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Nature's Laws, God's Laws; Obey and Live.

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WINE AND THE BIBLE.—No. 2.

EXAMINATION OF TEXTS.

TEXTS WHICH ARE SAID TO FAVOR THE USE OF WINE.

"In the holy place shalt thou cause the strong wine to be poured unto the Lord for a drink-offering." Num. 28:7.

WHATEVER semblance of argument may be founded upon this text loses all its force upon reference to the original. The term which is here rendered "strong wine" is shekar, which might with much greater propriety be translated "sweet wine," since that is the literal meaning of the word. It is so rendered by Kitto, who says that the article referred to in this text was a sweet juice derived from the palm-tree or any sweet fruit other than the grape. That this position is correct is conclusively proven by the testimony of an eminent Jewish rabbi, who says of the Jews, "In their oblations and libations, both public and private, they employ the fruit of the vine; that is, fresh grapes and unfermented grape juice." "Fermentation is to them always a symbol of corruption."

According to Plutarch, even the Egyptians used only unfermented wine in sacrifices.

"Wine which cheereth God and man." Judges 9:13.

The wine referred to here cannot be the fermented kind; for the original word so rendered is *tirosh*, which, as previously shown, was always applied to grapes themselves or to the fresh juice. Some learned Bible commentators hold that the word refers exclusively to the whole ripe fruit. Travelers in wine-producing countries assert that the fresh juice of the grape has a peculiarly refreshing effect when taken cool, and that any quantity can be drunk without any of the effects of fermented wine.

"He causeth the grass to grow for the cattle, and herb for the service of man; that he may bring forth food out of the earth; and wine that maketh glad the heart of man, and oil to make his face to shine," etc. Ps. 104:14, 15.

The wine referred to here must be of the unintoxicating kind; for it is represented as being a natural product, like grass, the herb, and oil. Fermented wine is not a natural result of growth. The Creator never made alcohol in any form. Not a single plant contains it. It is the product of decay and rottenness. As remarked in reference to the preceding text, new wine is a most refreshing and cheering beverage.

"Give strong drink unto him that is ready to perish." Prov. 31:6.

Even this text is sometimes used as an apology for the use of liquor, though at the most it could be made to excuse the use of strong drink only in cases of threatened death. An understanding of the real meaning of the text clears up all difficulty attaching to it. The term "strong drink," had no reference to distilled liquors, as in present usage. The art of distillation was unknown to the ancients, not being discovered until the ninth century of the present era. Strong drink, then, did not mean a liquor strong in alcohol, like brandy or rum. It referred to a liquor, sometimes called "mixed wine," which was a compound of wine with wormwood, myrrh, nux vomica, and narcotic drugs, which rendered it very intoxicating. It was customary, among ancient nations, to administer this strong, or intoxicating, liquor to criminals who were about to be executed, in order to stupefy them and thus mitigate their pain. In obedience to the common custom, a draught of this powerful opiate was offered to the Saviour, as he hung upon the cross. It was to this well-known custom that the wise man had reference when he said, "Give strong drink unto him that is ready to perish," just as the surgeon would say, Give chloroform to a patient about to undergo a surgical operation.

"The Son of man came eating and drinking, and they say, Behold a man gluttonous, and a wine-bibber," etc. Matt. 11 :19.

It will not be denied that Christ drank wine; but there is not the slightest evidence that he ever drank a single drop of fermented wine. Sweet wines which had been preserved by some one of the methods previously described, were by many persons drank to excess, just as food may be taken in excessive quantity. Such persons were called wine-bibbers, though they could not be called drunkards. But there is no evidence that Christ belonged to this class. The charge was made by wicked men, his enemies, who also accused him of gluttony, and on another occasion said, "He hath a devil." Was he a glutton? If not—and he certainly was not—how can it be claimed that he was a wine-bibber? The same authority which would prove him to be a wine-bibber, would also make him a glutton and one possessed of a devil.

"When the ruler of the feast had tasted the water that was made wine, and knew not whence it was (but the servants which drew the water knew), the governor of the feast called the bridegroom, and saith unto him, Every man at the beginning doth set forth good wine; and when men have well drunk, then that which is worse; but thou hast kept the good wine until now." John 2: 9, 10.

a. If the wine referred to above was of an intoxicating nature, then the brewer and the distiller have, as they claim, a sufficient apology for their nefarious business; for in manufacturing alcohol with which to poison their fellow-men, ruin their constitutions, squander their property, and render their children homeless and their wives widows—in all this work of evil, they are only imitating the example of their divine Master! Such a position is too unreasonable to be tenable; for the work of rum savors more of a Satanic than of a divine origin. No; it is impossible for any one but the veriest infidel to regard it consistent for the Saviour of mankind to lend his influence, his example, in favor of a practice which even human wisdom can see is an unmitigated curse to the race.

b. But how was this miracle wrought? It was simply by a shortening of the natural process by which wine is produced. The grape-vine sucks up water through its rootlets, and by a slow and mysterious process continuing through several months finally converts it into wine in its clusters of luscious fruit. Man obtains it by simply pressing it from the grapes. Christ, by his infinite wisdom, by his knowledge of the intricate processes carried on by the plant, for he made the grape-vine, performed the same work in a moment. The product was the same as though it had been produced in the ordinary way. Is the product of the vine, new wine, fresh grape juice, fermented or intoxicating? No; it is unfermented and wholesome. The grape-vine cannot produce alcohol. The Creator has not formed it in any plant. In simply shortening the natural process of wine-making, then, Christ produced not fermented but unfermented wine.

c. Again, the governor of the feast pronounced the wine produced by Christ the best, saying, "Thou hast kept the *good* wine until now." If we can ascertain which kind of wine was considered *best* among the Jews, we shall be able to settle this question with absolute certainty. An appeal to recognized authority will do this.

Says Dr. Jacobus, "Those were considered the best wines which were least strong."

Prof. M. Stewart says that the ancients regarded unfermented wine "as of a higher flavor and finer quality than fermented wine."

Kitto says of wine which had been preserved from fermentation by boiling, "Such was esteemed [by the Jews] the richest and the best wine."

There can be no doubt, in view of such testimony, that the wine which Christ made, and which the governor of the feast pronounced the best, was the unfermented kind, which was commonly considered the best among the Jews.

d. Lastly, Dr. Isaacs, an eminent Jewish rabbi, bears the following testimony: "The Jews do not, in their feasts for sacred purposes, *including the marriage feast*, ever use any kind of fermented drinks."

The Passover Wine.—Was the wine used by Christ and his disciples at the passover supper, just before the crucifixion, fermented or unfermented?

This is an interesting question; for all Christendom have for hundreds of years acted upon the supposition that the wine employed was fermented, and have used this kind of wine in the sacrament. If we can ascertain with certainty the character of the wine employed by the Jews in the passover feast, we shall be able to settle this question satisfactorily. Can we do so? The following facts seem to make the matter sufficiently clear:—

a. The process of fermentation is one of putrefaction or decay. The ancients understood this, and were also acquainted with the fact that fermentation is occasioned by leaven or ferment.

b. Not only leavened or fermented *bread* was forbidden during the passover, but all fermented *things*. Says Kitto, "All fermented *substances* were prohibited during the

paschal feast of the Jews, and during the succeeding seven days."

Hence, the passover was called the "feast of the unleavened," the word bread being not found in the original.

c. If the body of Christ was necessarily represented by bread which was absolutely free from ferment or leaven, surely his blood —"which is the life"—should be represented by wine equally free from putrefactive elements.

In view of the above facts, we are certainly justified in the belief that the communion wine used by our Lord was wholly free from alcohol.

"For every creature of God is good." 1 Tim. 4:4.

Fermented wine is not a "creature of God." It is the poisonous product of a destructive process, and not the result of a creative act, so that it can in no sense be called a "creature of God." Unfermented wine, the fresh juice of the grape, is certainly good and wholesome, and it may with propriety be called a "creature of God;" for it is one of the products of his hands, as shown by Ps. 104:14, 15.

"Drink no longer water, but use a little wine for thy stomach's sake." 1 Tim. 5:23.

This text is regarded by moderate drinkers as their stronghold. Whenever reasoned with on the subject, they quote Paul's advice to Timothy and apply the same to themselves irrespective of the state of their stomachs. In the great majority of cases, the stomach makes no complaint until after the habit of wine-taking has been formed. This fact alone is quite significant, but we would invite the attention of those who seek consolation from this text to the following points:—

a. The fact that it was necessary for Paul to advise Timothy to "drink no longer water, but wine," proves conclusively that Timothy was not in the habit of drinking any kind of wine.

b. Paul recommended wine as a medicine for Timothy on account of some weakness of his stomach, and other infirmities. This would not be recommending it for the habitual use of well persons.

c. The wine which Paul recommended was such as would be good for Timothy's stomach, else he would not have advised him to use it. Alcoholic drinks are notoriously bad for even a healthy stomach. They interfere with digestion, and are one of the most prolific causes of dyspepsia. Unfermented wine, on the other hand, has just the opposite properties. It is a most wholesome article, and was much esteemed by the ancients for the very purpose for which Paul recommended wine to Timothy. The conclusion is irresistible, then, that the kind of wine recommended by Paul was the unfermented juice of the grape. This position is confirmed by Athenæus, who recommends sweet wine "as being very good for the stomach." Paul certainly could not have recommended fermented wine to Timothy; for Pliny, Philo, and Columella, in speaking of fermented wines, say that they *produced* "headaches, dropsy, madness, and *stomach complaints*." Who will believe that Paul advised Timothy to use the very article that would cause his stomach to become diseased if it were not already so?

"Not given to much wine." 1 Tim. 3:8; Titus 2:3.

Moderate drinkers claim to find in these and similar texts ample support for their practice. They argue that Paul did not condemn the use of wine entirely, but only its excessive use. In 1 Tim. 3:3, Paul says, "Not given to wine," no qualifying word being used. The other expressions evidently do not mean that the use of intoxicating wine in any degree would be allowable. If such a rule of interpretation as moderate drinkers adopt were followed in explaining other similar expressions, we should have some very strange doctrines taught. For example, we read in Eccl. 7:17, "Be not *over-much* wicked." According to the rule referred to, we must understand this to mean that a man may sin in moderation if he is careful to avoid becoming excessively wicked. Such a doctrine would be fatal to Christianity, and obnoxious to reason. Any degree of indulgence in sin is wrong. Any degree of indulgence in intoxicating drinks is also wrong.

We may allow a literal interpretation of the text by reference to the fact that even unfermented wine may be used in excess, just as food may be indulged in to a gluttonous extent. Such use of wine may have been referred to by the apostle.

Work Is Health and Happiness.

BY ELD. D. M. CANRIGHT.

"And I was afraid, and went and hid thy talent in the earth: lo, there thou hast that is thine. His lord answered and said unto him, Thou wicked and slothful servant." Matt. 25:25, 26.

My text is a part of the Lord's parable concerning talents. A certain nobleman, having a large amount of property, being about to travel into a far country, called his servants and delivered his goods to them. To one he gave five talents, to another two, to another one, to every man according to his ability. Then he went on his journey.

The man who had five talents did well with his, and doubled it; so did the man who had the two talents; but the servant who had the one talent did nothing at all with his, only to do it up carefully and hide it. When the master came back he inquired for the talents. This man said to him, "I was afraid and went and hid thy talent in the earth, and here you have it." His excuse was that he was afraid. "His lord answered and said unto him, Thou wicked and slothful servant." The trouble with this servant was not what he himself supposed it was. It was not fear, but it was slothfulness, *i. e.*, in plain language, laziness. This is probably given to teach us that it is the duty of each one to work; that this is the object of life, and that God will punish men in the Judgment, not simply for what they have done that is wrong, but for doing nothing, and so idling away their time.

The very object of our existence here is to work. No man has a right to be idle or shiftless. It is a sin against God, and against his fellow-men, and against himself. Work, activity, *life*, is the great object of our being, the only source of health and happiness. The great Creator himself has set us the example of work. "In six days the Lord made heaven and earth." It was a mighty work to make our earth, and God worked in doing it.

Again, Jesus says of his Father, "My Father worketh hitherto, and I work." John 5 : 17. Look at this mighty earth of ours. Behold its towering mountains, its broad, sweeping plains, its rolling rivers, and the great and mighty ocean. All this was made —made by the Lord. Lift up your eyes and behold the millions of stars in the heavens. Each one of these is an orb, a real globe like our own; some of them are thousands of times larger. There is a Being, a living, personal Being, who has really made these. They did not make themselves. They were not all made at one time. Probably the great mass of them were made before God created our earth, and no doubt many of them have been made since that time. The Creator is not idle. He is the great center and fountain of all life, animation, energy, and work; and this very principle God has stamped upon all the works of his hands.

The Son of God himself is a worker—he is not idle. He wrought with the Father in creating our earth, and all that is therein. Thus we read of him: "In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not anything made that was made." "He was in the world, and the world was made by him, and the world knew him not." John 1 : 1–3, 10.

Not only did he make our earth, but Paul says that God made the worlds by him. "God . . . hath in these last days spoken unto us by his Son, whom he hath appointed heir of all things, by whom also he made the worlds." Heb. 1 : 1, 2.

And when Jesus came to our earth, he did not come as an idler, to be waited upon, but his whole life was one of active, earnest labor. Born among the poor, he learned the carpenter's trade, and worked as a day laborer till he was thirty years of age. During his ministry, never did any minister work harder than he. He gave his disciples this lesson: "But it shall not be so among you; but whosoever will be great among you, let him be your minister; and whosoever will be chief among you, let him be your servant: even as the Son of man came not to be ministered unto, but to minister, and to give his life a ransom for many." Matt. 20 : 26–28. Again he says, "But I am among you as he that serveth." Luke 22 : 27. Again, we read that he went about doing good. Acts 10 : 38. Yes; the Son of God, the representative of the great Creator, set us an example of work which every one should imitate. The Judgment will show that he has not been idle since he returned to Heaven.

Even the angels of God in Heaven, those pure, and high, and holy beings, do not spend their time in idleness. They do not simply stay around the throne of God and sing, and pray, and do nothing to all eternity. No; the Bible reveals them to us as constantly busy, thoroughly employed, earnestly at work all the time. Of them we read: "Are they not all ministering spirits, sent forth to minister for them who shall be heirs of salvation?" Heb. 1 : 14. Notice that *all* of them are ministering spirits, that is, serving spirits. They are sent forth to serve the heirs of salvation, to assist them, to labor for them. One of the highest of these came to John upon Patmos, and John was about to worship him, but he corrected him, saying, "I am thy fellow-servant." He was a fellow-worker with John among the servants of God. In Psalms 103 : 20, the angels are described as being ready to go here and there at the command of God. All through the Bible the angels are represented as coming from Heaven to earth upon errands of mercy, to assist the children of God. They are represented as taking an active and deep interest in the work of salvation. Indeed, in every glimpse we have of them we only behold them as active, earnest workers; and this is reasonable, because they could not be happy without it.

Look at nature everywhere, and you will see it all alive and stirring. See the ants! how constantly and faithfully they labor! Behold the bees! see the little birds among the branches! look at the insects! Every planet in the heavens is in constant motion. Our earth itself is not only turning over once every day, but is speeding through space with mighty velocity. The hand of the great and active Creator is seen in all this. It is just like himself.

Action, work, is absolutely necessary to the preservation of health, and the development of strength. Where action ceases, weakness, debility, disease, and finally death ensue. Look at the water as an illustration. Here is a small pond. It has neither inlet nor outlet. Protected by the hills, its face is scarcely ruffled by the moving air. Now look at it. It is still, motionless—dead. It soon becomes filthy, covered over with a green slime, and the vapors that ascend from it are filled with malaria, disease, and death. This is a fair sample of inactivity and slothfulness.

But, look at the little rippling brook. Every drop in that brook is constantly moving hither and thither, rolling and tumbling over the falls, moving mills, turning wheels, grinding corn, and performing labor everywhere. Now see how clear, how sparkling, how healthful that water looks. The mere sight of it is joy. How we love to drink its drops, and bathe in its waters! Why is this so different from that pond? My lazy, shiftless friend, mark the answer: One is idle, the other is moving.

Now if God made all other things to work, how much more so man! No point in revelation is plainer than that man was made to work. Even in Eden, man was placed in the garden to dress and to keep it. In his moral law God says, "Six days shalt thou labor, and do all thy work." Some have been troubled over this positive statement—"Six days *shalt* thou labor." They inquire, Do you think it really means that every man shall labor six days? I am strongly inclined to believe that the Lord meant just what he said; viz., that it is the duty of every man to be employed in some useful manner six days every week. He has no right to be idle. It makes no difference how rich he is; it is his duty to be active, to make his life a blessing to others.

The apostle has spoken plainly upon this question. He says: "And that ye study to be quiet, and to do your own business, and to work with your own hands, as we commanded you." 1 Thess. 4:11. They must work with their own hands, and mind their own business. Again he says: "For even when we were with you, this we commanded you, that if any would not work, neither should he eat." 2 Thess. 3:10. This is very strong language. Paul says if there is any man among you who is idle, and does not work, do n't you give that man anything to eat. Starve him out. If he prefers to starve rather than to work, let him die. Neither the Lord nor the world has any farther use for him.

In perfect harmony with this is the Lord's parable of the rich man: "And he spake a parable unto them, saying, The ground of a certain rich man brought forth plentifully; and he thought within himself, saying, What shall I do, because I have no room where to bestow my fruits? And he said, This will I do: I will pull down my barns, and build greater; and there will I bestow all my fruits and my goods. And I will say to my soul, Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry. But God said unto him, Thou fool, this night thy soul shall be required of thee." Luke 12:16–20.

Here was a rich man who had accumulated, doubtless by hard work, a large property. He had houses, and barns, and goods of every kind in abundance. He reasoned as many are apt to do. He said to himself, Now I have worked hard enough; I have got enough to make me comfortable the rest of my days; I am not going to work any more; I will sit down, eat, drink, and enjoy myself. But when the Lord saw this, he said, It is time for that man to die. If he has got through work, neither I nor the world have any farther use for him. This night let him die. This shows how the Lord regards laziness. It is just what we should expect from the nature of our blessed God. It is not in his nature to love and fellowship lazy and indolent persons.

It is a universal law of nature that each one loves those of his kind. Gamblers seek the society of gamblers; tipplers, the society of tipplers; pious people, the society of the pious. And if there is anything that is disgusting to an active, energetic, driving man, it is a lazy, shiftless, indolent man. He does not want him around. It stirs up his indignation to behold him. So we might know without any revelation from Heaven that God would not love lazy people.

There are many lazy people dreaming of Heaven. They think that if they can only get to Heaven, they will have a whole eternity to spend in blissful idleness, with nothing to do but to sit down, eat, drink, and sing. Heaven pity the poor, deluded souls. There is no such Heaven as that, nor will

there ever be. I expect, if ever I reach Heaven, to find it the most active, busy, stirring place in the universe. It will be the last place for a lazy man.

The question is sometimes asked, Can a lazy man be a Christian? To me the very question is absurd. The answer is written, not only all through the book of God, but everywhere in nature, No; emphatically, *no*.

But there is a farther thought in this connection. It is not only necessary that man should work, but this work, in order to make us happy, must be largely performed with the object of helping others, in doing others good. This is the main point in the question. It is not simply work in itself that is so necessary, but it is the object for which this work is done. It should be done to help and bless others. One of the most precious texts in all the book of God contains a sermon upon this question. Here it is: "I have shewed you all things, how that so laboring ye ought to support the weak, and to remember the words of the Lord Jesus, how he said, It is more blessed to give than to receive." Acts 20:35.

We are to help support the weak. And this principle is inculcated in the words of the blessed Jesus, "It is more blessed to give than to receive." There is not a truth in all nature that is plainer than this. There is not a doctrine in revelation that is more important than this. Indeed, it is the very key-note to the religion of the Bible. This is the key which opens all the treasures of happiness which God has ever made. Without this there is no happiness. Who has not tried it enough to know that it is more blessed to give than to receive? When a person is in need, a gift from another is sometimes very acceptable, and brings much joy and pleasure. But is not the joy of the giver greater than that of the receiver? Every one who has tried it, and observed the result on others, knows that this is the truth. Perhaps you have visited a poor, sick family. You find them destitute, and in need of food, clothing, and work. You go to them with some bread, some fruit, etc. You take hold and do up their washing, clean up their house, and cheer them up. That has done them great good. But now look at your own heart as you go home. How light it is, what a good feeling there is down there! Look in the mirror; how pleasant your face looks! Why, you feel real happy, don't you? You cannot possibly feel any other way after such a day's work. Have you never tried it, dear reader? If you have not, you have never tasted real happiness.

Once there was a very poor man who had a large family. Work was scarce; times were hard; his family were in need. He got into debt and could not pay, and he became discouraged, and decided to commit suicide. Early one morning he went to a high bridge, designing to drown himself. But there he met another man. He was a very wealthy man, but his cares and anxieties had so worn upon him that he was tired of life, and he, too, had come there to drown himself. The two happened to meet; an explanation followed. The poor man said poverty had driven him to this terrible act. The wealthy man told him if that was all he could soon remedy that. He had thousands of dollars for which he cared nothing. He then gave him quite a sum of money, for which the poor man felt overjoyed and very thankful. He returned home, weeping for joy and thanking and blessing his benefactor. The sight of this made the rich man feel so good and so happy himself that he did not want to die just then. He had learned something. He thought if giving a little made him feel so well as that, there was something yet for him to live for. So he went home a wiser and happier man. He had just learned what he had failed to discern all his life before; viz., that working for others' good is happiness to ourselves.

My observation has thoroughly satisfied me that there are thousands of people who are simply dying of selfishness. Self has been the great object for which they have lived. They have thought of self, have lived for self, worked for self. They have thought of nobody's happiness, and sorrows, and wants, but their own. Me, my farm, my house, my debts, my sorrows, self—everything centers in themselves. They meditate on themselves, they plan for themselves, until they have shut out every ray of light, and every source of happiness. They have indulged and petted self until they are filled with darkness and sorrow, and this has affected their lives. They have the "blues," they are gloomy, and sad, and desponding. They are utter strangers to cheerfulness and happiness. They send for the doctor, swallow patent medicine; but it is of no use. They shut themselves up in their own rooms, and there they stay and think how weak and feeble and bad off they are.

I have seen many cases like the above-described, and I have seen some of them thoroughly cured. It was not done, however, by medicine; it was not done by taking a foreign trip; neither was it done by a change of climate; but it was done simply by getting their attention off from themselves, and going to work for the good of others. In their

endeavors to encourage others, they forgot their own discouragements. In their efforts to help others, they forgot their own weakness, and in putting forth an effort to lift the burdens of others, they obtained strength to raise their own. Cheerfulness soon took the place of gloominess, hope that of despondency, and action imparted life and health.

Many are as weak as water, mentally and physically. And why? Simply from a lack of activity and work. Take your arm; tie it up carefully, nurse it, and keep it there for six months. Do not let it lift an ounce; do not let it lift itself even. Now untie it and put it to work. How much strength would it have? Probably it could not lift its weight, it would be so weak. Now look at that blacksmith. He bares his right arm; he lifts that heavy sledge hammer hour after hour, till his arm is tired and weary. But this he continues, day after day, month after month, through many years. Now look at the sinews of that arm. How they have grown! How they have expanded! How much larger and stronger they are! What has done that? Not idleness, but hard, continued work. And so it is generally; where one man dies of overwork, a dozen die for lack of work. Perhaps they have commenced with some slight ache or pain. This they have nursed, watched, and talked about, and they have let their imagination make it worse than it is until it has really become a dangerous disease. Whereas, if they had been so busy at work as to have had no time to think about it, it would soon have passed away. Look at the history of the world. Our great historians, legislators, generals, ministers, etc., have worked so hard and been so busy and active that they have had no time to be sick. Most of these men have lived to a good old age and enjoyed good health.

It is not fun and mere pleasure that people need for exercise; but they need to do something which they feel is benefiting somebody. It is a sense of this that brings the most good to ourselves. When we are simply exercising for the mere purpose of health, we lose one-half the benefit to be derived from exercise; viz., the consciousness of being useful, of doing some good.

The Sin of Ignorance.

BY W. PERKINS, M. D.

PROFOUND theologians have maintained for centuries that penalty is peculiar to transgression. This is conceded by even the untutored masses where the sin is against light and knowledge; but ignorance of the law is pleaded as an excuse for its violation. Could such be true in casuistry, in the domain of morals, it could not hold good in that of facts. If, as the learned say, ignorance could excuse *de jure*, it does not *de facto*. All may know that mistakes made, however honestly, are followed by the consequences peculiar to the act. An aunt of the writer some years ago believed she had her bottle of tonic and swallowed her usual portion, but proving to be laudanum, it killed her in a few hours. So, in all cases, facts, not mere opinions, rule. If, as the apostle says, "A man *think* himself to be something, when he is nothing, he deceiveth himself."

From this true stand-point, the importance of practical learning must be seen. Indeed, it is our first duty to give all diligence to gain knowledge. Solomon says its treasures are above all silver and gold. Indolence is the forerunner of rags, disgracing the soul no less than the body, leading to that poverty of the whole man against which Agur prayed, and which almost forces its victim into the miseries of crime. Hence, labor being a cardinal virtue, idleness is a cardinal vice, and must cause the generic sin of ignorance.

Now while this is bad enough in all respects, it is too bad as to one's own self. Beyond all question, "*the greatest study of mankind is man.*" Not knowing ourselves, we can know little else of any value. Losing ourselves, we can gain nothing of any avail. All this is certain to ensue by failing to study well our bodies and spirits. Ignorance of our physiques, of our structure, in a word, of anatomy and physiology, is invariably followed by destructive errors in living which are the direct causes of pain and premature death. Besides, none, it would seem, can fail to perceive the wickedness of so doing. Thou shalt not kill is surely one of the chief commands of Sinai. By all people murder has been regarded as capital and followed by the death penalty. It is so of necessity and invariably when inflicted on one's self. By undue means a rich man-slayer may elude the halter, while the suicide, whether at once or by degrees, is sure to perish. As he commits the crime he at the same time inflicts the penalty. True, he often employs ignorantly a drug doctor to facilitate the death process and also to enhance its pains, but all the dreadful work begins and ends in the vices of indolence and ignorance.

Is it not therefore clear as broad daylight that no one can ignore or neglect innocently the means of knowledge? Nor can we innocently fail to use our best influence to promote it in all feasible ways.

Too Poor to Be a Reformer.

THE above expression we sometimes hear used by those who are ready to speak in the highest terms of the reform diet; yet they claim their poverty forbids their adopting it. Is this really so? Please examine this supposed objection, you poor, would-be reformer, and you will find that it is groundless. Take, as an illustration, the mechanic who depends upon his daily earnings for support. He is supposed to know how to economize, and to make his earnings tell to the best advantage. But does he really do so in his present mode of living? Meat is regarded as an indispensable article of diet. Now, my dear sir, look at facts and figures a few moments. Take the one article of swine's flesh, and see what it costs you. Well, that will depend somewhat upon the locality. In the West it is probably cheaper than it is here in New England; but there it is made cheaper than here, so the principle is the same, east or west. Here you pay sixteen cents a pound, or $1.60 for ten pounds, and that ten pounds required 100 pounds of corn to make it. We will call the corn worth $1.60. In one pound of your pork 26 parts out of a hundred are nutriment, making in ten pounds, 260 parts. While in a pound of your corn there are 75 parts nutriment, which in 100 pounds, the amount required to make ten of pork, make 7500 parts, but when converted into swine's flesh makes only 260 parts. Furthermore, this flesh makes diseased blood, filling the system with grossness, and in many instances with trichinæ, which often result in a horrible death. Not only does this kind of diet produce disease, but it is continually demanding drug poisons, and doctors, which drain the purse of the poor mechanic to the bottom.

But we have spoken of only one article; yet this is enough to illustrate the point. Now let the meat be laid aside, and the means usually spent for it be laid out in fruits, grains, and vegetables, which are free from disease, and are calculated to build up the system; let this be done, and the poor man will find that he can live cheaper, better, and longer, from the fact that meat, tea, tobacco, drugs, and doctors, cost him nothing. So the idea that we cannot afford to be reformers is simply absurd. We cannot afford to live unhealthfully, thus bringing disease, sickness, and death upon ourselves, and go down to the grave because of our wrong habits. I recently saw a man here in Massachusetts putting up a barrel of pork for a family in San Francisco, Cal. This pork, when he gets it, will cost him about 30 cents a pound, providing there are no trichinæ in it; but if the little fellows have stolen a passage across the continent in that barrel of pork, we will not attempt to estimate the cost.

D. A. R.

Sleep.

MUCH has been said and written upon the importance of sleep in maintaining a healthy condition of mind and body, and much remains to be said and written upon the same subject; for it is one of great importance. Let a man or woman become restless and sleepless at night, and let sleep come irregularly and fitfully, as it happens, at night or in the day, and you find such a person becomes mentally weak, fickle, easily ruffled, childish, inconstant, forgetful; but let the condition change, and the person so affected become regular again in taking repose, and you find him regain, in time, his vigor and decision of character, unless age or other weakness forbid a sound state of health.

> "Night is the time for rest,
> The season for repose;"

and no amount of day naps will fully atone for troubled and broken rest at night. The fact is, if you would have a sound mind in a sound body, you must sleep well at night.

To do this you must not get fidgety and alarmed, and get up at night, and fuss around, make up a fire, or take a bath; for if you do it a few times it takes the chronic form of habit, and so it will increase upon you. No; be sure that you make all right before you retire, then close your eyes mechanically, if you must, and keep them closed, awake or asleep, until morning. If sleep still keeps at a distance, count a thousand; repeat your old lesson in Sabbath-school, or hymns, over and over; be sure you do not keep awake making calculations of business, or troubling your mind, or exciting it at all; but calm it, soften it, as you would a crazy friend, and soon you will get sleep, plenty of it.

WHY I DON'T LIKE TOBACCO.—It does one no good. It is a powerful poison. It is a letter of introduction to bad associates. The use of it is a filthy habit. It is an expensive habit. It makes a person a slave to its use, so it is almost impossible to abandon it.—*Youth's Banner.*

A VERMONT lady fainted away at a party, and when a young man cried out for some one to saw her corset strings in two, she arose, drew a pair of shears, and said she'd like to see 'em saw.

LITERARY MISCELLANY.

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

THE BLINDNESS OF VANITY.

A RUSSIAN FABLE, BY JOHN G. SAXE.

ONE day a monkey chanced to look
In the clear water of a brook
Which, like a mirror, served to trace
The features of his ugly face.
Astonished at the novel sight,
He cried aloud, "Sure, such a fright
I ne'er before have chanced to see
In all my life. What *can* it be?
If I had such a foolish look
As this strange monster of the brook,
(Although, of course, he's not to blame)
I'd drown myself for very shame;
But, thanks to Nature's partial grace,
I've got a different sort of face."
Just as the incident occurred,
A bear was passing by, and heard
The monkey's prattle—every word.
"Come," said the latter, who espied
His clumsy neighbor at his side,
"This way a moment—just look here;
And see a brute so very queer
You'll laugh yourself to death—at least,
I never saw so strange a beast!"
The bear replied: "Pray, look again;
'Tis your own image, full and plain,
That scares you so; the ears alone
Would make the picture surely known
As yours, beyond the least dispute;
'T is clearly no outlandish brute,
But your own portrait, full and plain,
In every part—pray, look again!"
In anger now the monkey spoke:
"Of course a *bear* must have his joke;
But, pray, be honest and admit
(Though it may hurt your pride a bit),
The image in the water there
Is yours; it is not mine, I swear!"

MORAL.

To fail their faults to recognize,
However plain to others' eyes,
Is (here's the moral) a mistake
That men, as well as monkeys, make.

—*Sel.*

Centennial Exhibition Sketches.

THE great national sensation at present, and promising to be such for six months to come, is the great Centennial Exhibition at Philadelphia. As thousands of our readers may not have the opportunity of visiting this grand display of the natural productions of every clime, and the manufactured products of every nation, we purpose to give a few sketches of such items of interest as may meet the eyes of a hurried visitor.

Philadelphia itself is next to the most populous city in America, having a population of 817,000, which is scattered over an area of 129 square miles. In the value and variety of its manufactures it ranks first of the cities of the United States. It justly claimed the right to prepare this great international display, containing, as it does, Independence Hall, where the Declaration of Independence was signed one hundred years ago, and Carpenter's Hall, in which was held the first Congress of the United Colonies. It is also in some respects a very pleasant city; and the occasional sight of the broad-brimmed hats, swallow-tailed coats, and honest faces of its old Quaker residents, is calculated to inspire a comforting confidence in the minds of stranger visitors.

There are scores of places of interest in the city. Independence Hall, Girard College, the Academy of Natural Sciences, the Mint, and the Zoological Gardens being some of the principal ones; but the great Exhibition is the chief point of attraction, and we will now confine our attention to this, after a word with reference to coming to it.

Philadelphia is a great railroad center, and can be reached by through trains from any part of the country; but after arriving in the city, the traveler is more than likely to be landed several miles away from his final destination, and with a heavy valise and trunk he is quite at the mercy of the unscrupulous cabmen who will endeavor to convince him that he is ten or fifteen miles away from his stopping place and will extort a fee of four or five dollars for conveying him there, when an expressman would take his baggage for a dollar, and a street car himself for nine cents, if he only knew the way. Every visitor before coming ought to obtain a copy of the "Visitors' Guide"—published by J. B. Lippincott & Co., 715 Market St., at 25 cts.—and study the plan of the city and decide upon the first stopping place after reaching the city. We would suggest just here that the Hygienic Hotel, 801 North 45th St., is a very eligible place for those who wish wholesome food and comfortable quarters.

If one starts out in search of a stopping place, he is at once astounded at the absurd prices which are named in response to his inquiries. For board in private families, for

which $5.00 per week would have been considered a high price a month ago, he is now asked $10.00 to $15.00 a week! A small, plainly-furnished room in the third story, fronting an alley or a back yard, is offered at $7.00 to $12.00 a week for lodging only. Regular hotel rates are $5.00 a day. From what a stranger may observe, it would seem that nearly every house in the city had become a boarding house. Philadelphians evidently design to make the most of this rare opportunity, and expect to win a golden harvest from their visitors. But we observed that nearly all of the boarding houses are empty, and none of the hotels are filled; and we predict that our Quaker friends will moderate their prices very greatly before the summer is over. When the exhorbitant rates now charged become generally known, thousands will be deterred from visiting the Exhibition who would otherwise do so.

The Exhibition Buildings are located in Fairmount Park, which is situated in the suburbs of the city, and comprises more than 2,700 acres of land. Through it run the Schuylkill and Wissahickon rivers. Two hundred and thirty-six acres of this beautiful tract have been enclosed for the purposes of the Exhibition. The inclosure has seventeen entrances, each of which is provided with a turnstile with which is connected a registering apparatus which accurately indicates the number who pass through the gate. The only ticket required to secure admittance is fifty cents in currency, no further charge is made after entering the ground. Exhibitors have free passes.

Having entered the ground, one sees hundreds of persons hurrying in every direction, each evidently intent on business. Many are workmen in soiled garments. A single glance suffices to show that although the Exhibition is open, it is yet far from ready. Building, road making, arranging exhibits, and other necessary work will occupy several weeks yet, so that the great show will hardly be in presentable condition even by the first of June. Those who anticipate visiting it would do well to delay doing so for a month at least, if they wish to get a correct idea of it.

The opening exercises on May 10 were a decided success. The grand programme arranged for the occasion was well carried out, and was witnessed by more than 50,000 people. The newspapers gave very exaggerated statements, making the number several hundred thousand. According to the record made by the turnstiles, 76,000 persons paid at the gates during the day. Several thousand exhibitors and invited guests held free passes, so that there may have been 100,000 persons on the ground during the day. A majority of these were present at the opening exercises, and probably constituted the largest audience of citizens ever convened in this country. The crowd about the speakers' stand was so great that several fainted, and it required the utmost efforts of a double wall of policemen, and a line of soldiers with presenting bayonets, to prevent the surging crowd from encroaching upon the platform. The addresses were of course audible to only a few of those nearest to the speakers. But the deep tones of the pipe organ, the music of the orchestra, and the voices of a thousand trained singers in the chorus, were distinctly heard by all. In marked contrast with the hoarse voices of the speakers whose frantic efforts to make themselves heard were only appreciated by a few hundreds, were the mellow basso tones of Mr. Whitney, of Boston, whose solo was so distinctly rendered that every ear in that vast multitude heard every syllable, and could recognize nearly every word. The popular appreciation of such rare talent was expressed by long-continued applause.

An illy-suppressed titter, with derisive smiles and scornful expressions, ran through the assembly when President Grant drew from his pocket a manuscript and began to read his speech in a schoolboy fashion, and in a tone quite inaudible to more than a few dozen of those nearest by.

Altogether, the Exhibition is pronounced by those who have seen the other great expositions at London, Paris, and Vienna, as being far ahead of all in its vastness. The buildings cover more than seventy-five acres of land, and have cost about $5,000,000.00. The estimated cost of fitting up the grounds and running the Exhibition is $4,000,000.00, making a total cost of $9,000,000.00. It requires twenty-five miles of travel to see all the different objects of interest.

With a brief general description of the plan of the buildings, we will conclude, leaving more detailed descriptions for future articles.

The chief Exhibition Buildings comprise five immense structures. The first and largest is the Main Building, which is 1880 feet long and 464 feet wide, and covers twenty-one and one-half acres. It cost $1,600,000.00. In this building are shown the products of mining, metallurgy, and manufacture, and whatever pertains to education and science.

Art Gallery, or Memorial Hall, is a beautiful building made wholly of granite, glass, and iron. It is 365 feet long and 210 feet wide. In it are displayed every variety of

painting and statuary from all parts of the globe. It cost $1,500,000.00.

Machinery Hall is devoted to the exhibition of machinery. It is a grand structure 1402 feet long and 360 feet wide.

In the Agricultural Building is displayed everything which is immediately related to agriculture. The building is 826 feet long and 540 feet wide.

Horticultural Hall is the remaining one of the five great structures in which the various exhibits are displayed. This is a handsome building, 383 feet long and 193 feet wide.

There are numerous other buildings erected for special purposes by the various States, and our own and foreign governments. The largest of these is the United States Exhibition Building, in which are shown the interesting collection of the Smithsonian Institute, military supplies, and other instructive collections.

A railroad runs all around the grounds, which is fitted up with a beautiful little engine and passenger cars, for the purpose of conveying passengers from one part to another at five cents a trip. At certain points, also, are found wheeled chairs which the visitor may rent by the hour with an attendant to wheel him about, and point out to him the chief objects of interest.

In our next we will attempt a brief description of the contents of the Main Building, which will by that time be in better order than at present.

Children's Nerves.

On the street the other day we saw a fretful mother roughly shaking and chiding for "being so cross," a sensitive child, who shrank in nervous terror from the harsh blast of a toy trumpet, sounded in his ear by a jolly little urchin, who evidently had intended to give pleasure, not pain. The frightened child, with pale face, trembling lips, and pathetic little suppressed sob, struggled manfully to conquer his nerves and his wounded heart. "Cross" was clearly the very last word that should have been applied to the suffering little fellow, whose nerves were set a-tremble for at least one whole day, not so much by the shock of the discordant blast, which a few kind words might have soothed away, as by the subsequent rough handling and rougher tones of his mother, and by his own very great effort at self-command.

Of course, the cruelty of this mother was unconscious, but not, on that account, much the less culpable. It should be the business of those who have the care of children, not only to see that they have proper food and clothing, but also to study their characters, dispositions, and nerves. Notwithstanding the attention that scientific physicians are now paying to the nervous system, we cannot yet expect to know the reasons why a noise, an odor, a touch, that is innocuous to most, to a few may cause terror, or pain, or faintness, or death. Yet, by observation, we may find out what affects unpleasantly the nerves of the child intrusted to our care, and, by avoiding as far as possible exposing it to the cause of its nervous fears or irritation, and by gently soothing it when such exposure is unavoidable, gradually inure its nerves to bear with fortitude the painful excitement.

In this way we have known nervous antipathies to be overcome, when a contrary course would have produced serious consequences; perhaps, even death.

A little girl whom we knew was thrown almost into convulsions at the sight of a dog or a cat. The parents would not allow either animal to be about their premises; and with equal good sense would never permit the child's terrors to be spoken of in her presence. If, by chance, one of the obnoxious animals approached her, she was always taken up, as if by accident, and her attention diverted. After a time, she gained courage enough to look at the causes of her terror, when their beauties and good qualities were pointed out to her, though she was never asked to touch them. Now the child has grown to be a young woman, conspicuous for her fondness for all animals, and especially for dogs and cats. Had her parents abruptly attempted to make her conquer her antipathy, its impression would, in all probability, have been so deepened that she could never have risen above it. In a similar case, of which we have been told, the child died in convulsions, induced by being compelled to touch a horse, the object of its nervous terror. On the other hand, by weakly humoring such fears, talking about them in the presence of those subject to them, and thus allowing or leading their minds to dwell upon them, the unfortunates may be all their lives subject to the bondage of an unreasoning terror.

A striking instance of the danger of disregarding a nervous dread is related in the memoir of Charles Mayne Young. A young gentleman had been appointed attaché to the British Legation at St. Petersburg. On his arrival at that capital, he was congratulated by the ambassador on being in time to witness the celebration of a grand fete, and invited to accept in the great church a seat among those reserved for the ambassadorial party. Though, in such cases, an invitation

is equivalent to a command, the attaché begged to be excused. Being pressed for his reasons, he gave them with much reluctance.

"There will be martial music," he said, "and I have an insuperable objection to the sound of a drum. It gives me tortures that I cannot describe. My respiration becomes so obstructed that it seems to me that I must die."

The ambassador laughed, saying that he should esteem himself culpable if he allowed his attaché to yield to a weakness so silly, and commanded him to be present at the fete.

On the day appointed all were in their places when suddenly was heard the clang of martial music and the beat of the great drum. The ambassador, with an ironical smile, turned to see the effect upon the "young hypocondriac." The poor fellow was upon the floor, quite dead. On a post-mortem examination, it appeared that the shock to his finely-strung nervous organization had caused a rupture of one of the valves of the heart.

If, then, as we see, the adult, with every reason for subduing nervous antipathies, apparently so unreasonable and ridiculous, finds it impossible to do so, how can a little child be expected to control or explain them?—*Scribner's Monthly.*

Reason and Instinct.

[Rev. J. G. Wood, M. A., F. L. S., in a work entitled "Man and Beast, Here and Hereafter," has attempted to prove that animals have souls as well as human beings, and that they have as just a claim to natural immortality as man. Assuming the right of the latter to such a claim, he makes a very strong argument in favor of the immortality of beasts, and their future existence. He shows by numerous original anecdotes that animals possess reason as well as instinct, that they have a more or less perfect mode of communicating ideas, that they understand human language, and possess, in common with man, memory, generosity, humor, pride, jealousy, conscience (?), parental love, love of master, and many other traits usually ascribed only to man. The following facts are supposed to illustrate the difference between instinct and reason. We will hereafter give our readers some of the anecdotes related by Mr. Wood.—Ed.]

Let us define clearly the distinction between instinct and reason.

The well-known and perfectly correct definition of instinct is this: "*A certain power or disposition of mind by which, independent of all instruction or experience, animals are directed unerringly to do spontaneously whatever is necessary for the preservation of the individual or the continuation of the species.*"

Take ourselves, for example. It is instinct which teaches the child to seek its mother's breast and to obtain its nourishment by suction. This it does in the first hour of its existence as well as if it had been taught by example and had practiced the art for years. It is instinct which teaches the newly born child to breathe, to cry when it is hungry or otherwise uncomfortable, and to clasp with its tiny hand the finger that is put into it.

It is instinct that teaches a bird how to make its nest after the way of its kind, to sit upon its eggs until they are hatched, and to feed the young with their appropriate food. This may seem to many of my readers a needless statement, but even in one of the learned societies of London I have heard a speaker assert that the power of building the nest was not an innate quality, but was communicated to the young by their long observation of the nest in which they were reared. That such an hypothesis is utterly absurd may be seen from the following facts.

In the first place, although the young pass their first few weeks inside the nest, they do not see the outside, neither can they possibly learn from their parents where the materials were obtained and the mode of putting them together. Each species, moreover, adheres to the habits of its kind, so that a chaffinch, if bred in a redstart's nest, would build the nest of a chaffinch and not that of a redstart. There have been countless generations of cuckoos, but, although every one of them was bred in the nest of a foster-parent not of its own species, not one of them has learned to build a nest for itself, but, when it becomes a mother, is taught by instinct to lay its eggs in the nest of some other bird.

Take the case of insects. Instinct teaches the silkworm to make its cocoon, to wait there until it is developed into a moth, and then to force its way into the world. It has never seen a cocoon before, so that it could not learn by imitation. Its mother died long before it was hatched, so that it could not learn by instruction. But, taught by instinct, it forms its cocoon exactly as did its parents whom it never saw, and as will its offspring whom it never will see.

All practical entomologists are familiar with many instances of pure instinct on the

part of insects. One of the most common is furnished by the well-known currant moth, or magpie moth, as it is sometimes called, which may be seen any summer day flitting about the currant bushes, seeking for a convenient spot in which to place its eggs. It is a very conspicuous insect from its mottled yellow, black, and white wings, and is remarkable for the fact that the perfect insect, the pupa, and the caterpillar, all possess the same colors.

The caterpillar belongs to the group which is scientifically termed Geometridæ, or earth-measurers, and popularly loopers, on account of the manner in which they walk, not crawling like other caterpillars, but drawing up their bodies in the middle into a staple-like shape, and so advancing by successive steps, stretching themselves straight and drawing themselves into a loop alternately.

All these caterpillars are provided with spinnerets and silk-producing apparatus, by means of which they can save themselves if they fall from a branch—an accident to which their way of walking makes them peculiarly liable. As they proceed, with the head and tail drawn closely together, they attach a thread to the object on which they are walking; and when they stretch forward the body to take a new hold with the front legs, they draw out a corresponding length of silken cord. If they should fall, they are brought up by the cord; and if danger should threaten, they let themselves down to the ground, and regain their position afterward by climbing up the suspended cord. Sometimes a knowing bird has been observed to take advantage of this habit, and to shake the branches until the caterpillars had lowered themselves to the ground, when he descended and ate them at his leisure, instead of hunting for them among the branches.

These caterpillars are hatched toward the end of summer, and feed for some three or four weeks, when they make preparations for the coming winter, which they must pass in a state of somnolence. Let us watch one of them at this period of its life. Its home is within a leaf of the currant or gooseberry, the edges of the leaf being drawn together and fastened by silken cords. But, before doing this, the caterpillar ties the leaf to the branch by several strong silken bands attached to the stem.

This process completed, the caterpillar goes into its winter-quarters, and sleeps undisturbed until spring. In process of time, the laws of nature loosen the leaf from the branch; it cannot, however, fall, being tied by the silken cords, and so it only hangs suspended, and swings about safely in the wind until the following spring.

Now here is a remarkable example of instinct pure and simple. It is utterly impossible that the caterpillar should know that the leaf would fall in the coming winter-time, and that the threads would keep it safely suspended until the warm weather of the following year.

Indeed, it is absolutely impossible that the creature should even know that there was such a season as winter, or that it would be obliged to live in the state of hibernation for some six months. When it again retires into quiescence during its pupal state it does not act in the same manner, but merely slings itself to the branch by its tail, previously spinning around it a slight cocoon by way of protection.

In both cases instinct, and instinct only, dictated its actions. In the one case it fastened the leaf to the bough, without knowing that the leaf would soon fall; in the other it slung itself to the branch, without knowing that during the warm days of summer it would need no protection from the elements and little from enemies.

It is instinct which teaches the newly hatched chicken to run about and peck up its food for itself, while instinct teaches the young pigeon to sit still in the nest and wait until fed by its mother. Ducks, though hatched under a hen, will instinctively make their way to the water; while chickens, though hatched under a duck, will instinctively keep out of it. Instinct throws a monkey into the most abject terror at the first sight of a serpent; while instinct teaches the secretary-bird, at first sight of a serpent, to kill and eat it. Instinct, and not parental instruction, teaches animals to select such food as suits them, and to reject that which would injure them. There are certainly some cases where instinct fails, as, for example, cattle that poison themselves by eating the leaves of the yew. But, in these instances, the cattle are domesticated, have not been obliged to depend wholly on their own efforts for procuring food, and their instincts have in consequence lost much of their power.

It is instinct which directs with unerring accuracy the cormorant to plunge into the water and to capture the swift fishes in their own element. It is instinct which tells the mole to find its food beneath the earth, and the swallow to catch the flies in the air. The swallow never tries to catch fish, nor the cormorant to chase flies, each being endowed from birth with the power of knowing its proper food and the means of obtaining it.

It is instinct which teaches the dragon-fly, an active inhabitant of the water, and the drone-fly, an absolutely inactive inhabitant

of the mud, while in their larval states, to take to their wings as soon as they have attained their perfect condition, and to dart through the air quicker than the eye can follow them. They use their wings at once with as much skill as if they had learned under skillful teaching and with long practice.

It is instinct, and not reason, that forces the birds to migrate, and which guides them in their long journeys.

Man, as well as the lower animals, has his instincts; but, as he is able to bring most of them in subjection to his reason, very few of them are apparent. Some, however, remain and assert themselves throughout the whole of human life.

The Kentucky Shower of Flesh.

THE following article from the *Sanitarian* seems to afford the most reasonable explanation of the curious phenomena which recently occurred in Kentucky of any which have yet appeared :—

"It appears to be a law of nature that weeds should grow with flowers, tares with corn, and that superstition should almost touch truth.

"Showers of frogs, of fishes, of bloody rain and snow, have frequently occurred. The last sensation, however, 'the fall of flesh in Kentucky,' offers some features of special interest.

"In 1537, while Paracelsus was engaged in the production of his 'elixir of life,' he came across a very strange looking vegetable mass, to which he gave the name of 'Nostoc.'

"The want of rapid transportation, combined with the perishable nature of the substances fallen, have hitherto prevented a complete and exhaustive examination. The specimens of the 'Kentucky shower,' however, reached this city well preserved in glycerine, and it has been comparatively easy to identify the substance and to fix its status. The 'Kentucky wonder' is nothing more or less than the 'Nostoc' of the old alchemist. The 'Nostoc' belongs to the confervæ, it consists of translucent, gelatinous bodies joined together by threadlike tubes or seedbearers. There are about fifty species of this singular plant classified; two or three kinds have even been found in a fossil state. Like other confervæ, the Nostoc propagates by self-division as well as by seeds or spores. When these spores work their way out of the gelatinous envelope they may be wafted by the winds here and there, and they may be carried great distances.

"Wherever they may fall, and find congenial soil, viz., dampness or recent rain, they will thrive and spread very rapidly, and many cases are recorded where they have covered miles of ground in a very few hours with long strings of 'Nostoc.'

"On account of this rapidity of growth, people almost everywhere faithfully believe the Nostoc to fall from the clouds, and ascribe to it many mysterious virtues. The plant is not confined to any special locality, or to any climate; sown by the whirlwind, carried by a current of air, in need of moisture only for existence and support, it thrives everywhere. Icebergs afloat amid ocean have been found covered with it. In New Zealand it is found in large masses of quaking jelly, several feet in circumference, and covering miles of damp soil; and in our own country it may be found in damp woods, on meadows, and on marshy or even gravelly bottom.

"All the Nostocs are composed of a semi-liquid cellulose and vegetable protein. The edible Nostoc is highly valued in China, where it forms an essential ingredient of the edible bird-nest soup. The flesh that was supposed to have fallen from the clouds in Kentucky is the flesh-colored Nostoc (N. carneum of the botanist); the flavor of it approaches frog or spring chicken legs, and it is greedily devoured by almost all domestic animals.

"Such supposed 'showers' are not rare, and are entirely in harmony with natural laws. In the East Indies the same Nostoc is used as an application in ulcers and scrofulous diseases, while every nation in the East considers it nourishing and palatable, and uses it even for food when dried by sun heat."

Marvelous Phenomena.

UNUSUAL occurrences have always been regarded by the masses with superstitious awe. A large share of the wonderful events described below could be readily accounted for on well-known scientific principles, and would be so explained at the present day; but at the time of their occurrence they were looked upon as miraculous.

"At Rome in 1222 it rained dust, mixed with blood, from 1 to 6 o'clock, and the sky appeared like blood. Snow fell in Syria in 1226 and presently turned to blood. Old writers assert that it rained blood three days at Rome. A monk of the Middle Ages says that in 1251 blood ran out of a loaf cut, as from a fresh wound. The clouds were red as blood. In 1348 there were many great earthquakes and tempests. Several towns and many people were swallowed up, and the

courses of the rivers were stopped. Some chasms in the earth sent forth blood, as at Villach, in Austria. Showers of hail, each stone weighing from one pound to eight, fell in several places. In Germany it rained blood, comets, meteors; firebeams and corruscations were in the air; mock suns in the heavens, on fire. In Lamech, in upper Asia, it rained blood three days together. Soon after the raining of blood at Lamech, it began at Cataya, near the great sea. It went sweeping along over the whole country. A great plague followed. It began at Caahery, in Asia, by an igneous vapor or sulphurous fire breaking from the earth or falling from heaven, which utterly consumed men, beasts, houses, stones, and trees, and so infected the air that millions of young serpents fell down to the earth, together with other venomous insects.

"In 1361 there was a famine in Poland. In Burgundy a shower of blood fell. Bedfordshire witnessed a bloody rain in 1450. About Antiura, in 1568, wheat ears were bloody when reaped. There fell from heaven burning stones in a flame of fire. There were prodigious floods and streams of blood. In 1588 bread put in the oven was drawn out sweating blood, and soon fell to ashes. In 1634 it rained brimstone at Wirtemburg. In 1686 hailstones about a pound in weight fell at Liste. People broke one that had brown matter in it—threw it in the fire and it made an explosion and report.

"In the spring of 1695 there were many mephitic fogs. In Limerick and Tipperary, during the winter, spring, and summer, there fell in several places a kind of thick dew like butter, soft, clammy, and of a dark yellow color. It fell in the night, chiefly on low ground. It seldom fell twice in one place. It lay near a fortnight on the earth, then became dry and black. It fell often in lumps, laid thin and scattered. It had a strong, ill scent. People used it as ointment, and cattle grazed safely on the ground where it fell. During the plague in 1709 an offensive mist, like a cloud of a blackish-yellow, or the smoke from oil of vitrol and oil of Tartar mixed, moved from one place to another over the town, emitting a violent stench. In October, came, at 11 at night, a blue fiery globe and fell over against the town with a great light.

"Between 1200 and 1718 at least 103 earthquake stook place, according to reliable data, as follows: From 1200 to 1300, 30; from 1300 to 1500, 15; from 1500 to 1600, 18; from 1600 to 1700, 38; from 1700 to 1718, 2; total, 103."

The Wrong Reason.—Women, in too many cases, attribute the causes of their failures in working to their sex instead of their own errors, and thus they are prevented from any real progress. They are apt to think that every rebuff they meet with is offered them because they are women, and therefore the natural victims of injustice. It is so much pleasanter to have imaginary enemies than to recognize one's own incapacity for the task undertaken, that the delusion is always maintained. In this way women will persist in attributing to personal hostility what is really caused by a lack of talent and industry. If a woman fails as a writer, a lecturer, an actress, a dramatic reader, her indiscreet friends are apt to assume that she fails because she is a woman. But, in fact, in these days her sex helps her quite as much as it hinders her in most all of these pursuits, and the chances are that where she fails a man of the same qualifications would have failed quite as badly. There ought to exist among women, and among men also, a more courageous spirit in these matters, and at the same time more humility. If people are not inclined to value woman's work, let them make it of such unquestionable worth that it cannot be resisted.

Blushing.—Darwin, in his new work on "The Expression of the Emotions in Man and Animals," has an interesting chapter on blushing. This act, he tells us, is the most peculiar and the most human of all expressions. Animals never blush, although monkeys redden from passion. We cannot produce blushing by any physical means—it is the mind which must be affected; and blushing is not only involuntary, but the wish to restrain it increases the tendency. While the young blush more freely than the old, infants do not blush; women blush more than men; the blind and deaf do not escape. It is usually the face, ears, and neck only that redden; the blush does not extend over the body; but certain races who go habitually naked blush over their arms and chests, and even down to their waists. The limitation of blushing to exposed parts is explained by the fact that these portions of the surface have been habitually exposed to the air, light, and alterations of temperature, by which the small arteries acquire the habit of readily dilating or contracting. Hindoos blush but little; the Polynesians blush freely; the young squaw of the American tribes has been seen to blush; the Kaffirs of South Africa never blush, neither do the Australians.

ABSENCE of occupation is not rest.

DIETETICS.

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

Eating without an Appetite.—It is a most mistaken notion, though a very common one, that a person must eat whether he has an appetite or not. It seems to be the general opinion that if an individual were to abstain from food a day or two he would certainly perish from starvation. That such a supposition is incorrect is shown by the fact that numerous instances are recorded in which persons have survived without food for periods varying from twenty to sixty days. But in these cases, there was, doubtless, a keen appetite, food being unattainable; we wish to speak particularly of cases in which there is no appetite.

Hunger, or natural appetite, is an expression by the system of a necessity for nourishment. It means that the tissues have been worn out by labor—either mental or physical—and that material in the shape of food is needed, out of which to rebuild them. When the system needs additional nourishment, and can use it in building up the body, it will call for it by making a person hungry. When the system has sufficient material, or when it is otherwise occupied and cannot use nutriment for repair, then it does not call for it, and the individual has no appetite. Hence, when a person has eaten a sufficient quantity, he is no longer hungry; or if the vital energies are employed in expelling impurities, they cannot use nutriment in building up the wasted tissues, and so they do not call for it, and he has no appetite.

Kind-hearted mothers and officious nurses often do an immense amount of harm by compelling the sick one to eat against his will, or tempting his appetite with sweetmeats and indigestible compounds which would make a well person sick. The provident housewife always has on hand a good supply of jellies, conserves, wines, sweetcakes, and "goodies," ready for use in case Tommy or Mary should be sick. Sometimes the young philosophers discover the use of these "nice things," and rather enjoy being invalids for a few days occasionally. When we see what unwholesome things are crammed into their stomachs on such occasions, we are led to wonder exceedingly that they do not, even more frequently than they do, fall into "a swift decline," and soon lie "with the tips of their toes turned up to the roots of the daisies," as Judge Brady would say.

When a person is taken with fever, he usually loses his appetite very speedily. Nature is busy cleansing the system of impurities, and has no time to repair waste. She cannot digest food if it is eaten, being otherwise engaged. What folly, then, to burden the stomach with food of any kind, and especially with unwholesome or stimulating food. When nature is ready for food, she will signify the fact by giving the person an appetite. It may be one, two, three days, or even longer, before the appetite returns; but it will come in due time. Then the person may have as much wholesome, simple food as he can digest.

In many cases of disease, probably in nearly all cases, the patient may be given a little food without material injury, at least after the first day or two, even though there is very little appetite, provided that it be only the very simplest, but it is a grave error to give food too frequently, even though it be of the most wholesome kind.

Fried Food.—Says a correspondent, "Some professed friends of reform think that cakes fried in tallow are first rate for food. Please give your opinion in the REFORMER."

Every man has an indisputable right to think as he chooses, provided he does not allow his opinions to injure any one but himself. It is, however, very strange indeed that any one should at the present day attempt to defend, as proper food, such dietetic abominations as fried cakes. The slightest knowledge of physiology shows the absurdity of such a notion. People who presume to decide what is proper food for human stomachs ought to bestow at least a week's study on some elementary text book of physiological science.

Nothing is more common than to hear individuals saying with the greatest confidence that this thing or that thing is unfit for food, or that another article is wholesome aliment, when it is evident from their expressions that they never looked inside a physiology, and are totally innocent of any knowledge of anatomy. One man is certain that tallow is "good to grease the joints." He always gives it to his cows when they are sick, and they speedily recover; hence, it must be good for humans. Another *likes* fried food, and hence it must be good. Another believes

lard to be very unwholesome, unfit for food, but supposes tallow to be a harmless substitute.

Only a little knowledge is sufficient to show the absurdity of all of these notions. Tallow and lard are essentially the same in their effects upon the system. One is as wholesome as the other. One is the product of disease in the hog, the other of disease in the ox.

Of all indigestible and dyspepsia-producing viands put into human stomachs, fried food is chief. If we were asked to suggest the most effectual means of slowly torturing to death a human fiend for whom a sudden death would be too slight a punishment, we would propose to feed him to death on a "fried diet." A suitable bill of fare would be, for breakfast, fried ham, fried eggs, fried bread, fried griddle cakes; for dinner, fried cabbage, fried potatoes, fried chicken, fried sausage, fried hominy, fried apples; for supper, fried cheese, fried doughnuts, fried lobster, fried fish, fried clams, fried oysters, fried crabs. A barrel of sardines and a bushel of popped corn well greased with fried butter should be placed in his cell to appease his appetite until meal time. We could safely warrant such a diet to be "sure kill," and to be capable of producing the greatest possible amount of misery in the operation.

The frying-pan, the tobacco-box, the whisky bottle, and the pill-box, together form a combination of the most diabolic enemies of mankind.

Fish and Brains.—Several years ago, Prof. Agassiz became responsible for the theory that fish food afforded a larger amount of phosphorus than other foods, and was on this account the best kind of food for mental workers and those who wished to have large and active brains. This theory was very popularly received for some time; but a large share of the most eminent physiologists are now denouncing it in unstinted terms. We only refer to it because we still occasionally receive letters of inquiry about the reputed value of fish as brain food.

However pleasing the idea may have been theoretically, all practical experience has proven its fallacy. It is a well-known fact that those nations which eat fish the most freely are the most ugly and degraded of the human race. The Terra del Fuegians are a good illustration of this class.

It seems that this fact was as true of ancient as of modern nations. Several thousands of years ago, the great Babylonian kingdom included the inhabitants of the shores of the Persian Gulf, who were fishermen, and subsisted largely upon dried fish which they pounded and made into cakes. According to history, these were the meanest and most inefficient and poorly developed, mentally and physically, of all the subjects of the Babylonian kingdom.

It is a certain evidence of deficiency of brains in a person who resorts to a fish diet for the purpose of obtaining more.

Tender Beef.—Those who are fond of tender beef may not find their appetites sharpened by a knowledge of the causes of tenderness in animal food. Lean meat is muscular fibre. When the muscle is strong, firm, and healthy, the flesh is tough; but when, by any means the muscle becomes softened and disorganized, the flesh is tender. This softening may occur before the death of the animal or after. Disease and violent exercise are the causes which effect it before death, and putrefaction occasions it after death. Many butchers are in the habit of torturing animals to death so as to make the flesh more tender. A still more common custom is that of keeping the flesh until decomposition begins before using it for food. Putrefaction softens it, renders it more tender—and to some tastes develops a *higher flavor*. Perfectly fresh meat is always tough, if the animal was not diseased, and hence it is kept from one to several days before it is thought fit to eat.

The following paragraph shows that civilized nations are not the only ones who have learned how to make flesh tender:—

"In Madagascar, which is not a conspicuously civilized country, beef cattle are hamstrung and then driven about with whips and goads while thus disabled until they are in a highly fevered condition. This is done simply that the meat may be rendered tender and juicy, and as a refined method of slaughtering.

Washing Vegetables.—Vegetables should never be washed until immediately before being prepared for the table. Lettuce is made almost worthless in flavor by dipping it in water some hours before being served. Potatoes suffer even more than other vegetables through the washing process. They should not be put in water till just ready for boiling.

You had better be poisoned in your blood than in your principles.

THE

HEALTH REFORMER

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

Hygienic Physicians vs. Hygienic Quacks.

IT is a lamentable fact that all the quackery is not confined to those who deal in poisons and patent medicines. We are very sorry to be obliged to believe that there is a rapidly increasing class of individuals who may without impropriety be styled hygienic quacks. A quack is an individual who makes pretensions to knowledge which he does not really possess. There are quacks in all professions, but the medical profession is especially favored, if the patronage of pretenders can be called a favor. We sincerely wish that medical quacks were wholly of the drug persuasion; facts compel us to believe otherwise.

There is one class of hygienic quacks who have gathered from a few works on hydropathy a superficial knowledge of water treatment. In itself, water treatment is one of the most efficient means of treating disease, though not a specific. In the hands of these tyros, it is often made the cause of serious injury by misapplication. The mistake of these individuals is in supposing that their slight knowledge renders them competent to successfully treat every form of disease with water, a thing which it would be impossible for the most able physician to accomplish. Different remedies must be applied to different cases; and no little skill is required to properly adapt the remedy to the disease.

A second and still more dangerous class of hygienic quacks is made up of individuals who have received a small amount of medical training—in a brief course of study with inadequate advantages—and who have obtained a knowledge of a few general principles, which are in the main correct. We say that those of this class are more dangerous, because more pretentious. They not only suppose themselves competent to deal with every case of disease which may arise, but arrogate to themselves the authority to sit in judgment upon all physicians who may chance to differ with them in theory, though infinitely wiser in practical details, pronouncing as knaves and idiots the whole medical fraternity, while at the same time unable themselves to tell the difference between apoplexy and syncope; between diarrhea and dysentery; or between a cancer and a harmless tumor.

Such individuals may accomplish some good; but it is a serious question whether they do not often do still more harm by exciting the just contempt of many sensible people and thus prejudicing them against the the real good which they might otherwise have been led to accept. Any amount of arrogance and pretension will not always pass for scientific attainments. Brass and impudence will not make up for a deficiency in knowledge of anatomy and surgery. People who employ a man who professes to be a hygienic physician and find out that he is almost or quite as ignorant of the structure of the human body as themselves, feel—and justly—as though they had been grossly imposed upon. They fairly reason, This man professes to be a physician. A physician is required by law to possess an accurate knowledge of anatomy. This man does not possess such knowledge; therefore, he is a quack; I want nothing more to do with him. Possibly this is the reason why so many of those who call themselves hygienic physicians do not meet with better success in securing practice. The peculiarity of the system is the reason usually given; it is

barely possible that ignorance is the more correct one. Indeed, to our certain knowledge it has in some localities come to be a very popular conviction that ignorance is the chief peculiarity of hygienic physicians as a class. Such an impression is a great misfortune; but a still greater cause for regret is that there is too much ground for such an opinion.

For a man to avail himself of the privileges of a doctor of medicine while destitute of the legal requisites for such a degree, and while having never conformed to the legal requirements necessary to rightfully obtain a medical diploma, is the most insolent kind of quackery.

What the hygienic cause needs is not quacks, but thoroughly educated physicians. There is room for ten thousand such to do good work for humanity. Such men will command respect; they will have abundant patronage. The people are not such fools as some would have us believe. In general, true merit is promptly recognized. Society will place a man where he belongs. Sick people want to get well. They do not care for a man's theory if he only cures them. And if they discover at the first consultation with a physician that he thoroughly understands his case, a confidence is inspired which is one of the most essential elements of successful treatment.

We would not discourage in the least those who, having obtained some knowledge of hygienic treatment, are trying to practice what they have learned. Let every individual make a practical use of all the knowledge he has, and continually seek to gain more. We must be progressive. There is no necessity for a spirit of intolerance toward our mistaken medical friends, even though their practice is an erroneous one. If we are right, we can the better afford to be fair and candid, and treat our opponents with respect.

There are plenty of hygienic quacks; we don't need any more of that class. What we do need, and what the cause must have before it can make further headway, is thoroughly trained hygienic physicians who are as well versed in scientific attainments as those who depend chiefly upon drugs as curative agents. Can we not have such physicians? There is a wide field of usefulness open before those who will fit themselves for the work in a thorough manner.

Why Do Hygienists Die?

It is quite a mistake to suppose that even hygienic living will make a man immortal. Death is a universal evil common to all living things. Again, it is quite as great an error to suppose that correct dietetic habits alone constitute the sum total of hygienic requirements. The character of the air we breathe is of far greater importance than the character of our food. Poisons taken in the form of drink occasion more disease than the solids which go into the stomach. Improper habits of labor will wear out a man prematurely in spite of the most strict conformance to all other rules of health. Giving way to depressing passions will tear down the vital organism of a hygienist as well as of any other man.

We are inclined to take too narrow views of what it means to be hygienic. A true hygienist is one who conforms, not to one or two, only, but to *all* of the laws of health. Such hygienists are rare. Such an one would not die prematurely, though he would die sometime, doubtless.

We have received many letters of inquiry, requesting an explanation of the death of prominent hygienists. The following is a sample:—

"It appears to me that the great champions of health have not attained any very remarkable age, as a rule. If some few have, they are exceptions; so have a great many other men who have followed their own inclinations and appetites without question. Graham died at fifty-eight; and S. R. Wells, in his fifty-fifth year, dropped off as suddenly and easily as if he had been addicted to some of these terribly deadly habits against which you preach."

We are not bound to explain the cause of death in every such case as those mentioned. We have no personal knowledge of the habits of either of the persons referred to, or of the circumstances of their deaths. We will state,

however, that it is claimed on good authority that Mr. Graham's death was greatly hastened by domestic troubles. He may have been at fault, or some other person may have been chiefly responsible; that is no concern of ours. It is quite certain that nothing could be more unhygienic than a domestic broil; and if Dr. Graham lived continually in such an infelicitous condition, as we have been led to believe, the only wonder is that he did not die sooner.

Of Mr. Wells's case we know very little except what has appeared in print, but have been informed that hygienic treatment did not have a fair trial, as he was treated by a homœopathic physician, and was injudicious in neglecting to take necessary rest and quiet while suffering with the disease which resulted in his death. We might state some further facts, but have no desire to create unnecessary feeling. The only object of this statement is to answer the inquiries of many friends.

A Centennial Plague.

PHILADELPHIA has been so busy preparing for the great show, building new bridges, opening new streets, building hotels, restaurants, and gambling saloons, and making flags of all nations for display on the opening day, that she has quite forgotten some of the "weightier matters" of a sanitary character which have been suffering for want of attention ever since the opening of spring. Had the season not been uncommonly backward, there would have been serious consequences apparent long before this. Philadelphia has prided herself on her neatness heretofore; but at the present moment it is quite impossible to describe the unsanitary condition of the city. Although the weather is quite cool, in some portions of the city the stench is intolerable. Such a thing as a breath of pure air is unattainable within a mile or two of the most populous portions of the city. Notwithstanding this, the Director General of the Centennial Commission, in a recent published invitation to the people, pronounces the city in a "good sanitary condition!"

Upon looking about for the cause of so many foul odors, one is at once astonished that the stench is not worse, though it could scarcely be more concentrated than it is in certain localities which we might name. We can think of no comparison more fitting to the case than that used by Dr. Talmage, who said of the Beecher scandal that it was like a rotten egg five hundred miles in diameter burst upon the community.

The larger share of the streets are teeming with filth. The sewers seem to be mostly upon the surface. In some localities, where the streets have been built up, leaving a sunken vacant lot in the center of a block, the surrounding families have constructed gutters leading to this great hollow, and have thus converted it into a community cess-pool, into which is also thrown all the swill, garbage, and refuse of the neighborhood. This putrescent pool sends out its volumes of mephitic vapors to mingle with the gutter steams and poisonous gases emanating from the filthy streets.

The surface filth is bad enough; but it does not compare with the sources of death and disease stored beneath the surface. The underground sewers are even more to be feared than the open gutters. Here is received a large portion of the most dangerous filth of the city. Into them are daily washed the contents of 150,000 privies and water-closets. If this mass of filth were immediately washed away, there would be no cause for complaint; but it remains sometime in the various portions of the pipes, generating the most foul and poisonous gases, and sending out floods of disease germs, to be inhaled. If these unwholesome products were confined in the sewers, no particular harm would result; but they are not. They are constantly escaping through a thousand leaks in the pipes, through dry water traps, and wherever new sections of pipe are being added. The water traps, so much relied upon to shut out these deadly gases, are worse than a failure; for they allay all fears of mischief, and then afford no protection. The accumulation of gas in the sewers, and the constant afflux of water, causes an increase of pressure in the sewers, which drives the foul emanations up

through the water traps into the very parlors of the finest residences. In many cases, there is actually an overpowering breeze of putrid gas issuing from water-closets and other places connected with the sewers.

If the city authorities do not attend very promptly to this stupendous evil, they may have the privilege of entertaining, this summer, a cholera epidemic, or the black death, or some other plague, along with their centennial visitors.

The stench has already become quite too intolerable for our hygienic nostrils, and we have fled from the city in disgust, to the more quiet, cleanly, and healthful city of Wilmington, Del. We would recommend those of our friends who contemplate visiting the exhibition, to provide themselves with the most approved form of respirators, and a good supply of disinfectants.

Household Medicine.

ACARUS SCABIES—ITCH.

It is now certainly known that the cause of this disease is a minute insect which burrows in the skin, and causes the unpleasant irritation and eruption by its depredations.

The eruption usually consists of minute pointed vesicles of a reddish color; but it may assume a variety of other forms. It appears most frequently between the fingers, upon the wrists, at the bend of the arm, in the axilla, in the groin and inner portion of the thighs, and about the ankles. It may extend to the whole body, but is commonly confined chiefly to the parts mentioned.

The disease is communicated only by direct contact, and may make its appearance in from two days to two weeks after exposure.

Treatment.—The proper treatment of this disease has been the subject of considerable discussion among hygienists. Some have claimed that it is incurable by any hygienic means, and should be treated with poisons. Others have disputed this claim, and have regarded the use of drugs even in this disease as a gross violation of hygienic principles. Somewhat careful investigation of the subject has induced us to take the position that although hygienic remedies are successful in some cases, the use of other remedies is more generally reliable. The object of treatment is to kill the parasite; hence external remedies alone are necessary, and we see no reason why the use of drugs should be seriously objected to even by hygienists. The object is to kill; and poisons are excellent for that purpose. The following remedies have each been successfully employed in treatment:—

1. A daily pack of an hour, followed by a dripping-sheet and wet-hand rub, continued for a week. The patient should dress in perfectly clean clothing after each treatment.

2. Rubbing the body with lard or sweet oil daily for a week or ten days, taking a thorough bath with soap and water every day. Change clothing daily after bath.

3. The daily use of sulphur ointment, which is sold by druggists, for four or five days.

4. Boil together two parts of sulphur, one of lime, and ten of water for three or four hours. Let it settle, and turn off the clear liquid. Rub this liquid on the skin for a half hour, and the insects will be killed. Wash with soap and water, and put on clean clothing.

5. Mercurial ointment is an efficient remedy, but its free use will cause constitutional injury by absorption if it is allowed to remain long in contact with the skin. Salivation is not an infrequent result of its use.

Whatever remedy is employed for the disease, it is important to bear in mind the fact that vermin thrive best where there is the most filth; hence, cleanliness is one of the essentials of treatment. Every article of clothing worn before the commencement of treatment must be thoroughly cleansed in boiling water, or fumigated for a day with burning sulphur, before it is again worn.

The addition of a few drops of oil of bergamot, or any other essential oil, will obscure the unpleasant odor of sulphur ointment, which is probably, upon the whole, the most reliable remedy for general use. Combined with water treatment, a cure will be sooner effected. The following is a good way for using it:—

Strip the patient at night, and give him a thorough bath with soft soap and warm water. Rub the body thoroughly. Apply the

ointment freely to the whole body, rubbing it in well. Wrap the patient in a sheet, and put him to bed. In the morning, give him another bath with soap and water, and dress him in entirely clean clothing, not allowing him to touch a garment worn before. Repeat this treatment for four or five days in succession, and longer if necessary.

No internal remedy is necessary in any case.

Hygienic Remedies.

WET-SHEET RUB.

THE wet-sheet rub, or dripping-sheet, as this bath is sometimes called, is a very useful bath, and is especially useful in cases in which there is inactivity of the skin. Taken just before retiring, at a tepid temperature, it is an excellent remedy for night sweats and sleeplessness. Its effects depend largely, however, upon the manner in which it is administered. This is true, indeed, of nearly all varieties of baths. When given in a bungling manner, they may do quite as much harm as good. A very important point to be kept ever in mind is, Do not permit the patient to chill. The unpleasant sensation will not only have a damaging influence upon the patient's mind, causing him to dread the treatment or to doubt your skill, but will often do him serious injury, being followed by a violent reaction attended by headache and other unpleasant, sometimes more serious, symptoms.

To give a wet-sheet bath successfully, proceed as follows :—

Place upon the floor or carpet a large rug or oil-cloth, to prevent injury from water. Place in the center a large wash-tub, in the absence of a more convenient vessel. Pour into the tub two pailfuls of water at 95°, or a little less than blood heat. In a pail close at hand place two gallons or more of water at a temperature four or five degrees less than that of the water in the tub. While the patient is undressing, procure two large cotton sheets. Gather one end of each into folds so that it can be easily and quickly spread out; lay one upon a chair close at hand, and place the other in the tub a little at one side. Place a low stool at a distance of three or four feet from the tub. Have the patient wet his head thoroughly, or do it for him, and then let him step into the tub, facing the assistant, with his arms straight and pressed closely to his sides. Draw up the gathered end of the wet sheet, spread out one side quickly, place the corner over one shoulder of the patient, and while holding it in place with one hand, quickly draw the remainder of the sheet around him with the other, bringing it up well around the neck, and folding the corner under the top so as to hold it in place. This should occupy but a few seconds. Then commence rubbing the patient vigorously with both hands, one upon each side, going over the whole body very quickly, and then repeating the same. This is necessary, to prevent chilling of any part. After three or four minutes of energetic rubbing, pour over the patient's chest and shoulders the pail of water prepared for the purpose. Then rub two or three minutes longer. Now quickly disengage the wet sheet, allowing it to drop into the tub. While the patient is stepping upon the stool, quickly grasp the dry sheet, and as soon as he is in place, envelop him with it, and at once commence rubbing lightly, but quickly, as before, passing very rapidly over the whole body, to prevent chilling, and repeating until the patient is thoroughly dried. The head should not be neglected, and the armpits, groins, and feet should receive especial attention, that no moisture be permitted to remain.

When the skin is quite dried, or nearly so, the sheet should be removed, and the whole surface rubbed with the bare hand, gently but briskly. Accompany the rubbing with light percussion, and gentle vibration of the bowels. Great care should be used that the rubbing is not continued so long, or applied so vigorously, as to induce perspiration, as this will expose the patient to taking cold. If the skin should become moist after having been dried, from perspiration, gradually lower the temperature of the room a few degrees, and continue light rubbing until the skin becomes dry and cool. Then allow the patient to dress.

Linen or cotton sheets which have become soft by use are much preferable to new ones for use in administering baths of any kind. Very few baths afford a better opportunity

for the display of skill and energy than this. Some practice and genuine genius are required to give it really well.

Sanitary Missionaries.

A PHILANTHROPIC hygienist could not do a more praiseworthy act than to canvass his neighborhood and make a desperate attempt to frighten his neighbors into an observance of the most common rules of wholesome decency. He would find ample room for the display of all the eloquence he could summon to his aid, for people are almost universally very slow to see any importance in these subjects.

We want a thousand sanitary missionaries. Who will volunteer? Any one who will engage in the work will not only do a noble act toward his fellow-men, but he will benefit himself and his family by securing wholesome surroundings. Here, then, is a selfish motive, which will doubtless be the strongest incentive of all, so perverse is human nature. In the Family Health Almanac for 1876 will be found an article on "Disinfection and Disinfectants," which contains practical information to which the attention of the people ought to be called.

People's Department.

A Year's Trial of Reform.

[WE are happy to receive the following from Prof. L. V. Dodge, with whom we enjoyed a very pleasant acquaintance during his stay at the Health Institute, at Battle Creek. We are glad to know that he still adheres to the good way, and that he is improving in health in spite of his arduous professional labors. We hope to hear from him again.—ED.]

To the Editor of the HEALTH REFORMER: One year ago to-day, at a hotel in Jackson, Mich., while on my way to the Health Reform Institute, at Battle Creek, I reached to a salt-cellar, much after the usual fashion, and got some salt for my potato. I have not done the like since. During the intervening twelve months, all the chloride of sodium which has found its way into my food has been placed there by the cook, and that has usually been in moderate quantities.

Up to the date of this decisive step, I had, for two or three years, aimed at a reduction of the various condiments in popular use. Formerly, I thought everything needed salting. Seldom did I eat a vegetable without giving it a liberal top dressing of that delectable chemical, and that without any preliminary investigation as to the need in that direction. So delicious did it seem to me that, when a boy, I often took a liberal pinch from the salt barrel, between my thumb and forefinger, and extracted its saline properties by a vigorous application of the principle of suction.

It doubtless would be a matter of surprise to many, though probably not to any reader of the HEALTH REFORMER, to learn that I have survived this year of total abstinence. If I am asked what has been the effect upon my health, I must answer that I cannot tell. This I know, that, while not overstocked with vitality, I am stronger than a twelvemonth ago, and have been performing my school duties every day of this college year. It is not usually fair reasoning to attribute improved or impaired health to a single fact, and I will not attempt to do it. But when I say that I have not the least craving for salt, that I relish my food with very small quantities of it, and that the presence of such an amount as once would have seemed to me entirely deficient now often creates dislike, I feel sure that this ready accommodating of the taste to the deprivation constitutes a species of evidence which it is difficult to impeach.

By the way, what a hard-working agency nature is. Constantly is she striving to mend what has been marred by man's instrumentality. Yet is nature persistently ignored by the mass of mankind. I well remember being thoroughly possessed of the popular fallacy that physician is everything, nature nothing. Pikery was good for the stomach ache, camphor for a bruise, salve for a cut, and so on. To have a wound heal without the application of a plaster, or a sick person recover without the administering of a nostrum, was little short of a miracle.

Of late years, the phraseology has been modified, and we are told that medicine is to be taken to "assist nature." Let us be duly grateful for any improvement in this particular; but I submit that the right language is not yet reached. I take it that all nature wants of us is to get out of the way. If I am sick and then recover, I simply remove an obstruction which never ought to have been placed in nature's way. I may have caused my sickness, but nature effects the recovery.

Two weeks ago, I thought it time for some additional rows of peas, and had some peas soaking when a rain came on. I well knew the result of working clay soil, such as my garden contains, when it is wet; but the peas might not keep till the ground should dry, and I hastily made my drills and sowed them. Well, I have since raked the hard crust once or twice, and some of the peas have come up. This morning I went over them with a sharpened stick, and carefully stirred the soil and removed the lumps. The result will be that I shall have twice as many pea vines as otherwise would have made their appearance. I found some so imperfectly covered as to have become perfectly dry during the arid weather of the past few days. Yet some of these had sent their roots far down into the moist earth, and were growing, though not rapidly. Some had pierced through ground so hard that it seems impossible that they should have grown at all. Some, having encountered lumps so firm as to resist all their attempts, had taken a circuitous course in their attempts to reach the light. Some, utterly hemmed in, were leading a miserable existence, and would eventually have died. The obstruction being removed, those plants will all receive a new impetus; they will find their way to the sunlight, and become thrifty and beautiful. Who effects this wondrous change? Is it I, or nature? Not I, by any means. To make a plant grow by my direct agency is as far beyond my powers as the mysterious processes of vegetable growth are beyond my comprehension. I but removed obstacles which I myself had interposed. Nature, ever active, all-powerful, does the work.

Has God, who works through nature, less care for animal organisms, for the temple of the soul, than for the vegetable? The answer, "No," comes with emphasis from all the operations of nature and from the inner consciousness. He is constantly laboring to rebuild the wasted tissues, to re-invigorate the debilitated frame. When we remove the impediments which our own sins and ignorance have interposed, that is all we can do. That tireless force which works incessantly, and works most effectively while we sleep, will work restoration if there is any foundation on which to build.

Berea College, Ky.

Is it True?—A clergyman of Connecticut writes us as follows:—

"I have recently subscribed for the HEALTH REFORMER. I also procured some tracts in which I feel deeply interested, especially the one on pork. I wonder if all it says about pork is true. That is my idea of pork—that it is very filthy and abominable food. I have preached against its use in a series of health sermons, and scared several out of the habit of using it, and now I propose to try your tract and see what the meat (pork) venders will say to that. I have long thought it a most unwholesome article of food, but never thought quite as much could be said against it. Please send me twenty-five copies of the tract."

Yes, it is all true; and we did not tell nearly the whole of the story. The picture of the evil results of pork-eating is not overdrawn. No statement is made which we are not prepared to substantiate. We are glad our clerical friend is making war against the practice, and we hope he will find the little tract a useful auxiliary. We know of scores who have been led to abandon the use of pork by reading it. We mean to give the grunting beast and his masters no peace until he is turned loose to pursue his legitimate calling as a scavenger, or else exterminated.

"In union there is strength" is a trite proverb, and a very true one. We have often thought of the possibility of effecting some sort of an organization of all interested in health reform and the dissemination of hygienic truth. It is certain that the cause, although progressing, is not making one-tenth the advancement which would be possible with an efficient organization. The spirit of jealousy and rivalry which is manifested by many prominent professed friends of health reform is most disastrous. A partisan spirit is dividing the ranks of hygienists so hopelessly that there seems little chance for a united effort unless some kind of an organization can be effected upon so broad and liberal a basis that all could work with freedom, not feeling hampered or embarrassed by any rigid formula. How to effect such an organization is a problem which we have been studying, privately, for a year or two. Perhaps a solution will be reached in due time. Possibly the precise moment for an organization has not yet been reached, though there seems to be a great necessity for it.

The first great difficulty in attempting such an enterprise is to find thorough-going men and women with settled principles, who are

willing to work. If we had a man like our correspondent in every township, we would feel no fears about the success of the undertaking. Let us hear more upon this subject.

Experience.—MR. EDITOR: Being a reader of the HEALTH REFORMER, and reading a good deal about salt and hygienic agencies, and being a true believer in them, I have thought sometimes I would like to let you know my experience. Before I was taken sick, pretty nearly three years ago, I think I was as fond of salt as a man could be. Things that came to the table salt enough for other folks, I would always give an extra dose, until I was taken sick. I was taken with lung fever. I had an awful time of it for about two years, between the disease and the doctors. I had one doctor come and see me twenty times in twenty-one days, at five dollars a trip; yet I got no better. When I told him I was not going to doctor any more, he told me if I did not keep him on, or get another good physician, I would be a dead man in three days. I told him I did not care, I would risk that; and when I asked him to leave me a little more night-sweat medicine, he got angry and said, "Not a drop, sir." So much for some of the drug doctors.

When I was sick, I could not get things fresh enough. Everything seemed to be too salt; and every time I tasted salt, it would start the cough on me. After a long time, I was allowed to be gone in consumption, and never expected to get better. For the last year, reading the HEALTH REFORMER, and seeing so much about salt, I have discarded it entirely, and now I can relish my food as well without salt as ever I did with it; and I know by actual experience it is very irritating to the system. By living as near right as I can, as the HEALTH REFORMER tells me, discarding drugs, using no pork nor pork grease, using graham flour, vegetables, and all the good fruit I can eat, and bathing about three times a week, and exercising according to my strength, being in the fresh air all I possibly can, I have got to be about as good a man as ever. Thank God for his goodness to me. I was able to plough all the fall, felt first-rate, ate heartily, and enjoyed myself a good deal during the winter.

These are all facts, and can be proven any day; and if you think they would be the means of helping any poor mortal, and you think enough of them to publish them, or part, you are perfectly welcome.

Yours very respectfully,

ANDREW MAIR.

Who could ask for a better practical demonstration of the efficiency of hygienic means in restoring the sick? Mr. Mair's straightforward account is an argument from experience which no amount of quibbling can set aside. The potency of health reform is clearly demonstrated in his restoration to health. He was daily dosed with drugs until he was given up to die. He dismissed his doctor, who was fortunately so kind as to even refuse his "night-sweat medicine." He got well, and is now "as good a man as ever." Such a man has a right to thank God for the light of health reform.

We have no spite toward the doctors. They doubtless mean no harm to their patients; but we have an earnest protest to raise against the enormous and unnecessary dosing with drugs to which sick people are subjected.

Questions and Answers.

Consumption, etc.—Mrs. W. D. B., Wis., asks the following questions:—

1. Can any one who has consumption derive benefit from wearing a wet compress over the chest? 2. Should it be applied warm or cold? 3. Should it be worn constantly if worn? 4. Is it advisable when there does not seem to be warmth enough in the system to keep it from feeling cold? 5. Should a bandage be worn around the body when there is a great deal of pain in left side and weariness in the back, between the shoulders?

Ans. 1. Yes; when the condition of the lungs is such as to indicate that remedy. 2. Whether the hot or cold compress should be applied would depend on the condition of the lungs and of the system in general. As a general thing, a compress which is to be worn is applied at a tepid temperature. 3. The constant wearing of a compress is not usually advisable. It may be worn during the night only, on alternate days, or during alternate weeks. When the compress is constantly worn for some time, the skin often becomes diseased. Some consider this a process of purification. We do not so regard it. It is rather a source of irritation and waste. 4. A compress should not be worn when it is accompanied by chilliness. 5. The abdominal bandage, properly employed, is a very useful means for removing abdominal pains; the remarks made with reference to the

chest compress apply equally well to the abdominal bandage. There is no advantage in making the skin sore, as is done by a continued use of the wet-girdle.

Salt-Rheum.—R. W. T., Minn., asks for the treatment of salt-rheum.

Ans. This disease, when of long standing, is of a very obstinate character. Its cure is only effected in such cases by long continuance in well-doing. The diet must be entirely hygienic. All of the general habits must be equally correct. Constitutional remedies, such as will aid in cleansing the system of impurities and improving the general health, must be adopted. For a local application, nothing is so good as the wet linen bandage. It should be kept applied to the affected parts incessantly, being often renewed. This remedy alone will sometimes effect a cure in a marvelously short space of time. It should be perseveringly continued for weeks if a cure is not effected sooner.

There is no harm in adding to the water in which the cloths are wet a small quantity of carbonate of soda or potash. An alkaline wash sometimes relieves the itching more quickly than pure water. The use of tar soap is also entirely unobjectionable. Keeping the part cleansed very thoroughly is an essential part of treatment.

The disease is by no means an evidence of scrofulous humors in the blood, as many people imagine.

Injury — Pin - Worms.—E. D. H., Neb., writes that his little girl received an injury to her hip a few weeks ago and has since been unable to bear her weight upon it, and cannot be moved without pain. A doctor thinks she has had a partial stroke of paralysis. Wishes to know what to do. Also inquires the cure of pin-worms.

Ans. 1. We see no grounds for the doctor's diagnosis of paralysis. It is more probable that the child has suffered an injury to her hip. The limb ought to have perfect rest until nature has time to effect a cure. The attending physician, if a competent surgeon, will know how to secure quiet to the limb by a plaster of Paris bandage or something equivalent to it. Slight extension of the limb by a proper instrument would be the best remedy. It is important that careful and thorough treatment should be promptly applied, as it may save the child from being a life-long cripple from hip disease. 2. Perhaps you did not employ the enema thoroughly enough. If cold water and salt water are not effective, try a strong infusion of wormwood or chamomile. The use of such food as will keep the bowels loose and regular is essential in the treatment of the difficulty. A cure is nearly or quite impossible so long as the bowels are constipated.

Hoarseness.—Mrs. A. C. B., of Cal., a school-teacher, complains of a severe hoarseness and painful irritation of the throat which is much improved after the rest of Saturday and Sunday, but soon returns after resuming her duties on Monday morning. The difficulty is of long standing. She wishes to know if treatment applied in the evening and on the unemployed days of the week would do any good.

Ans. Treatment will do you some good if taken at the times mentioned, but would do more good if regularly taken at the most favorable time of the day. Possibly the dryness of the air of your school-room, if it is heated by stoves or a furnace, may aggravate your difficulty. The air should be moistened by the evaporation of water from an open vessel. Use your voice as little as possible for a time, and be careful to speak in an easy tone of voice.

Dizziness.—Mrs. E. B. L., Mich., complains of dizziness, which persists even though she is quite hygienic in her diet. Inquires cause and remedy.

Ans. The cause may be an unbalanced circulation or some severe strain upon your nervous organization. Dizziness is a common symptom of dyspepsia, which may not be apparent by local distress in the organs of digestion. The remedy is of course to remove the cause. Be careful to observe all of the laws of health as well as those pertaining to diet. Exercise out of doors several hours a day.

J. P., N. H.: You should control the appetite of the child and not allow her to use excessive quantities of the unwholesome articles you mention, even if she is inclined to do so. The less of them the better. Make alternate hot and cold applications to the affected part three times a day, followed by vigorous friction. Give the child plenty of out-of-door exercise. Do not confine her to in-door employment. Improve the general health in all possible ways. The difficulty is a nervous affection, the cause of which is obscure.

R. W. T., Minn.: If your difficulty is not bronchitis, it is quite obscure, and we would not venture a diagnosis without a personal examination.

T. O'B., Mich.: See answer to E. D. H. in this number.

FARM AND HOUSEHOLD.

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

Fever Nests.

HOUSEKEEPERS cannot be too often reminded of the importance of looking after the sources of disease, which are sure to be always lurking about a neglected household. "Eternal vigilance is the price of peace," said a noted statesman. Eternal vigilance is the price of health, is equally true. A single neglected cess-pool or privy may cause the death of several members of a family. Filthy cisterns, foul wells, dark, unventilated cellars—filled with decaying vegetables—a heap of rubbish in the back yard, or any collection of decaying, organic matter may be the source of fatal disease. No one who values life or health can afford to remain indifferent to these things. Even though to some minds they may seem gross and indelicate, they are eminently practical, and nothing which concerns human health and happiness so immediately as do they, is unworthy of the attention of the most refined.

Fevers of the most dangerous types have their beginnings in the places already mentioned. If several members of a household sicken with fever, it may be set down as an absolute certainty that the cause is not far distant. It may be in the house, or out of the house, beside it, or under it. It may be in the back yard, the stable, the wood-pile, the drain, the gutter, the sewer; it is certainly somewhere, for fevers do not come by chance, neither is it possible to believe them the direct inflictions of a kind Providence.

It is the easiest thing in the world to get up an epidemic of typhoid fever, by simply supplying the proper conditions; and that is just what is being done in thousands of neighborhoods. Cellars are left uncleansed, the walls are not whitewashed, cisterns are not properly cleansed, cess-pools are allowed to become foul, privies are left to become reeking pest-holes, swill, dishwater, and chamber-slops are thrown out at the back door, and the most common sanitary rules disregarded in a thousand ways; then if a dozen people get sick, it is an inexplicable visitation of Providence! A visitation of filth, would be a more correct statement.

If fevers can be so easily produced, they can be almost as easily prevented, if whole neighborhoods can be induced to co-operate. Let every man be sure that his own premises are clean, and then the whole will be wholesome. It should be no excuse for any one that his neighbors are more filthy than he. The more filth, the more disease; a little filth close at home is worse than a good deal a little way off.

Clear out the "fever nests," destroy the eggs, allow no chance for incubation, and there will be no fevers.

Papering.—As the annual time for all house-cleaning operations has fully arrived, a few suggestions may be opportune. We offer the following relative to papering walls:—

1. Do not allow a room which needs papering to suffer for the want of it. The cost will be a mere trifle, and the attractiveness which it will add to the room will much more than repay the expense.

2. Never put on new paper over old. The old paper should be wholly removed before applying the new. If allowed to remain, the contact of the moisture in the fresh paste employed will occasion the generation of foul and poisonous gases which will pervade the air of the room and poison its inmates. Very serious illness has been traced to this cause.

3. A good way to loosen the paper is to wet it thoroughly with a strong solution of saleratus water an hour or two before it is to be removed.

4. After removing the paper, wash the wall thoroughly with a solution of copperas, made by dissolving a pound of pulverized copperas in a gallon of warm water. A solution of chloride of lime answers well in place of copperas. This is necessary to destroy the foul gases and putrefactive germs which are accumulated in the porous plaster by absorption. The amount of filthy matter thus accumulated during a year is very great. It is said that the Chinese find it profitable to tear off the plaster from their walls every few years, replacing it by new, and using the old for a fertilizer.

It is the presence of these putrescent matters that give to certain houses a peculiar odor. It is a disgrace to any house that it should be known by its characteristic smell, or stink, we should more properly say—and yet we have seen a good many such houses, have *smelled* them. Thorough disinfection of the walls is one of the best remedies.

5. The selection of paper is an important item. Under no circumstances allow the use of a paper which is printed with arsenical colors. No matter if it is the prettiest pattern to be found, "something new," "just out," "stylish," or possessed of all other desirable properties; if it contains arsenic, reject it.

What would be thought of a woman who should employ a machine to sprinkle rat poison among her children, in their food, in their drink, into the very air they breathed? She would be rightly pronounced an inhuman monster. That is just what a woman does who puts arsenical paper on the walls of her house. She hangs up the poison, and flies, swinging garments, picture frames, looking-glasses, etc., rub it off into the air, whence it settles upon everything in the room, and is inhaled by those who breathe the poisoned atmosphere. Numerous cases of long and serious illness have been reported by scientific men who have investigated this subject. Get paper which is free from poison if you have to try a dozen times and get a chemist to analyze each specimen for you. It would be better to paper a room with newspapers than with the most beautiful patterns which were executed in arsenical colors.

6. It is very poor taste to select gaudy, showy colors for paper. They are not pleasing to a refined eye. Neutral tints agree best with the eyes.

7. The paste is another important item. Its adhesiveness may be greatly increased by adding two table-spoonfuls of powdered alum to each panful of paste made in the ordinary way. The alum will also delay souring.

Moths in Carpets.—One can never be quite sure that his carpets are not being consumed by moths, except for a few weeks after taking them up and thoroughly cleaning them, unless something is used to prevent their growth or to destroy them. This often necessitates the taking up and cleaning of a carpet that otherwise would not need the renovation.

With an ingrain of Lowell this needless labor may be saved by laying down a damp cloth, and over it thoroughly rubbing the edges with a hot flat-iron; this will kill the moths, if any have accumulated. But with the tapestry, Brussels, or velvet, the ironing is not effectual; besides, it injures the carpet. Much hard work can be saved, however, by removing the tacks, one side at a time, rolling back, and examining the edges. If there are any moths, they must be brushed off and burned; and to effectually destroy the life of all deposits, the edges of the carpets must be ironed, as before stated, but on the wrong side. The edge of the carpet lining should be thoroughly looked to, and the exposed edge of the floor washed, and while damp sprinkled with salt. If the carpet is to be folded under in any place, sprinkle salt between the folds and see that the floor is well covered with salt for an inch or two under the edge of the carpet all around. If salt was always put under the edges of carpets before tacking them down, moths would have but slight chance to trouble them.—*Sel.*

Taking Notes.—A little book and lead pencil, artfully used, will save many dollars in the course of a year. They should be kept in the pocket, and the time, place, and manner of various kinds of work to be performed should be written as soon as they occur to the mind. How often an important work is put off "till another year," simply because it has been forgotten until it is too late!—*Sel.*

Care of Horses' Feet.—When the ground is wet in the spring and fall of the year, horses are liable to be afflicted with scratches and greased heels. To cure and prevent these disorders, the parts should be well washed with emollient soap, and afterward rubbed dry with soft cloths, after which they may be touched with sweet oil. Finally, the animal should be kept out of the wet as much as possible.

Hints.—Always mend clothes before washing them. Alum or vinegar is good to set the colors of red, green, or yellow. A hot shovel held over varnished furniture will take out white spots. Ribbons of any kind should be washed in cold soap-suds and not rinsed. If your flat-irons are rough rub them with fine salt and it will make them smooth. Scotch snuff put on the holes where crickets come out will destroy them.—*Ex.*

To Revive Flowers.—Flowers nearly always begin to fade and droop after being kept for twenty hours in water; a few may be revived by substituting fresh, but all may be restored by the use of hot water. For this purpose place the flowers in scalding water, deep enough to cover about one-third of the length of the stems. By the time this is cold the flowers will become erect and fresh. Then cut off the shrunken end of the stems and put them in cold water.

POPULAR SCIENCE.

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

Honey.—A vexed question about bees was recently answered by Professor C. V. Riley, at a bee keepers' council, in St. Louis. The query was: Do bees make or gather honey? The professor says they make it. Thus does science proclaim that the venerable Dr. Watts was wrong when he asserted that the busy bee "gathers honey all the day from every opening flower." The nectar lying in flowers never would become honey, says Professor Riley, no matter how manipulated by the hands and minds of men; but it is taken up by the bees and passed through a state of semi-digestion and excretion, resulting in the manufacture of what is called honey, yet still retaining in part the flavor or perfume of the flowers, by which we determine one kind of honey from another. Professor Riley's views were corroborated by a paper read by a botanist and chemist of Louisiana, describing the process of change undergone by nectar in the stomach of the bee, in order to become honey. —*Sel.*

Hard Paper.—French manufacturers have a method of rendering paper extremely hard and tenacious by subjecting the pulp to the action of chloride of zinc. After it has been treated with the chloride, it is submitted to a strong pressure, thereafter becoming as hard as wood and as tough as leather. The hardness varies according to the strength of the metallic solution. The material thus produced can be easily colored. It may be employed in covering floors with advantage, and may be made to replace leather in the manufacture of coarse shoes; it is also a good material for whip handles, the mounting of saws, buttons, combs, etc. A great deal is used in large sheets for roofing. Paper already manufactured acquires the same consistence when plunged, unsized, into a solution of the chloride.

Lead in Tin.—Many people are poisoned by lead without knowing the source of the poison. Tin-lined cooking vessels are now known to be the source in many obscure cases. The manufacturers of these vessels find it for their advantage to mix lead with the tin used in lining pans, cooking utensils, etc. When any acid fruit is placed in one of these vessels, it dissolves a portion of the lead, and so communicates the poison to those who eat it. The presence of lead in the tin lining of vessels may be detected as follows:—

Place on the clean surface a drop of nitric acid. Apply gentle heat, and the acid will evaporate, leaving a white spot. Moisten the spot first with a weak solution of caustic potash, then with a weak solution of iodide of potassium. If the color of the spot becomes yellow after adding the iodide of potassium, the presence of lead is indicated, and the article should be rejected as poisonous.

Two years ago we were poisoned by eating cranberries which had been cooked in a tin-lined saucepan which contained lead. We discovered the presence of lead by the taste in time to prevent very serious consequences, though we suffered considerably for a day or two with severe abdominal pains. Had the sauce contained so much sugar as to mask the metallic flavor, the results might have been more serious.

Putrefaction Arrested by Pressure.—A communication to the Paris Academy of Sciences by M. Paul Bert, on the "Influence of Air-Pressure on Fermentation," a summary of which appears in the *Academy*, states that a piece of meat placed in oxygen, with a pressure of twenty-three atmospheres, remained from July 26 to August 3, without putrescence or bad odor. It consumed in that time 380 cubic centimetres of the gas. A similar piece, suspended in a bell-glass full of air at the ordinary pressure, acquired a bad smell, consumed all the oxygen, amounting to 1,185 centimetres, and was covered with mold. Another trial was made with oxygen at a pressure of forty-four atmospheres; no oxygen was absorbed between December 19 and January 8, and no bad odor was exhaled. Thus it appears that the micro-ferments which cause fermentation can be killed, when they are moist, by a sufficient tension of oxygen. Fermentations of milk and wine are arrested by high pressure, and fruits keep sound. Diastase continues to act as a ferment, and bodies of this description preserve their properties indefinitely if retained under pressure.—*Science Monthly.*

NEWS AND MISCELLANY.

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

—A revolution is in progress in Mexico, which promises nothing but useless bloodshed.

—New Mexico has applied for admission as a State.

—Chicago is now commonly recognized as the greatest grain port in the world.

—The Egyptians have been defeated in their war with Abyssinia.

—The Sultan of Zanzibar has recently agreed to abolish the slave trade. This is one of the results of the labors of Livingstone.

—The crime of arson is increasing to an alarming extent. It now costs the country $50,000,000.00 annually.

—During the past ten years, the people of the United States have paid $7,000,000,000.00 in taxes, or nearly $2,000,000.00 a day.

—Bret Harte says that California produces magnificent grapes, but that its other fruits rival those of the East only in size.

—A lively war is now occurring between Gautemala and San Salvador in Central America.

—Dom Pedro, the Emperor of Brazil, with his wife, is now making a tour through this country. They were at the opening of the Exhibition, and recently visited the Mammoth Cave.

—The pope delivered a remarkable address in the Vatican, a few weeks since, in which he declaimed loudly against the "liberty of teaching" recently becoming prevalent.

—The Czar of Russia is threatened with insanity, a hereditary malady in the royal family. He is now suffering under the preliminary symptoms of the disease.

—A recent newspaper authority shows that lunacy is increasing in France with alarming rapidity, and enumerates the use of absinthe, opium, and tobacco, among the recognized causes.

—The Cubans have recently elected a new president. Their generals say that Spain would be obliged to send a million soldiers to subdue them. Their prospects of success are daily brightening.

—There has been a recent revolution in Hayti which resulted in the complete overturn of the existing government, and the establishment of a provisional government which will control affairs until a new president can be elected.

—The Russian journals publish a long report of the commission charged by the Physical Society of St. Petersburg to examine the phenomena of spiritualism. The report concludes that these phenomena are the result either of unconscious movements or of conscious imposture, and that the doctrine of spiritualism is a superstition.—*N. Y. Sun.*

—Dr. W. W. Hall, editor of "*Hall's Journal of Health*," and author of many health works, fell upon the streets of New York in a fit and expired in a few moments, on Wednesday, May 10.

—A serious flood occurred during the last month in the Connecticut River valley, and in the vicinity of Lake Champlain. Much damage was done about St. Johnsburg, Vt., and in other places.

—Rev. George E. Tomlinson, pastor of the Seventh-day Baptist Church, in Westerly, R. I., died suddenly on Thursday night, from the effects of an overdose of chloral, taken to induce sleep.—*Ex.*

—Silver coin is now quite current in Philadelphia. The official report to the Treasury Department of the disbursement of silver shows that $4,200,000 has been paid out, of which amount Philadelphia has received $300,000.

—The last news from Stanley, the African explorer, was dated April, 1875. An envelope addressed in his hand-writing, but containing a note in another hand, in very poor English, and with no news of him, was recently received by Colonel Gordon.

—Rubenstein, the Hebrew murderer of Sara Alexander, a young Jewess, died in his cell in a New York prison, on May 10, while awaiting execution. He gradually wasted away, a prey to horrid hallucinations and fearful remorse.

—The revolution in Turkey still continues. The lives of Christians in Constantinople are unsafe, and the insurgents rule the city. Foreign intervention alone will put an end to the present state of things. The government is entirely unable to support itself, and cannot exist much longer.

—There is great interest at present manifested in the question whether the Exhibition grounds and buildings shall be opened upon Sunday. The Catholics and a majority of foreigners favor the opening. The proprietors of liquor-selling establishments are especially favorable to such an action. Several mass-meetings have been held with a view to influence the commissioners to open the grounds, at least, if not the buildings. It is still uncertain what will be the final decision.

—The presidential campaign is already waxing very warm. Politicians are blackguarding each other to the extent of their ability. Men hitherto supposed to be honest and honorable,

are now suddenly found to be knaves, scoundrels, liars, thieves, hypocrites, and idiots. Such is politics.

—Philadelphians are sad. They have expended their "bottom dollar" in the Centennial enterprise, supposing that there were "millions in it;" but now they do n't see the millions putting in an appearance, and they begin to think that they have made a charity investment. Upon the opening day 75,000 tickets were sold. Since that the attendance has ranged from 10,000 to 20,000 a day.

—Washington's false teeth are to be exhibited at the Centennial, in company and contrast with the finest dental work of New York. The wonder is, they say, that any man ever held them in his mouth five minutes. The teeth are bits of bone, scarcely trying to look like teeth attached to gold plate, with strips riveted across to strengthen the teeth in place; while coiled wire at the end of the jaws makes a spring, and assists in opening and closing the machine.—*Ex.*

—Temperance reformers are having a warm contest with the centennial commissioners, on account of the permission granted to a number of parties to sell intoxicating liquors on the Exhibition grounds. Several leading temperance men threaten to serve an injunction upon the commissioners to compel them to withdraw their permits, for which the dealers paid them large sums.

—England is increasing her iron-clad fleet on a formidable scale. The Inflexible, launched recently, will weigh 10,000 tons, cost $3,000,000, and be protected by double armor of from sixteen to twenty-four inches thickness. She will carry four 81-ton guns, capable of piercing armor 20 inches thick at the distance of a mile and a half. The Téméraire, set afloat yesterday, will also carry four great guns. These floating monsters, though proof against artillery, may still be liable to destruction by torpedoes of recent invention.—*N. Y. Tribune.*

—The two countries of the world, leaving Central Africa out of account, about which least is known to outsiders, are Thibet and Corea, both or them populous, and both ruled by despots of the old Oriental type. The numerous attempts made to open them up to travel and commerce have heretofore proved failures, and they remain sealed against all the influences of our form of civilization. But mankind will presently gain entrance into Corea. By the treaty through which war has been averted, and the long-standing quarrel closed between Japan and Corea, two of the Corean ports will next year be opened to commerce with the enterprising Japanese. This is a signal triumph of Japanese diplomacy. It has gained that which all the menaces and all the negotiation of British and other European agents have failed in gaining. Other governments, including our own, will now of course demand that Corea shall put them upon an equal footing with the Japanese.—*Ex.*

—As the N. Y. *Herald* remarks, the "Beecher and Bowen prize-fight" still continues. At a recent meeting of Plymouth church, Mr. Bowen was expelled by unanimous vote. His protest was presented by his son. It was a statement of his relation to the scandal, and a re-affirmation of the truth of the statements which he had made. It is evident to everybody that some person is guilty of stupendous falsifying. The difficult question to answer is, Who is it? We are advised that "the end is not yet." At a meeting held a few days previous to the one referred to, Mr. Beecher remarked, "I am charged with a monstrous crime." Dr. Ward, editor of the *Independent*, instantly exclaimed, "of which you are guilty." The general indignation of the members was manifested by driving him from the house. When will this dirty business end?

Literary Notices.

THE CURE FOR INTEMPERANCE. Manchester, 91 Oxford St: Dietetic Reformer.

A four-page tract embodying a paper read by Mr. Napier before the British Association, in which he shows by numerous cases that a strictly vegetarian diet is a most powerful aid in reforming intemperates. The testimony is a very valuable one, coming as it does from so high an authority, and we are glad that our English vegetarian friends have seen fit to publish it in this form.

TWO DIETETIC EXPERIENCES. Another tract by the same publishers. It contains many useful facts, and ought to convince those who are so vigorous in demanding experimental evidence of the utility of vegetarianism.

By a mistake in arrangement, this tract was last month attributed to another publisher.

THE CUP OF DEATH, and THE TWO WAYS. New York: National Temperance Society.

Each of these little pamphlets is a temperance concert exercise designed for children. They are chiefly made up of short quotations of prose and poetry, intermingled with original notes by the compilers. It is a very commendable effort to impart useful instruction in an attractive manner.

THE OVERLAND TRIP. San Francisco: Charles A. Sumner.

This is a narrative lecture of a trip "'cross the plains." It is presented in a rather unattractive style, but contains many good things, nevertheless; perhaps the most useful is a map of the route of the Central Pacific Railroad with its chief connections.

LIST OF COUNTERFEIT NOTES. Cincinnati, Ohio: F. W. Helmick.

This list may doubtless be made of practical utility by any one who handles much money. There is doubtless a very large amount of counterfeit currency in circulation.

Items for the Month.

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

OUR CONTEMPORARIES.—During the ten years since the HEALTH REFORMER made its appearance as an organ of health reform, numerous other periodicals have been started, professedly with the same aim and scope. After a brief career they have, almost without exception, become extinct, either by absolute suspension or by consolidation with some other journal. Several journals which were already in existence when the REFORMER began its career have met a similar fate.

Some of these periodicals have possessed real merit, and have accomplished much good in the diffusion of light upon the great subjects of reform among the people; and we have noticed their decline and death with no little regret, regarding the failure of each as the closure of another avenue through which the minds of the people are to be enlightened.

Four years ago, the HEALTH REFORMER announced with pleasure the advent of a new periodical, the *Science of Health*, which promised to become the leading health journal of the world. Ably conducted, with an enterprising and energetic publisher, its prospects were most hopeful. For a time, its best hopes seemed to be realized; then evidences of failing patronage appeared; and now we are sorry to see the announcement that the June number will be the last of this valuable magazine. We have been gratified at its success, and are sorry for its failure. We have had no occasion for any other feeling, for our own constantly increasing patronage has left no room for anxiety about success.

The failure of our contemporary has not resulted from any lack of ability, but solely from lack of support. And we are very willing to attribute the success of the REFORMER wholly to the noble and generous support which has been accorded by its thousands of friends. With a continuation of the same hearty support which our patrons have given us in the past, we feel assured of the same and even greater prosperity in the future, and we shall endeavor to make the REFORMER still more worthy of the generous patronage which it receives.

☞ A correspondent writes us from Iowa: "Sirs, I move that you inaugurate a simon-pure hygienic boarding-house, convenient to the Exhibition, at rates that both proprietors and guests can stand, and insert a card in the June number so that we can all find it." Our correspondent will find a notice of such a boarding-house in our advertising columns this month—the Centennial Hygienic Hotel, at which we have recently had the pleasure of spending a few days. The proprietors are gentlemen, and provide their visitors with wholesome fare. The rates are no higher than at other hotels.

☞ The *Herald of Health* announces that hereafter it will be published but once in two months. We hope that this is not the first symptom of approaching dissolution. The *Herald of Health* has been before the public longer than any other health journal published; and we shall be sorry to see it meet the fate of the *Science of Health*.

☞ We take pleasure in calling attention to the advertisement of Heald's Hygeian Home in this number. We found their institution a very pleasant place, and formed an agreeable acquaintance with its proprietors. Visitors to the Exhibition who find the air and surroundings of the city objectionable, will find there a very quiet and cheerful home. The short ride upon the cars or by steamboat will be found very agreeable after a day spent in the crowded city.

ADVERTISING.—On account of the limited space which we have devoted to advertising, and for other reasons, the publishers of the HEALTH REFORMER have for some time found it necessary to decline the solicitations of the proprietors of various Health Institutions and Hygienic Boarding-Houses and Hotels for the opportunity of advertising in the journal. They have now decided to add to the journal an advertising department, in which all who can give good references of reliability and being worthy of public patronage can have an equal opportunity to present the merits of their several institutions.

The HEALTH REFORMER is not the special organ of the Health Reform Institute located at Battle Creek, Mich., and will not give to that institution any advantages which will not also be accorded to other institutions of equal merit.

The aim of the REFORMER will be to disseminate the truths of hygienic living as widely as possible. It will be in no sense partisan or sectarian, though nothing will be admitted to its pages which is not in harmony with the fundamental principles of Christianity. The following is a schedule of our

ADVERTISING RATES.

Less than 1 square, per line, nonpareil,	1	insertion,	$ 0.30
1 square, one inch, 12 lines, nonpareil,	1	"	3.50
2 squares,	1	"	6.00
½ column,	1	"	10.00
1 column,	1	"	15.00
1 page,	1	"	25.00

One-fourth discount for advertisements continued six months or more.

One-third discount for a year or more.

Special rates for last page of cover, and personal notices on last page of reading matter.

All who wish to avail themselves of this opportunity for advertising will please favor us with an early response, sending copy and specifying the number of squares or inches of space wanted.

PUBLISHERS HEALTH REFORMER,
Battle Creek, Mich.