grateful while it beats, for the tender mercy and loving kindness that sent me there to be healed. If any of you want rest and help, you can find them there without any imposition. M. T."

Chicago, Ill., Jan. 9, 1874.

Advantages of Health Reform.

BY S. B. WHITNEY.

It is not my purpose to enter into an enumeration of these, but to call attention to the immunity enjoyed by strict reformers from some of the dangers to which others are exposed; which is illustrated by the following facts that have recently come under my notice: In the *Troy Weekly Times*, of Dec. 20, the statement was made that on the 11th inst. the Albany Board of Health took one hundred and eighty-two carcasses of unwholesome meat from the clutches of a sausage man. It seems that the statement was not strictly correct, and the action of the Board was criticised and misrepresented, which called out the following, which appeared in the *Albany Morning Express*, of the 16th:—

"A CARD—DISEASED MEAT.

"The columns of the *Sunday Press* of Sunday last contain an article relative to the conduct of the Board of Health and myself as inspector of meats, in regard to the charge that Peter Wagner of No. 97 Sherman street was preparing for the market meat unfit for use, and in which it was asserted that it was untrue, and based upon malicious intermeddling. Justice to the Board of Health and myself demands the following statement:—

"By direction of said Board, I visited, last Thursday, Mr. Wagner's place of business, and found, piled in an old shed, 40,000 pounds of meat, dressed and ready for sale. I inspected this meat, and found that *all* of it was of the poorest quality, and barely fit for use. In that immense heap of meat I found 1900 pounds that were manifestly diseased, which I destroyed at once. I have power only to seize the meat that is diseased, else for the public good, I would have destroyed the entire 40,000 pounds.

"At West Albany (beyond our jurisdiction), there is at present some 30,000 pounds more of the same kind of meat ready for the market, and I mention this because Mr Wagner purchased the meat in question from the same man who now holds the 30,000 pounds at West Albany.

"EDMUND ENRIGHT, *Inspector of Meats.*"

This was followed by an account of a poor woman who paid \$6.75 for a quarter of beef,

which, after delivery, was "found to be covered with disgusting looking sores, and was in an otherwise unhealthy condition." Although seeking redress, at the time of writing she had failed to find justice.

Now any one can see at a glance that strict health reformers avoid all this danger, both to stomach and pocket, which is an item that should not be overlooked, but should lead reflecting minds to a consideration of the claims of health reform in other respects. Such a consideration will generally result in a practical adoption of its principles; for the advantages of the reform only commence with this item of safety, as observation and experience both prove that a hygienic diet is far superior to a flesh diet of the very best quality that can be obtained.

The Heating of our Houses.

"ENTERING the door of one of our 'comfortable' modern houses, what meets us? A puff of scorched air from a register, redolent of burning iron, or of boiled air from a steam heater. The thermometer is standing at about 74°. We advance to the parlor. There matters are even worse; for no outside cold has entered with momentary freshness. The plants in the window look yellow and forlorn. Ominous cracks are visible here and there in the furniture—nay, a strip of ornamental veneer has actually split off from the piano and lies on the carpet. Our hostess, coming forward to greet us, is wrapped in a little shawl, and remarks that its an awful day; that she has n't been out of course, but even in the warm house has felt the cold. In fact, she looks blue and pinched. Whereat we wonder; for the room feels insufferably hot; but we place ourselves beside her where she sits cowering over the register, and conversation goes on with what spirit it may under these circumstances.

"At the end of an hour, we are surprised to find ourselves a little chilly. That is, our head is hot enough—a little too hot, perhaps—but both hands and feet are cold, and we are inclined to agree with our friend when she opines that 'the girl' must have let the fire go down. But glancing at the thermometer, we stare to see the mercury has risen instead of falling. It is now at 80. And after all, why should we wonder? Nature is inevitable in her retributions, and we, no less than the poor geranium in the window, must suffer the penalty of a deranged circulation when we violate her laws of temperature."

The mistake of overheating rooms is one which is often made, even by those who profess to be hygienists. Its results are exceeding disastrous to health, causing almost constant congestion of the head, with general disturbance

of the circulation. The proper remedy is to dress warmly, and then secure plenty of good fresh air, not allowing the temperature to run much above 60°. Careful attention to this subject for the next two or three months will obviate a vast amount of suffering. K.

The Need of Good Food.

THOUGH man does not live by bread alone, the bread portion of his sustenance is of very great importance. Ignoring the body is as fruitful in mischievous results as living for it alone. Body and soul are so dependent on each other that what affects one affects the other, and the more finely organized the body and the soul of any person may be, the greater must be his care to keep the two in perfect harmony.

It makes a world of difference what one eats. No class of people should be so particular about their food, the quality, the mode of cooking and the manner of serving, as those who live by their brains. The human animal who would keep in the highest working order must be as carefully groomed, as nicely fed, as perfectly appointed as Goldsmith's Maid or Dexter. The cooking a potato, the making and baking a loaf of bread, are to them matters of vital importance, as, indeed, they should be to everybody.

A great many people never stop to inquire what particular diet is best for them, but, following the injunction of St. Paul, in a sense never intended by him, eat what is set before them, asking no questions for conscience' sake or any other sake. If "hog and hominy" is the standard dish, they live on that; if hot soda biscuit and steak fried in lard are provided, that must reinforce their strength and content their appetites. It is a melancholy fact that horses and cows and dogs are more intelligent feeders than most human beings, and by natural consequence, they rarely have dyspepsia, gout, or humors. If men and women would be governed in their diet by reason as rigidly as brutes are by instinct, a large portion of the ills that flesh is heir to would never be heard of.

How many understand the effect of diet on the temper and disposition of the mind, and avoid whatever will make them irritable, stupid, or melancholy? How many mothers regulate the food of their children with reference to these results, and by so doing secure the tranquillity of their entire households? How many students are there, who, alive to the importance of proper diet, eat only food "convenient for them"?—*New York Tribune*.

No man ever did a designed injury to another without doing a greater to himself.

Propagation of Tubercle by Milk.

NOTWITHSTANDING our opposition to all kinds of extreme and radical views and the disposition to think that many extreme views have been advocated by some writers upon health and hygiene, which is doubtless the case, the evidences are each year becoming more and more numerous and conclusive that the nearer man can approach, dietetically and otherwise, to that condition which his anatomical and physiological characteristics clearly indicate to be the most natural for him, the less danger will he incur of being contaminated by disease. The following from the *Medical and Surgical Reporter* is certainly very suggestive:—

"At the last meeting of the French Association for the Advancement of Science, M. Chauveau gave to the section what he termed a demonstration of the transmission of tuberculosis by the digestive organs. He observed that his numerous observations enabled him to state that if the healthy young of animals susceptible of tuberculosis were fed with food with which the matter of tubercle was mixed, they would all exhibit tuberculosis in various organs. In anticipation of this meeting, he had purchased some healthy calves; and, having had them fed as described, on slaughtering them the sixtieth day after the first ingestion, the lymphatic system was found extensively tuberculized, while caseous deposits existed in the lungs. This thesis he demonstrates most conclusively, and he is supported in his inferences by an apparently wholly independent series of experiments carried on by Dr. Klebs, in Germany.

"Dr. Klebs asserts that the milk of tubercular cows brings on tuberculosis in various animals. The affection generally commences with intestinal catarrh, followed by tuberculization of the mesenteric ganglia, the liver, and spleen, and ending in extensive miliary tuberculosis of the thoracic organs. Infection by means of the milk may be without result in vigorous organisms; and the author has even seen full formed tubercles resorb and disappear through cicatrization. It is likely, adds Dr. Klebs, that the tubercular virus is contained in varying proportions in the milk of cows which are more or less diseased, and the scrofulosis may occur, in children born without tubercle, through the milk of an unhealthy mother or wet nurse. In conclusion, the author expresses the view that the virus is contained in the serum of milk, in a dissolved state, and that it is not destroyed by boiling, which is ordinarily insufficient.

"If these facts are not overstated, and they do not seem to be so, what a dangerous article must be that which is measured out in thousands of gallons daily, in all large cities, the product of phthisical cows, fed on distillery slops.

and choked with foul odors! The milk of one tuberculous cow will contaminate that of the whole dairy when mixed in the cans.

"The propagation of typhoid fever by milk has been only too clearly shown in London this year; and now have we not to lay to the charge of the same fluid the maintenance of a part of the terrible prevalence of phthisis among us?"

Fried Food.

THE following extract is from a foreign journal, and is well worthy of the consideration of farmers:—

"What singular combinations of edibles they make use of in the United States. Farmers in the West are not so long-lived as other classes, although under proper dietetic conditions they ought to be much more so. Fried dishes several times a day, with several fried articles at each of the three meals, is one of their common dietetic abominations. Dried beef, old cheese, and pickles, are among the common relishes, while lard and saleratus make their richer dainties infectious and caustic. We have seen on a farmer's table fried pork, fried eggs, fried potatoes, and fried griddle-cakes, for breakfast; fried ham, fried hominy, and fried parsneps, for dinner; and fried sausages and doughnuts for supper—all the frying done in lard.

"No class is so troubled with canker, erysipelas, tumors, cancers, and humors, as farmers; and the excessive use of pork, lard, fine flour, rich cakes, and greasy pastry, are enough to account for it. In dietetic habits, our farmers are sadly misled by the agricultural journals, nearly all of which pander to their prejudices and flatter their morbid appetites, by recommending and commending swine breeding and pork eating, while they fill their 'Kitchen Column' with recipes for making 'rich and palatable' puddings, pies, and other complicated dishes, which no stomach ever carried inside of a human body could long tolerate without death or dyspepsia. The essential need of our farmers is plain, wholesome food, properly cooked. This would give them much more available power for work, relieve them of many of the distresses and expenses of sickness, add many years to their life, and render old age 'green' and normal instead of dry and decrepit, as it is in most cases under existing habits."

Temper in Health.

EXCESSIVE labor, exposure to wet and cold, deprivation of sufficient quantities of necessary and wholesome food, habitual bed-lodging, sloth and intemperance, are all deadly enemies to human life; but there are none of them so bad as violent and ungoverned passions. Men and

women have survived all these, and, at last, reached an extreme old age; but it may be safely doubted whether a single instance can be found of a man with violent and irascible temper, habitually subject to storms of ungovernable passion, who has arrived at a very advanced period of life. It is, therefore, a matter of the highest importance to every one desirous of preserving "a sound mind in a sound body," so that the brittle vessel of life may glide down the stream smoothly and securely, instead of being continually tossed about amidst rocks and shoals which endanger its existence, to have a special care, amidst all the vicissitudes and trials of life, to maintain a quiet possession of his own spirit.—*Sel.*

A "Public Health Association."

ALL of the readers of the REFORMER may not be aware of the fact that there is at present in successful and efficient operation a "Public Health Association;" but such is the case, and it is a noticeable feature of this noble enterprise that it numbers among its most active supporters and enthusiastic workers many of the most talented physicians of the country. The whole aim and object of this association is to improve the sanitary conditions of the people, especially in large and populous cities where epidemic and contagious diseases have so often hurried thousands into untimely graves who might still be filling their proper station in life, had suitable attention been paid to those measures which prevent the occurrence of disease.

As already intimated, the efforts of the society are directed toward a research into the nature and causes of disease and the proper preventive means to be adopted. It is a good omen for the cause of hygiene that the attention of the public is being turned toward the importance of hygienic measures in the *prevention* of disease; and may we not hope that the remarkable success which has attended the even partial adoption of proper sanitary measures in New York city—whereby several thousand lives are annually saved—may have a powerful influence in convincing the people generally, and especially the medical profession, of the superior efficiency of those potent remedies which hygeio-therapy brings to bear in the *treatment* as well as *prevention* of disease?

At a recent meeting of the Public Health Association in New York, many able and interesting papers on various subjects relating to health and hygiene were read. Although some of them give evidence that the writers are not

yet entirely emancipated from the benighting influence of drugopathy; yet we gladly welcome numerous evident tokens of advancement, and expect the progress already made will lead to still greater and more decided reformatations. The following extracts are brief abstracts of two very excellent papers as reported in the *Sanitarian* :—

“THE HOUSEKEEPER’S RESPONSIBILITY.

“The selection of food and its preparation is left for us to do. In this partnership of nature and man, our part, the cooking part, is not a matter of indifference. We have one thing to do to convert the food of nature into the best and prepare it in the healthiest way, that it may most easily be converted into the nutriment that becomes blood and flesh. The dyer, whose colors are the result of various colors, selects them most carefully. The chemist produces his results by equally careful preparation, and all make the air and temperature subservient to their needs. They recognize the fitness and ratio of the materials which they use to secure the results they want. Nothing is left by them to accident and ignorance. All is done by them by rule. Animal life comes under the same rule. Life is lengthened or shortened as nutriment is given or withheld. Man is more affected by the kind of food he eats than the lower animals, because he is of a more sensitive disposition. All measures of his life ought to depend on his digestion. If, after our meal, the stomach complains, we have headaches, or are languid, nervous, depressed, have pains of neuralgia or indigestion, our energies are overborne, they must be referred to the way in which we have treated the stomach by putting unsuitable burdens upon it. A large portion of these ills are probably due to our own fault, and to our love of what we call really good eating, but the cook and housekeeper are more likely to blame. Woman is not a housekeeper by instinct or a cook by nature any more than men are natural shoemakers, but she has the capacity for the former work which he may have for the latter. They cannot be perfect in the duties of a housekeeper without suitable preparation any more than they can be milliners. Boys are trained to their professions. No such training is given the daughters for that station which is admitted to be their high aim in life—the superintendence of the household. Nowhere, except in the kitchen, where so much depends upon care in selection and preparation, is the use of the measure done away with; nowhere is so little care given to the selection of the articles of purchase.”

“HEALTH OF AMERICAN WOMEN.

“The condition of bad health pervades all classes, rich and poor, high and low, the educat-

ed and ignorant alike; it exists as the opposite of good health. The functions of the body, to be maintained in health, depend upon a proper observance of certain rules. There is no reason why girls should not have the same freedom as boys, in their dress, and the same privilege to light, air, and exercise. The fashionable boarding-schools for young ladies are an evil. Unless previously well trained by a sensible mother, it is a sad misfortune for a young girl to be sent to such a school.”

J.

To Young Men.

It is easier to be a good business man than a poor one. Half the energy displayed in keeping ahead that is required to catch up when behind will save credit, give more time to business, and add to the profit and reputation of your word. Honor your engagements. If you promise to meet a man, or do a certain thing at a certain moment, be ready at the appointed time. If you have a work to do, do it cheerfully, and therefore more speedily and correctly. If you go out on business, attend promptly to the matter on hand, and then as promptly go about your own business. Do not stop to tell stories in business hours.

If you have a place of business, be found there when wanted. No man can get rich by sitting around stores and saloons. If you have to labor for a living, remember that one hour in the morning is better than two at night. If you employ others, be on hand to see that they attend to their duties, and direct with regularity, promptness, and liberality. Do not meddle with any business you know nothing of. Never buy an article simply because the man who sells it will take it out in trade. Trade is money. Time is money. A good business habit and reputation is always money. Make your place of business pleasant and attractive; then stay there to wait on customers.

Never use quick words, or allow yourself to make hasty or ungentlemanly remarks to those in your employ; to do so lessens their respect for you and your influence over them. Help yourself, and others will help you. Be faithful over the interests confided to your keeping, and all in good time your responsibilities will be increased. Do not be in too great haste to get rich. Do not build until you have arranged and laid a good foundation. Do not—as you hope to work for success—spend time in idleness. If your time is your own, business will suffer if you do. If it is given to another for pay, it belongs to him, and you have no more right to steal it than to steal money. Be obliging. Strive to avoid harsh words and personalities. Do not kick every stone in the path; more miles can be made in a day by going steadily on than by stopping to kick. Pay

as you go. A man of honor respects his word as he does his bond. Ask, but never beg. Help others when you can, but never give when you cannot afford it, simply because it is fashionable. Learn to say, No. No necessity of snapping it out dog-fashion, but say it firmly and respectfully. Have but few confidants, and the fewer the better. Use your own brains rather than those of others. Learn to think and act for yourself. Be valiant. Keep ahead, rather than behind time.—*Church Advocate.*

Necessity of Ventilation.

I HOLD that the breathing of impure air is a fruitful source of disease of the right heart occurring after middle age. How many people ignorantly favor its occurrence by confining themselves to closely shut, non-ventilated, hot, stifling rooms, in which the carbonic acid has accumulated to two or three per cent of the air they respire! How many are thus destroyed by being compelled, through the exigencies of life, to pass the greater part of their time in pits or manufactories where ventilation is defective, or in which the air respired is poisoned by noxious fumes and offensive emanations from the materials undergoing the process of manufacture! How many are falling victims to the poisonous influence upon the heart of the atmosphere of an underground railway! What do these facts suggest? How are these evils to be prevented? The simple answer is: Let the rooms in which you live be effectually ventilated by an incoming current of air filtered from all adventitious impurities, and so provided that no draught should be felt; and by an outgoing current which shall remove from the apartment the carbonic acid, the carbonic oxide, sulphurous acid gas, sulphureted hydrogen, and other noxious compounds, as rapidly as they are generated. Apply the same principle to public buildings, theaters, schools, manufactories, pits, and to all places in which people are accustomed to congregate.—*Popular Science Monthly.*

Talk More to the Children.

A LADY writing to the *Lawrence Home Journal* says:—

“But it is in our homes that this speechlessness tells most fearfully—on the breakfast, dinner, and tea tables, at which a silent father or mother sits down in haste and gloom to feed their depressed children. This is especially true of men and women in rural districts. They are tired; they have more work to do in a year than it is easy to do. Their lives are monotonous, too much so for the best health of either mind or body. If they dreamed how much this monotony could be broken and

cheered by the constant habit of talking with others, they would grasp at the slightest chance of conversation. Sometimes it almost seems as if complaint and antagonism were better than such stagnant quiet. But there need not be complaint and antagonism; there is no home so poor, so remote from affairs, that each day does not bring, and set ready for family welcome and discussion, beautiful sights and sounds, occasions for helpfulness and gratitude, questions for decision, hopes, fears, regrets.

“Many a wife goes down to her grave a dulled and dispirited woman, simply because her good and faithful husband has lived by her side without talking to her. There have been days when one word of praise, or one word of simple good cheer, would have girded her up with new strength. She did not know, very likely, what she needed, or that she needed anything, but she drooped. Many a child grows up a hard, unimpressible, unloving man or woman, simply from the uncheered silence in which the first ten years of life were passed. Very few fathers and mothers, even those who are fluent, perhaps, in society, habitually talk with their children. It is certain that this is one of the worst shortcomings of our homes. Perhaps no other single change would do so much to make them happier, and, therefore, to make our communities better, as for men and women to learn to speak.”

Quarreling.

If anything in the world will make a man feel badly, it is unquestionably a quarrel. No man ever fails to think less of himself after than before. It degrades him in his own eyes, and disgraces him in the eyes of others, and, what is worse, blunts the sensibilities on the one hand, and increases the power of passionate irritability on the other. The truth is, the more peacefully and quietly we get on, the better for our neighbors and for ourselves. In nine cases out of ten, the better course is, if a man cheats you, cease to deal with him; if he is abusive, quit his company; and if he slanders you, take care to live so that nobody will believe him. No matter who he is, or how he misuses you, the wisest way is to let him alone; for there is nothing better than this cool, calm, and quiet way of dealing with the wrongs we meet with. Lies unchased, will die; fires unfanned, will burn out, and quarrels neglected, become as dull as the crater of an extinct volcano.—*Sel.*

It is not what people eat, but what they digest, that makes them strong. It is not what they gain, but what they save, that makes them rich. It is not what they read, but what they remember, that makes them learned.

Answers to Correspondents.

DISEASED LIVER.—J. J. M. complains of having been troubled with boils from infancy. Is now afflicted with a very troublesome itching of the skin of nine years' standing, so intolerable that sleep is sometimes prevented. Wishes to know cause and treatment.

Ans. Several causes may give rise to the itching sensation of the skin, which you describe. It may result from disease of some portion of the nervous system; but in your case we apprehend that the real seat of the difficulty is in the liver. This organ has probably become inactive, or there may be obstruction of some kind to the excretion of the bile. As the result, the bile elements remain in the blood, and act as an irritant to the delicate nerves of the skin.

Treatment. Adopt a strictly hygienic diet, avoiding everything of a clogging nature, as lard, pork, butter, large quantities of salt, sugar, etc. Live in the open air as much as possible, and attend well to all sanitary and hygienic measures. A vigorous dry-hand rub should be taken every morning. Monday and Wednesday take a wet-sheet-rub at 10 A. M., at a temperature of 90°, cooling down to 80°. Friday take a wet-sheet-pack at the same hour, continuing forty-five minutes, following with a pail-douche or brisk sponge-bath at 85°. A hot fomentation over the liver, alternating with cold compress, may be given for fifteen or twenty minutes previous to the wet-sheet-rub on Monday. You will do well to procure a copy of the Hygienic Family Physician, in which you will find full descriptions of the methods of giving the different kinds of treatment prescribed. For sale at this Office. Price, \$1.00.

INFLAMMATION OF THE PROSTATE GLAND.—G. D., Cal., writes for advice, saying that he has been treating with drug doctors for some time for inflammation of the prostate gland, but has received no benefit. Disease of two years' standing. Complains of frequent micturition, and occasional shooting pain in left hip, with discharge of mucus soon after. Highly colored urine.

Ans. It is quite probable that the real cause of this difficulty is a failure of the liver to perform its proper work, by means of which the urine is loaded with many irritating substances which produce irritation of the bladder and adjacent parts.

Treatment. Of course the treatment should be mainly constitutional. The same advice given in the preceding case with reference to diet and general habits should be carefully followed. Every irritating condiment should be discarded wholly. This will do more than anything else to effect a cure. The sooner you

relinquish drugs, the more hope of ultimate cure. For general treatment, you should take the same as recommended for the preceding case, together with cool sitz-bath once or twice a week for fifteen minutes.

DEAFNESS.—C. B. D. is troubled with deafness, the cause of which seems to be in the Eustachian tube. Says it was caused by a cold, and that she is now troubled with catarrh so badly as to be obliged to use *snuff*!

Ans. As you surmise, the probable cause of your deafness is inflammation of the lower portion of the Eustachian tube; but this results from the inflammation of the membranes of the nose, or the catarrh of which you suffer.

Treatment. No treatment will be of the least benefit to you until you discontinue the habit of snuff-taking. This alone is sufficient to cause serious inflammation. After dispensing with the snuff, you should take general treatment to secure activity of the skin and liver, as frequent wet-sheet-rubs and fomentations over the liver with occasional packs. The feet must always be warmly clad. Of course, all greasy food and condiments must be avoided. Use plenty of fruits and grains, discarding bolted-flour bread. For local treatment the tepid nasal-douche will be found very soothing. The water may be drawn into the nose, or may be injected with a syringe for the purpose. Frequently gargling cold water in the upper part of the throat is also very useful to allay the inflammation.

Another correspondent says: 1. Tell me what I shall eat. I grow fat on graham bread. 2. Are butternuts, black walnuts, and hickory nuts, healthy? 3. Is cider healthy? My dear mother lived ninety-seven years and drank hard cider the year round.

Ans. 1. Graham bread in less quantity with plenty of exercise. 2. They may be eaten in moderate quantity with the regular meals by those whose powers of digestion are unimpaired. 3. Hard cider is not fit to be placed in the stomach of any intelligent health reformer, since it can possibly do no good, and must do more or less injury. If your dear mother had drank no hard cider, she would very likely have completed a full century. Many drunkards and tobacco-users have lived to very great age.

P. G. C. mentions the case of a little child which has been afflicted with scrofulous sores and blotches from birth. Says the hygienic diet was adopted with apparently beneficial results to the general health, but with the increase of the scrofulous sores; what is the cause and cure?

Ans. It is a quite frequent occurrence in hygienic practice that diseases manifest themselves with greater power and activity when

the general health of the patient is improved. The reason of this is that disease is a remedial effort, and so the effort will be more or less unsuccessful according as the vital powers are more or less impeded in their work. You do not, or at least should not, wish to cure the scrofula. You must aim to cure the patient. Do not attempt to cause the scrofula to "strike in," as it is termed, as such a course would imperil the infant's life. Aim to improve the general health as much as possible by giving it proper food, frequent baths, etc.

L. M. C. asks: What hopes, if any, through the REFORMER, or any other means, are there of a lady, having had a family of twenty children, age about forty-five years, who is now suffering from an abscess on the left side just below the breast, which discharges continually, and has been doing so for about a year. The patient is very weak, though able to sit up. Previous to the breaking out of the abscess, for about a year, she suffered so much with her left lung, in the upper part, that she could scarcely endure the weight of the clothes she wore. Since then, she has coughed and raised less, with less pain.

Ans. There can be little doubt that the lady is suffering from an abscess of the lung, which has opened externally. The prospects of her recovery are very unfavorable, although we cannot say that it is impossible from the description of the case which is given. The only hope for her lies in the most prompt and continued application of all known hygienic remedies applicable to her case. She can expect little benefit unless she can be placed under the immediate care of a skillful hygienic physician. If able to do so, she should go to some good health institution.

Treatment. Plenty of active, out-of-door exercise. Proper diet. Sitz-bath on Monday, Wednesday, and Friday, of each week, at 10 A. M. Continue the bath fifteen minutes, beginning it at a temperature of 90° and cooling it 5° at the end of each five minutes, ending the bath at a temperature of 75°. Take a foot or leg bath on the remaining days of the week just before retiring, alternating with cold and hot, and ending with the cold. An injection of from four to six ounces of cool water into the rectum each morning before evacuation will be found very useful.

J. F., New York city, complains of retention of urine, so that the use of a catheter is necessary; wants to know what he can do to relieve the difficulty.

Ans. The difficulty is probably of such a nature as to require surgical assistance; if so, your best course would be to apply to a skillful surgeon for examination. It is possible, how-

ever, that it may arise from inflammation or enlargement of the prostate gland. In the latter case, you should follow the directions given to G. D. on the preceding page.

W. P., St. Louis, says, Pure Africans seldom if ever have yellow fever. Please explain why.

Ans. It is a well-known fact that people may become so accustomed to certain causes of disease that they will be resisted and repelled with nothing more violent than the ordinary physiological actions of the system. Thus, the inhabitants of malarious districts after a time becomes so thoroughly acclimated that they seem to suffer very little ill effects; while a stranger coming into the neighborhood will almost immediately be seized with fever and ague. Africa, with its tropical climate, luxuriant vegetation, and long rains, is certainly the most favorable locality for the production of those causes which produce yellow fever, so that the negro would very naturally become quite accustomed to resist all morbid influences of this character. It may be further remarked that the emunctories of the negro seem to be more active than those of white people generally. It is from this fact that the prejudice with reference to disagreeable odor has arisen against the colored race.

A. C. H. asks, What effect has licorice upon the stomach when taken for a cold?

Ans. Licorice can produce no effect upon the stomach or any other organ, as is also true of every other drug. But through the action of the stomach, liver, and mucous membrane of the lungs upon the licorice, the vital machinery is to a certain extent deranged, and actual harm sometimes done, while no real good is ever accomplished.

R. B. D., Bay Co., Mich., calls attention to a peculiarity of his little daughter, aged twelve years. She seems to be well in body, and manifests no deficiency of mental capacity, but whenever she starts to go to any place, she exhibits a singular hesitancy; taking a step or two forward, and then replacing her feet, or stepping back into position again. The same is noticed with reference to the motion of her hands.

Ans. The peculiarity may be simply a habit, but is quite likely an affection of that portion of the brain which performs the function of co-ordinating voluntary motion. The only course to be pursued with reference to treatment is simply to keep the system in as good a condition as possible by careful attention to the general health. She should be placed upon a strictly hygienic diet, and should take a general bath once or twice a week.

SCIENTIFIC.

Fire.

SCARCELY a more curious phenomenon exists in nature than that of burning, or combustion, which every day brings gratefully to our notice during the long winter months. How interesting it is to sit before an open grate [or fireplace and see the forked tongues of flame rapidly licking up the glowing embers! The ancients gazed upon such a spectacle with awe, and worshiped the fiery element. But modern science manifests no such weakness; but boldly inquires, What is fire? and what is a flame? Here, then, is the answer:—

Fire is simply a rapid combustion, or, in other words, a rapid combination of elements in chemical action. Most fire is produced by the union of oxygen with carbon, as is the case in the burning of wood or coal; but any rapid chemical action causing flame may also be termed a fire; so that it is a manifest error to say, as do many, that a fire is the union of oxygen and carbon. Fire may be produced by dropping powdered arsenic or antimony into chlorine gas. The chemist of a century ago supposed that fire was produced by the disengagement of a subtle element known as "phlogiston" from some element with which it was engaged; but their absurd theory was long ago discarded.

And now what is flame? Let us examine a burning candle, and see. We notice first that the candle is composed of two essential parts: A wick, surrounded by tallow, wax, or some other carbonaceous substance. At the top of the candle, immediately below the flame, is seen a small quantity of oil or melted wax, which appears as though held in a shallow cup, as it really is. By dropping into this a few grains of charcoal dust, you will be enabled to observe that the fluid is in constant motion, being rapidly drawn up into the center of the flame by means of the wick, just as a piece of cloth or sponge will soak up water.

But what becomes of the oil after it passes up the wick? If you observe carefully, you will see that all about the charred portion of the wick there is a non-luminous appearance. This you will observe more readily as the wind or your breath blows the flame a little to one side. In other words, the flame is hollow, being luminous only on the outside. The interior of the flame is filled with gas, which is produced by the decomposition of the oil or wax by the heat.

But what makes the luminosity of the flame? It is a familiar fact that all solid substances, when heated to a sufficiently high temperature, emit light; as, for example, a piece of iron heated in a blacksmith's forge to a white heat. In the candle there are millions of little particles of solid carbon floating about, and these are heated to the point of incandescence by the great heat which results from the burning of hydrogen, which is going on in the blue portions of the flame. The existence of these solid particles can be easily demonstrated by any one by simply holding in the flame of the candle or lamp some solid substance, as glass, upon which large quantities of soot or lampblack will accumulate.

The phenomena of candle burning, then, are these: 1. The melting of the wax or tallow. 2. The drawing of the liquid oil up the wick to the point of 'greatest heat. 3. The decomposition of the oil, producing a gas composed of a chemical compound of hydrogen and carbon. 4. Decomposition of the gas into hydrogen and carbon. 5. Heating of the solid particles of carbon, or charcoal, to the point of incandescence by the burning hydrogen. 6. The giving off of carbonic acid as the result of the burning of the carbon, and watery vapor from the burning of the hydrogen.

In the burning of oil, the processes are entirely identical, with the exception of the first. In gas burning, the different stages are the same as in candle burning, with this difference only that the solid carbon is vaporized at a distance from the point of burning, being transmitted in pipes.

How Trees Are Killed by Lightning.

ALL who have examined a tree which has been destroyed by a thunder-bolt will have noticed not only how the layers of wood have been scattered and separated into strips, as if full of wind and shakes, but also the dryness and brittleness of the wood, as though it had been through the process of curing in a kiln. This is attributed to the instantaneous reduction of the sap—the moisture within the wood—into steam. When this moisture is abundant, as in May or early June, the force and amount of the steam not only bursts and separates the layers and fibers, but rends the trunk in pieces, or throws off a portion of it, down a line of greatest power or least resistance. And when the amount of steam thus suddenly generated is less, owing to the drier condition of the steam from continual evaporation and leaf exhalation, there may be no external trace of the lightning stroke; yet the leaves will wither in a few days, showing that the stem has been rendered incapable of conveying supplies, and the tree will either partially or entirely die. Still lighter discharges may be conducted down the moist stem without any lesion or hurt.—*Building News.*

THE length of a flash of lightning is generally greatly under-estimated. The longest known was measured by M. F. Petit at Toulouse. This flash was ten and a half miles long. Arago once measured a series, which averaged from seven to eight miles in length. The longest interval ever remarked between a flash and the report was twenty-two seconds, which would correspond with a district of fourteen miles. Direct researches have shown that a storm is seldom heard at a greater distance than from seven to ten miles, while the average are barely heard over four or five miles off. This fact is the more curious as cannon may be distinctly heard double or treble that distance, and in special cases, much farther. During the bombardment of Paris, in the winter of 1870, the Krupp guns, which had been left over from the Exposition of 1867, were heard at Dieppe, a distance of eighty-four miles. Arago states that the firing at Waterloo was audible at Creil, one hundred and twenty miles distant.

Items for the Month.

Blue Cross.

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.

Still a Chance.

WE offer still another opportunity for those of our old subscribers who have not yet renewed their subscription for 1874, to do so, hoping that they will improve it immediately. As previously stated, our reason for making this slight departure from the strictly advance-pay system which we have adopted, is to give our friends a little longer time in which to pay up. This we have considered quite justifiable in view of the "hard times" which have resulted from the "panic," and our forbearance has been amply rewarded by the hundreds of renewals which have been made during the past month. Several hundreds of our old patrons have still failed to subscribe for 1874, but we shall not drop their names this month, as we feel assured most of them, and we hope all, intend to renew their subscription.

We do not wish to strike from our list the name of a single subscriber, and hope to make the REFORMER for 1874 such a journal that its readers will feel themselves unable to do without it, as many now express themselves. The times have been somewhat hard, but not so much so as people thought, and are now improving. But if times are hard, so much more need for economy; and how can a dollar be better invested than in procuring information with reference to the means of preserving health, and so avoiding disease, suffering, loss of time, and doctors' bills?

The REFORMER is unquestionably the cheapest health journal published, and our constant aim is to make it the best. We leave our readers to judge of our success.

Time Extended.

So many of our agents, and others desiring to canvass, have requested an extension of time that we have decided to *continue* our very liberal offer to canvassers. See call for canvassers on second page of the cover of this issue.

We wish to engage the services of one hundred canvassers, immediately, in addition to those already at work. The next sixty days will be even more favorable for work of this kind than the past two months. The times are not so hard, and money is more plenty. People have met most of their expenses for the winter, and, with this burden off their minds, will be much more ready to respond to the solicitations of our agents.

As remarked last month, we feel assured that "the business is a paying one, as well as philanthropic." We have yet to receive the first discouraging word from any of our agents. On the contrary, all are meeting with good success.

Who will accept of our liberal offer to canvassers?

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THE books named below will be furnished by mail, post-paid, at the prices given. By the quantity, at the Office, or delivered at the express or R. R. freight office, for cash accompanying orders, at one-fourth discount on those books published at this Office. Those books in this list not published by us will be furnished by us as low as by their publishers.

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