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THE mysterious is always the most fascinating.

HAVE nothing to do with a man in a passion, for men are not like iron, to be wrought upon when hot.

THOU who wouldst give, give quickly. In thy grave thy loved one can receive no kindness.—*Carlyle.*

"HE that hath no rule over his own spirit is like a city that is broken down, and without walls." Prov. 25:28.

THERE is a transcendent power in example. We reform others unconsciously when we walk uprightly.—*Mme. Swetchine.*

THE Mexican War cost the United States $100,000,000. The total number of volunteers, regular army and marines, 101,282; killed and wounded, 3,420.

THE largest match factory in the United States, situated at Akron, Ohio, turns out 57,000,000 matches in one day when run to its full capacity. That enormous production gives one match per day to every man, woman, and child in the country.

THE natives of India gather from the cocoa tree the following supplies: Bread, water, wine, vinegar, brandy, milk, oil, honey, sugar, needles, thread, clothes, cups, spoons, basins, baskets, paper, masts for their ships, sails, cordage, nails, covering for their houses, etc., etc.

ORGANS OF EXTERNAL SENSE.

THE organs of external sense are those organs of the animal machine which bring it into relation with external objects. These organs are commonly reckoned as five in number,—hearing, sight, smell, taste, and feeling, or the sense of touch. To these five senses modern physiologists have added two others, the sense of temperature and the muscular sense, or the sense of weight. Of the five senses the first four have their appropriate organs (the ear, the eye, the nose, and the tongue), situated in the head, while the organ of touch is distributed over the entire skin of the body.

In calling attention to these organs we have selected the organ of sense, or touch—the skin of the body—as the one for special consideration in this article. The sense of touch in the human body, or the nerves of feeling, are the posterior roots of the spinal nerves, and some fibers of the fifth and eighth pair of cerebral nerves. These nerves are distributed to the papillæ of the skin. These papillæ are small elevations on the surface of the body, inclosing loops of blood-vessels and branches of sensatory nerves. It is not possible to puncture the body in any place with the finest needle without wounding both a blood-vessel and a nerve.

The skin itself is the outer covering of the body, and serves as a defense for the most deeply-seated structure. As an apparatus for secretion it is one of the most compound of all the tissues. It is composed of two layers, called *derma* and *epiderma*. The derma, or true skin, is composed of elastic cellulo-fibrous tissue, abundantly supplied with blood-vessels, lymphatics, and nerves. The derma is the seat of the characteristic natural colors of the skin. In negroes it is very thick, and its cells are filled with minute black or otherwise colored pigment granules. Its thickness renders it less penetrable by rays of heat, and hence it is that a negro can bear that exposure

of his skin to a degree of solar heat which blisters that of a European. The superficial strata of the derma is the papillæ spoken of above. Though every part of the skin be sensitive, yet the papillæ are so in the highest degree, and are the chief instruments by which the sense of touch is exercised. One interesting feature of the true skin is its voluntary muscular fiber. It is the contraction of this fiber which produces that peculiarity of the surface of the body called "goose pimples."

The epiderma, or cuticle, is the scarf skin, which envelops and protects the derma. Its internal surface is soft, its external surface is hard and horny. The pores of the epiderma are the openings of the respiratory ducts, and hair follicles, and glands. Of these it is said by some that there are about seven million on the surface of the body. Eichhorn calculated that the surface of the ordinary body was about equal to fourteen square feet, and that on this surface there were about ten million of these perspiratory glands. It is in these that the perspiration is being constantly formed, though it generally passes away as fast as it is produced, in an insensible vapor, and in health collects in form of sweat only when it is very rapidly formed, as during active exercise. The cuticle becomes very thick and hard on parts of the skin subject to much friction, as the bottoms of the feet and insides of the hands.

The derma is not confined to the external surface of the body. The same membrane lines the cavities of the mouth, nostrils, windpipe, air-passages, the cells of the lungs, the meat-pipe, stomach, intestinal tube, etc. This internal lining of the body is called the mucous membrane. The skin of the surface of the body, and that of the lungs and alimentary canal, in many respects resemble each other, especially in regard to the substance which they throw off from the system; and they are to a considerable extent reciprocal in their offices, the excess of one corresponding with the suppression of the other.

Another secretion from the skin is that of the oily sebaceous matter, by which its surface is always kept in a slight degree greasy, so that water will not adhere to it only in drops, and does not easily soak into the epidermis. The loss of fluid by these secretions of the skin is in some measure compensated by the absorption which it also exercises. The skin absorbs fluids placed for a short time in contact with it so rapidly that (especially after long fasting) a perceptible increase of weight is observed when the person has a bath. The power of the body to absorb moisture has been manifest in a marked degree in some instances on record of shipwrecked sailors who, having nothing to drink unless they took to sea water, have slaked their thirst by applying cloths wet, even in the salt water, to the surface of their bodies.

The vicarious action of the internal and external skin of the body may thus be illustrated: If the insensible perspiration of the external surface becomes checked by sudden exposure—by taking cold—the internal skin collects and disposes of this matter that would have passed from the surface of the body. The nerves of the internal skin connect with the nervous center of organic life, while the nerves of the external skin connect with the center of the nerves of animal life, the top of the medulla oblongata. Thus the external skin and the internal mucous membrane sympathize in a powerful manner with each other. Irritations of the mucous membrane affect the external skin, and irritations and affections of the external skin also affect the mucous membrane.

Of the sense of touch we will quote from Doctor Kellogg's "Home Hand-book:"* "The sense of touch greatly assists the other senses in acquiring correct ideas of the nature of bodies. We are rarely fully conscious of our dependence upon this sense, or of the degree to which it may be developed, until deprived of some of the other senses, especially sight. Numerous examples are given of persons who, upon losing their sight, have been enabled to develop their sense of touch to such a degree as to be really marvelous. Probably one reason for this remarkable increase in the delicacy and efficiency of touch is the concentration of the attention upon it when the sight is absent from birth, or has been destroyed.

"The sense of touch differs greatly in delicacy in different parts of the body. The acuteness of the tactile sense in any part may be readily tested by observing the distance at which two pin points may be placed from each other without being recognized as two distinct objects. For example, two points applied in this way to the hand, will be recognized as two when but a slight distance apart, while upon the back they may be removed some considerable distance without being distinguished as more than one object. In this way the whole skin

*Pp. 167, 168.

has been tested, the result showing that of all parts, the tip of the tongue is the most sensitive, recognizing points which are not more than one twenty-fifth of an inch apart. The tips of the fingers rank next in sensibility, distinguishing objects which are no nearer to each other than one-seventeenth of an inch. From the tips of the fingers the acuteness of touch rapidly diminishes as we recede, being represented by a distance of one-seventh inch at the portion of the finger next the palm of the hand, one-third on the back of the fingers, three-fifths on the back of the hand, two-thirds on the skin of the throat, one and one-half inches on the sternum, and two inches at the middle of the back. The cheek is much more sensitive than the back of the hand, recognizing objects at one-third of an inch. Objects are recognized on the dorsum of the foot at a distance of one inch."

It is surprising how the sense of touch may be educated. The blind have not only been taught to read, but even to distinguish colors, by the sense of touch. As to how the nerves take cognizance of hardness or softness of bodies, whether they are rough or smooth, hot or cold, is another wonder in the structure of the nervous system. It is by the degree of resistance required in the papillæ of the body when brought in contact with any substance, that it is supposed the mind forms a correct idea of their quality in these respects.

The hair and nails have been spoken of as appendages of the skin. But it is a fact that each of these is dependent on an organism of nerves, vessels, etc., for its sustenance and production. The root of the hair, which is situated just beneath the skin, consists of a small oval pulp, invested by a sheath or capsule. That part of the hair in a state of growth is hollow, and filled with this pulp. The vigor of the hair depends on the vigor of its roots. The vigor and integrity of these roots depend on the general welfare of the body. Injury to the digestive organs, gluttony, intemperance, sensual excess of any kind, anger, grief, fear, etc., powerfully affect the roots of the hair, and thus the hair itself. Violent grief or excessive fear have whitened the hair, sometimes in a very few hours. This was the case with Marie Antoinette, the wife of Louis XVI., who became so frightened at their being arrested and imprisoned as they were fleeing from France, that her hair turned from an auburn color to the whiteness of age in a single night.

The coloring matter of the hair is furnished by the bulb at the root of the hair, and the color of the hair is according to the color of the bulb. It is the unhealthy action of the root of the hair that causes it to have a dry appearance, or its turning gray. All applications to the head, except those which give vigor to the roots of the hair, and healthiness to the skin of the head, are decidedly injurious. Dietectic errors, or abuse of the stomach, are of the greatest injury to the hair; so a proper regard to all the laws of our being is the only reasonable ground on which we can expect a healthy head of hair.

The nails have their roots and organs by which they are produced, yet they are themselves destitute of nerves and vessels. They do not sympathize so powerfully with the affections of the body as the hair, but they are more or less moist and pliable, or dry and brittle, according to the general health of the body.

Diseases of the skin are very numerous and prevalent, but in the case of the majority which occur they arise from the neglect of some of the conditions necessary for the health of the skin. These conditions, in general, are good nutritious food, which shall be properly digested; a due amount of warm clothing, especially during changeable and cold weather; constant and regular exercise, so as to keep the skin, as an excretory organ, in perfect order; sufficient bathing of the surface of the body (with the occasional use of soap), to keep it supple and free from impurities.

J. N. L.

DYSPEPTIC'S PLEA.

THE tempter to my soul hath said,
"You need a little butter for your bread;
A little sugar on your rice,
A little cream to make it nice;
A little salt and pepper on your meat,
Some kind of seasoning on everything you eat."

HOW THIRSTY PLANTS GET WATER.—In the arid regions of Egypt, a French botanist, M. Volkens, has found roots twenty times as long as the part of the plant above the surface. On some of these desert plants the same observer has noticed a very curious moisture-absorbing contrivance. Glandular hairs put forth by the leaves yield a bitter crystalline liquor, which spreads out at night and collects the dew.

RICHEST is he that wants least.

LOSING TIME IN GETTING HEALTH.

A MAJORITY of those who resort to health institutions have been invalids for several years. Most of them have been badly damaged by drug medication. About one-half of them (judging from our own experience) are able to do one-half of a moderate day's work without injury, one-fourth are able to labor not more than one or two hours a day, the remainder are entirely disabled; and when these invalids are told that six months or a year is the time necessary to restore them to comfortable health, the first exclamation on their part, usually, is, "How can I afford to lose so much time?"

We are often obliged to retort, "How can you afford not to?" The most losing thing in the world next to sin is sickness, and no amount of time judiciously expended in attaining a sound bodily condition can be misspent. One, two, or three years, devoted to the thorough renovation of a shattered constitution, is often the best investment that the invalid can possibly make, and so far from causing him any loss of time, it may add five, ten, or twenty years to his life, besides rendering every year of his life more happy and useful.

Cornaro, who wrecked his health at forty, by adopting a "sober and temperate life" enjoyed remarkably good health and vigor to nearly one hundred years of age. We could name scores of persons who were our patients fifteen and twenty years ago, who were then utterly broken down and unfitted for business, and miserable in every sense. Some were totally discouraged, others had almost lost all ambition to be anything, or to do anything, and a few had lost all desire to live longer. They were under the strict regimen and rigid discipline of the "institution." For one or two years their improvement was slow, and attended with occasional relapses, but, eventually, they were enabled to resume their regular vocations, since which time they have attended to business successfully and uninterruptedly, and in the enjoyment of almost uninterrupted health.

Now, these persons did not lose any time in getting health. They made a profit on the time invested of several hundred per cent. A majority of them, perhaps all, would have been in their graves years ago had they not "lost" a year or two of time. Nearly all of them had been the rounds of allopathic, homeopathic, and eclectic druggery. They had also tried many of the quack nostrums that flood the market, and then came to us as a last resort—more in desperation than in hope.

Young men who find themselves in a state of chronic invalidism at the period of life when they should be in their prime—twenty to twenty-five years of age—are usually the most impatient patients we have to deal with. They have broken by living too fast, and to gain lost time they are anxious to make a quick recovery. Tell them that physical regeneration is with them a three years' job, and they want to know if in some way it cannot be accomplished in three months; or, if three months be named, they will want the time reduced to three weeks. They are in a hurry to settle, they are anxious to go into business, they must get married, they want—everything, and that speedily. They are willing to take any number and variety of baths, cold, hot, or any grade between; exercise to any extent; eat as much of unseasoned food as you can prescribe; do anything, or submit to anything (except the one thing most needful—keeping themselves quiet), provided they can be made "all right" without delay. They are continually worrying themselves and annoying their physicians to have that done which is impossible. They want the laws of nature changed for their especial benefit, and nature refuses. They desire to recover health outside of the operation of the laws of the vital organism, and vitality says, No. Nature will not be contravened. Vitality will not be hurried. The recuperative power being in the living organism, and not in external agents, the vital machinery must and will have its own good time to work, or the work will not be well done. Hurried cures are like stimulated strength, worse than useless.—*Dr. R. T. Trall, in Health Reformer, 1871.*

"EVERY good act," says Mohammed, "is charity." Your smiling in your brother's face is charity; an exhortation of your fellow-men to virtuous deeds is equal to alms-giving; your putting a wanderer on the right road is charity; your removing thorns and stones, and other obstructions, from the road is charity. A man's true wealth hereafter is the good he does to his fellow-men. When he dies people will say, "What property has he left behind him?" But the angels who examine him in the grave will ask, "What deeds hast thou sent before thee?"

A PERSON may as well be in darkness as to be overwhelmed by a flood of light.

BREATHING BY MALES AND FEMALES.

I DO not know of any original investigation in physiology lately prosecuted that is of so much practical importance to the student of hygiene as that done during the past year by Dr. J. H. Kellogg, of Battle Creek, Michigan.

Eight or ten years ago he expressed the opinion that the difference between the respiration of males and females is due entirely to pernicious modes of dressing themselves adopted by civilized females.

The fact that a difference in the manner of breathing, as commonly observed, exists, is not questioned. The cause of this difference is the point upon which Dr. Kellogg and some other physiologists disagree. Most writers have assumed that the difference is due to natural causes associated with the female sex, by which they are fitted for maternity. The facts are these: Males and children of both sexes perform the act of breathing by enlarging the thoracic cavity both horizontally and vertically. Elevation of the ribs, naturally drooping at their middle when at rest, secures the horizontal enlargement, while the descent of the diaphragm secures the vertical enlargement—the deepening of the chest. But this descent cannot occur without slight depression of the abdominal organs, which, in turn, causes protrusion of the abdominal walls. This occurs during inspiration. A return of the parts to their former position accompanies expiration. Breathing in this manner is termed "*abdomino-costal respiration.*"

Adult females of nearly all civilized countries breathe by means of their upper ribs alone, the diaphragm and lower ribs being comparatively inactive. This is termed "*superior costal respiration.*" Dr. Kellogg some years ago expressed the opinion, as above stated, that, if not hampered by constriction, females would breathe just as children and men do.*

This opinion he says he arrived at from observation alone. Last year, while on the Pacific Coast, he was enabled, by the courtesy of the Chinese Consul at San Francisco, to thoroughly examine about a score of female Chinese, with reference to this matter. He had constructed an apparatus which, being placed upon the thorax and abdomen of a subject, would trace on prepared paper the amplitude of movements of the parts of the body on which the machine was placed. By moving the apparatus from the thorax down over the abdomen he was enabled to have traced a continuous line, one end of which would represent the "costal respiration" of the individual examined, while the other end would represent his "abdominal respiration." In these Chinese women the costal end of the lines made were gently curved, or thrown into slight indulations, while the abdominal end was characterized by sharp curves having long sweeps between them, fully a half inch in height. This showed that they, at least, employed "abdominal respiration" almost to the exclusion of "costal." But the doctor was not satisfied with this. He next visited the Yuma Indians of Arizona. These he found almost nude, wearing only short skirts or aprons made of bark. Tracings which his apparatus gave him from these, and also from women in the Chickasaw nation, gave substantially the same results as those above recorded. Similar tracings were given, also, from the person of a Scotch woman who had never worn corsets. On the same page, and almost identical with the above in appearance, were tracings from a man But the doctor did not stop here. He obtained tracings from a number of fashionably dressed females. By them the lines were reversed. The sharp curves and long sweeps were made over the thorax, and the lines almost straight were obtained over the abdomen. Even in the case of a reformed corset wearer whom he examined, the deranged respiration had been only in part corrected, thus showing that the baneful effect of this instrument, the corset, continues long after the article itself has been abandoned. Thus by mechanical demonstration has Dr. Kellogg proved that the position taken by him years ago was founded in truth.

So much for the fact and the proof of it. But someone says, "What of it?" Simply this: Many ladies, when remonstrated with about the use of corsets, say, "Oh, mine doesn't hurt me! I wear it loose." But the fact remains that an article of clothing which exerts such an influence upon the body as to *change the type of respiration in an entire race* cannot be a harmless thing!

The injurious effects of corsets upon the lungs is often seen and generally recognized. But their baneful effects do not stop here. Let us look

*Until recently I supposed that he was alone in this matter. In Dr. G. Jaeger's *Lectures on Health Culture*, written in 1882, I find the following: "Quiet breathing . . . . is differently performed by men and by women; at least, this is the case in our state of civilization, although I doubt whether it is so everywhere."

farther. The abdominal cavity is filled with the organs of digestion and excretion, including the spleen, pancreas, kidneys, etc. The alimentary canal is a long tube with muscular walls, whose duty it is to keep their contents in a constant condition of agitation. The same movements are found in the stomach. This is known as "peristaltic action," the final result of which is to urge onward the contents of the canal. Now the peristaltic action of the abdominal organs is largely induced by stimuli which come to the organs from without, notably from the abdominal movements which result from the descent of the diaphragm during abdominal respiration. Deprive an individual of these movements by incasing the waist and abdomen in steel or bone splints, however loose, and you thereby diminish the peristaltic action of the alimentary canal. This is likely to be followed by constipation, slow digestion, fermentation of food, and a dormant condition of the liver. No doubt the kidneys also suffer in common with the rest of the organs that lie under the diaphragm.

That this is true may be confirmed by the fact that *massage* applied to the bowels and liver so frequently, results in the relief of the disease symptoms above mentioned. I verily believe that no one article of dress that has ever come into common use has done more harm than the corset.

J. E. CALDWELL.

"LIGHT" BREAD.

No single article of food is so necessary in the family as good bread, and probably the best and most convenient bread for general use is that made either from the best gradual-reduction-process flour, or from what is called "whole wheat" flour. This flour contains all the elements of nutrition found in wheat, and is free from the indigestible, woody fiber, which, though serviceable in some cases, is too irritating in others. Persons with fair digestion but rather torpid bowels are greatly benefited by the use of unbolted flour, but weak stomachs and active, sensitive bowels are likely to be injured by the coarse husks of the wheat, from which the system can derive no possible benefit in the way of nutrition. White flour made by the gradual-reduction process, now generally used, contains a much larger per cent of certain important bone and fiber-making portions of the wheat than was formerly found in bolted flour.

But aside from the flour used the chemistry of bread-making is by no means unimportant. Something more is required than simply to make dough and then cook it. Before baking, and during the first part of that operation, the dough must be made "light," or porous, by some means, and while not wholly free from objection, it will be found that this is generally best accomplished by slight fermentation produced by yeast or other similar means.

About 63 per cent of white flour is starch, 15 per cent is water, and the remainder is made up of sugar, fat, casein, and gluten. The latter is one of the most important elements in the flour. It is sometimes separated from the other elements, and is used as food for persons suffering from certain diseases of the kidneys. Important, however, as is the gluten, the starch is not less so, for the reason that it forms the major portion of the flour; and before it can be digested it must be converted into another substance called dextrine. This change is effected largely by the heat during baking, but it is greatly facilitated by the slight fermentation which takes place while the bread is "rising." The yeast, which is a living organism, feeds upon the starch, and thus assists in breaking up its granules, thus facilitating the change to dextrine, and rendering the starch more easy of digestion.

One of the prerequisites of good bread is "lightness," or porosity. This can be secured in a good degree by several different processes, namely, by fermentation, by action of certain chemicals upon each other, and by aeration. The first named is, for all practicable purposes, the best. By the first of these processes carbonic acid gas is formed by the action of yeast upon the starch in the dough; this gas inflates the bread and makes it "light." It is farther expanded by the heat of the oven, and some steam is also generated, which assists in expanding the cells which have previously been formed by the gas. In a few hours after baking almost every trace of this gas has disappeared, and as the heat has killed the yeast and thus stopped all fermentation, the bread is left sweet and wholesome, provided it has not been allowed to stand too long before baking, in which case it will be sour and not fit for food.

When baking powder or soda and sour milk are used the gas which "raises" the bread is formed by the action of the chemicals upon each other,

but as the starch granules remain intact, except as they are affected by the heat, their conversion into dextrine is less perfect and the bread is less easily digested; especially is this true when, as is usually the case, the bread is baked in much less time than is generally allowed for the baking of bread raised by fermentation. Another serious objection to the use of baking powder is that the chemicals form salts, which remain in the bread and tend to irritate the stomach.

Only those who have proper appliance for its manufacture can make aerated bread successfully. Gems and rolls may, however, be fairly made without the aid of any other "raising" agent except air. To accomplish this the dough, or batter, must be made stiffer than when baking powder is used. It must be stirred in such a way that a considerable quantity of air is worked into it. It is then baked in a quick oven and the air and steam together raise the bread. Rolls are raised almost wholly by means of the steam which is generated during the process of baking. For gems, rolls, etc., this process of raising is entirely unobjectionable, but it is not available for what is commonly denominated bread.

In baking bread the best results are obtained by long baking in a moderately hot oven. If too hot the crust forms too soon and the process of rising is arrested sooner than it should be; while on the other hand, if the oven is not warm enough the process of fermentation continues too long and the bread becomes too light, or possibly sour.

The heat used in baking should be steady but constantly growing less intense until the bread is done. This condition is met exactly in the old-fashioned brick ovens, in which the fire is built inside and is raked out after the oven has become sufficiently hot. When bread is to be baked the oven should be sufficiently heated before the loaves are put in, after which no fuel should be added, and it is especially important to avoid any sudden raising of the temperature, for after the crust has formed it burns very easily, and a very little scorching injures the whole loaf. In order to have *good* bread the entire work must be well and carefully done, for no matter how light and sweet the dough may be it is possible to spoil it in the baking, and it is equally true that the most careful baking cannot make good bread out of heavy or sour dough. Constant vigilance is the price of good bread. C. P. B.

BOILING WATER.

In order to test the destructive power of boiling water on typhoid bacilli, Dr. Vilchur, of St. Petersburg, made a number of pure cultures in broth, keeping them in a thermostat for two days, at a temperature of about 91° Fahr., and then mixed them with known proportions of boiling water, immediately afterward sowing the mixtures in jelly. The results showed that, when the volume of boiling water equaled that of the culture, the bacilli were partially but not wholly destroyed. When double the volume of boiling water was used, the bacilli were all killed. From experiments with typhoid stools, he found that all the bacilli, however numerous, were invariably destroyed by the addition of a volume of boiling water equal to four times that of the stool. In this way he suggests it will be easy to disinfect with certainty all the dejections of typhoid patients.—*Dietetic Gazette.*

NUTRITION AND TEETH.

Dr. Norman Kerr, writing in the *British Medical Journal*, says that in the cities of the United States, where tea is consumed in much smaller quantities than in England, the teeth decay more rapidly. The climate, the many indigestible articles of diet, the extreme nerve-tension of the Americans, and other causes affecting the nervine and general health of that people, tend to induce a dyspeptic condition which always seemed to him to be largely responsible for their premature dental decay.

At the same time there can be little doubt that the white bread and tea is a frequent cause of gastric trouble. Next to tea, alcohol, by its depravity of the digestive apparatus, has always seemed to him to interfere with tooth nutrition and soundness.

BAKED BEANS.

Pick over and soak overnight in cold water a quart of best beans. Put them to cook in fresh water, and simmer gently till very soft and the skins broken. Let them be quite juicy when taken from the pot, season with salt, and a teaspoonful of molasses. Put them in a deep crock, and place in a slow oven. Let them bake two or three hours, or until they assume a reddish-brown tinge, adding boiling water occasionally to prevent their becoming dry. Turn in a shallow dish and brown nicely before sending to the table.—*Macon Health Home.*

Disease and its Causes.

A LESSON.

OVER the mother's brow that day
A fretful look held ceaseless sway;
She beheld in the glass with regretful air
A faded face that once was fair.

"It's wash and bake and churn and sew;
Daily, an endless round I go.
Children are naught but trouble and care;
And life is a vain, delusive snare."

"Mamma," screamed Ben, "poor brother Joe
Has falled into the well, oh! oh!!"
Beauty lost was forgotten then,
As she ran at the words of the screaming Ben.

At last when Joe, with the golden hair,
Was saved, she sent to Heaven this prayer:
"I thank thee, Lord for mercies given,
I find I've much on earth of Heaven."

—*Monnie Moore.*

CHRISTIAN RECREATION.

BY MRS. E. G. WHITE.

CHRISTIANS should be the most cheerful and happy people that live. They may have the consciousness that God is their father, and their everlasting friend. But many professed Christians do not correctly represent the Christian religion. They appear gloomy, as if under a cloud. They often speak of the great sacrifices they have made to become Christians. They appeal to those who have not accepted Christ, representing by their own example and conversation that they must give up everything which would make life pleasant and joyful. They throw a pall of darkness over the blessed Christian hope. The impression is given that God's requirements are a burden even to the willing soul, and that everything that would give pleasure, or that would delight the taste, must be sacrificed.

We do not hesitate to say that this class of professed Christians have not the genuine article. God is love. Whoso dwelleth in God, dwelleth in love. All who have indeed become acquainted by experimental knowledge with the love and tender compassion of our heavenly Father, will impart light and joy wherever they may be. Their presence and influence will be to their associates as the fragrance of sweet flowers, because they are linked to God and Heaven, and the purity and exalted loveliness of Heaven are communicated through them to all that are brought within their influence. This constitutes them the light of the world, the salt of the earth. They are indeed savors of life unto life, but not of death unto death.

It is the privilege and duty of Christians to seek to refresh their spirits and invigorate their bodies by innocent recreation, with the purpose of using their physical and mental powers to the glory of God. Our recreations should not be seasons of senseless mirth, taking the form of the nonsensical. We can conduct them in such a manner as will benefit and elevate those with whom we associate, and better qualify us and them to more successfully attend to the duties devolving upon us as Christians. We cannot be excusable in the sight of God if we engage in amusements which have a tendency to unfit us for the faithful performance of the ordinary duties of life, and thus lessen our relish for the contemplation of God and heavenly things. The religion of Christ is cheering and elevating in its influence. It is above everything like foolish jesting and joking, vain and frivolous chit-chat. In all our seasons of recreation we may gather from the divine Source of strength fresh courage and power, that we may the more successfully elevate our lives to purity, true goodness and holiness.

Even the great God is a lover of the beautiful. He has given us unmistakable evidence of this in the work of his hands. He planted for our first parents a beautiful garden in Eden; stately trees were caused to grow out of the ground, of every description, for usefulness and ornament. The beautiful flowers were formed, of rare loveliness, of every tint and hue, perfuming the air. The merry songsters, of various plumage, carroled forth their joyous songs to the praise of their Creator. It was the design of God that man should find happiness in the employment of tending the things he had created, and that his wants should be met with the fruits of the trees of the garden.

God, who made the Eden home of our first parents so surpassingly lovely, has also given the noble trees, the beautiful flowers, and everything lovely in nature, for our happiness. He has given us these tokens of his love that we may have correct views of his character. He has implanted in the hearts of his children the love of the beautiful. But by many this love has been perverted. The

benefits and beauties which God has bestowed upon us have been worshiped, while the glorious Giver has been forgotten. This is stupid ingratitude. We should acknowledge the love of God to us in all of his creative works, and our heart should respond to these evidences of his love by giving him the heart's best and holiest affections.

God has surrounded us with nature's beautiful scenery to attract and interest the mind. It is his design that we should associate the glories of nature with his character. If we faithfully study the book of nature, we shall find it a fruitful source for contemplating the infinite love and power of God.

Many extol artistic skill which will produce lovely paintings upon canvas. All the powers of the being are by many devoted to art, yet how far short do these come of the natural. Art can never attain to the perfection seen in nature. Many professing Christians will go into ecstacies over the painting of an evening sunset. They worship the skill of the artist; but they pass by with indifference the actual glorious sunset which it is their privilege to look upon every cloudless evening. Where does the artist obtain his design? From nature. But the great master Artist has painted upon heaven's shifting, changing canvas the glories of the setting sun. He has tinted and gilded the heavens with gold, silver, and crimson, as though the portals of high Heaven were thrown open that we might view its gleamings, and our imagination take hold of the glory within. Many turn carelessly from this heavenly-wrought picture. They fail to trace the infinite love and power of God in the surpassing beauties seen in the heavens, but are almost entranced as they view and worship the imperfect paintings, in imitation of the master Artist.

The Redeemer of the world generally chose the open air in which to give his lessons of instruction, rather than to be inclosed in walls. He could make his teachings more impressive when surrounded with the beauties of nature. He chose the groves and the seaside, where he could have a commanding view of landscape and varied scenery, that he might illustrate important truths of the kingdom of God by the works of God in nature. He made use of the birds, carroling forth their songs without a care, and the lilies of the valley in their beauty, outrivaling Solomon in all his glory, and the lily, emblem of purity, reposing upon the bosom of the lake, the lofty trees, the cultivated lands, the waving grain, the barren soil, the tree that bore no fruit, the everlasting hills, the bubbling stream, the setting sun, tinting and gilding the heavens, to impress his hearers with divine truth.

He connected the works of God's fingers in the heavens and upon the earth with the words of life he wished to impress upon their minds, that as they should look upon the wonderful works of God in nature, his lessons should be fresh in their memories. He could extol the wisdom of God in his creative works, and could bind up his sacred lessons by directing their minds through nature, up to nature's God. The landscape, the trees, the birds, the flowers of the valley, the hills, the lake, and the beautiful heavens, were associated in their minds with sacred truths, which would make them hallowed in memory, as they should look upon them after Christ's ascension to Heaven.

As we are attracted to the beautiful in nature, and associate the things which God has created for the happiness of man with his character, we will regard God as a tender, loving Father, rather than merely a stern Judge. As the character of God thus bears the aspect of love, benevolence, beauty, and attraction, the mind is drawn to him. The heart is quickened, and throbs with new and deeper love, mingled with awe and reverence, as we contemplate God in nature.

It is for our health and happiness to go out of our houses, and spend as much of our time as possible in the open air. The mind of the invalid should be withdrawn from self to the beautiful scenes of nature. We can but be cheerful as we listen to the music of the happy birds, and feast our eyes upon flourishing fields and gardens. We should invite our minds to be interested in all the glorious things God has provided for us with a liberal hand. And in reflecting upon these rich tokens of his love and care, we may forget infirmities, be cheerful, and make melody in our hearts unto the Lord.

DIET.—I am firmly persuaded that any man who, early in life, will enter upon the constant practice of bodily labor and of abstinence from animal food, will be preserved entirely from gout. . . . The cure [of rheumatism] requires, in the first place, an antiphlogistic regimen; and particularly a total abstinence from animal food, and from all fermented and spirituous liquors.—*Dr. Cullen.*

WOMAN'S DRESS—CORSETS.

IN the natural figure there is no marked waist line. Immediately below the bust begins the outward curve of the abdomen, and a line drawn from the arm-pits to the hip bones finds little or no marked depression, as there are no shelves called hips in the body as God made it. They are wholly manufactured articles.

If the Venus de Milo or the Venus de Medici were to show such angular outlines as are created by fashion, the artist's eye would see no beauty in them. The Venus de Milo has a waist that lacks but a hair's breadth of being one-half her height. By that standard, a woman five feet four inches tall should measure thirty-two inches about the waist, and should have no hips. The manufacture of hips begins early in the girl's life. The little skirts, unsupported by waists, must be drawn tight enough to remain in place. The tender muscles give under the pressure, and, being deprived of nourishment by lessened circulation and lack of exercise, do not develop normally, and the girl grows up with a slender waist, which she considers natural, and with protruding hips, which she probably supposes were created by nature for the support of petticoats. Every day I see upon our streets little girls who are undergoing the process of hip manufacture. How much more confidence we have in the dressmaker than in the Creator!

"But if corsets are worn loose, are they injurious?" The steels of the corset are always pressing upon the bowels, and must, of necessity, be harmful. Even flexible whalebones do not allow entire and natural use of the muscles. A lady who had never worn corsets was induced by her friends to try a pair, after removing the steels. At every movement she was made conscious of a hindrance to freedom of motion. She wore the corsets five hours, and assured me that for days her muscles were sore from the unaccustomed pressure of even the flexible whalebones.

It is often asserted that, while the slender woman may discard corsets, the fleshy woman cannot. A fashionable dressmaker, speaking only from her standpoint, assures me that superabundance of flesh is not so destructive of elegance of figure as the pushing the bust up under the chin, and the causing an unnaturally large abdomen, by the compression of the corset about the waist. Dress reformers have taken into consideration, however, the necessity of having support for the bust, and a great variety of waists, and breakfast corsets, and bust supporters, have been devised.

Sometimes, in the excitement of a dress-reform fever, the eager convert throws aside her corset, without making other changes in her clothing. The bands of her skirts cut into her flesh, and in a few days she decides that dress reform is a delusion. Her motive was good, her method injudicious. Had she arranged her clothing to be wholly supported from the shoulders, her corset would have been more easily discarded. The combination undergarments should be depended upon for warmth. The light petticoat can have its own waist, and the dress skirt be supported by straps, or fastened to the dress waist by flat buttons sewed to the seams, or buttoned to the lower end of a strap, the upper end of which is sewed in the lower side of the arm-hole with the sleeve.

The fact that a woman feels, as she expresses it, all gone, and not able to sit erect without a corset, is proof enough that the corset has been injurious, and that the muscles which were made to support the body have lost their power by non-use. The corset can be transformed into a harmless underwaist by removing the steels and whalebones, by putting straps over the shoulders, and by wearing it so loose as not to interfere with the deepest inhalation. The ability to breathe is the measure of the ability to do; and if women ever accomplish anything worthy of the highest commendation, they must make their clothing so that they can breathe.—*Mary M. Allen, M. D., in Congregationalist.*

OLEOMARGARINE.—Professor Taylor, of the Agricultural Department, having made a careful analysis of oleomargarine, finds it compounded of "beef fat, lard, butter, water, and, probably, some cotton-seed oil." The manufacturers of the stuff call it "a diet for the poor man." We do not know how it is in the East, but feel pretty certain there is not a man in California so poor that he would not rather banish butter from his table than accept oleomargarine for its substitute. Each of its ingredients, separately, can be put to a use, but as an admixture the public want none of it.—*San Francisco Call.*

THE superiority of some men is merely local They are great because their associates are little.—*Johnson.*

DRINKING WATER.

ONE of the most important questions to ask in seeking a place of residence, next to climate, and I don't know but I may say, in many cases, before climate, is, What is the quality of the water you furnish for drinking and culinary purposes? On the question of pure water we will quote some very interesting remarks from Hugh Brooks, in the *New York Tribune:*—

"The papers should remind the people very often that multitudes are poisoned by impure water. Look to the well! It isn't safe to assume that it doesn't need attention. Let no summer pass without cleaning it. Privies, cess-pools, barn-yards, should not be allowed to contaminate the ground in its neighborhood. The well is a very effective drain, drawing liquids from a large space round about. At first the soil filters the soakage from these filthy depositories, but the filter is soon clogged, the soil filled with vegetable and animal waste, the ground is surcharged with noxious accumulations gathering for years, which the heavy rains carry to the fountain. Even when the surroundings are considered clean there will in time be a large accumulation of noxious matter in the soil. Open barn-yards, near dwellings, with their large deposits of water-soaked manure, cause much sickness and death. Make the manure under cover, and it won't soak into the well, and it will be worth twice as much for the land. A family began digging a well in a rocky place and stopped digging at ten feet deep without finding water. In the winter the hole partly filled with surface water and soakage, mostly from a barn-yard close by on a level with it. The father of the family died next autumn; the mother lived till the spring following; the pale-faced children still survive. It is safe to say that the slops and refuse of dwellings are thrown out in fearful proximity to the well oftener than they are conveyed away to a safe distance. Privy vaults should be water-tight on the surface, made with the best cement accessible, and emptied often.* Keep in mind that we must drink pure water or die prematurely. Wells on low, swampy ground can't supply pure water. An eminent physician declares that there are differences in the properties of water found in different localities inappreciable by chemical analysis, but quite sufficient to affect health. Speaking of Eureka Springs, in Arkansas, he says:—

"'From some cause, probably the absence of mineral matter in the water, its osmotic property is greater than that of ordinary water, and it rapidly filters through all the tissues of the body, literally washing out the impurities. A very large per cent of the diseases with which we are afflicted are caused by the retention of waste matters, which in health are thrown out as excretions. By the drinking of large quantities of this pure water these excretions are removed from the fluids and solids of the body, and carried off by the glands and other structures whose function is to eliminate waste matters. Pure water is most nearly a universal solvent in nature, and the purer it is, the better solvent. Inasmuch as all nutritious matters must be in a state of solution before they can be absorbed and applied to the uses of the tissue of the body, so, likewise, all useless waste matters of the organism must be in solution before they can be carried out of the system as secretions.'

"This testimony to the value of pure water is entitled to special attention; it is a 'solvent,' and its free use eliminates waste matter, which causes disease. Many doctors concur in the opinion that to the extreme purity of the Eureka water, rather than to any mineral elements in it, must be ascribed the remarkable cures of rheumatism, liver and kidney troubles, neuralgia, catarrh, constipation, dyspepsia, and similar diseases credited to it. The water tastes very much like rain-water caught in a clean tin pan and cooled a little by standing on ice. People need not go to Eureka Springs for pure, clean water to wash out the impurities that hurry them to the grave. A great many springs gushing from the hills and mountains may be about as good; the rain, as it falls from the clouds, distilled in God's laboratory, is pure; freely and discreetly used, uncontaminated by the additions commonly made to them, these waters will bring health to many hopeless sufferers. If people knew the value of pure water, if they knew what a safeguard it is against disease, they would spare no pains to secure it. They would never drink the drainage of swamps and lowlands, they would make it perfectly sure that no foulness from house, or yards, or barns could ever contaminate the well. If they use rain-water (a great many would better do that), they would give close and constant atten-

* Better still, where it can be done, to have boxes or buckets under the privy seat, covering at once all excretions with dry earth or ashes from the stove, and burying the contents frequently.—ED.

tion to the filter, making it effective; they would let the rain clean the roof before they saved the water, and they would at least twice a year clean out the cistern and renew the supply. Pure water has such credit at Eureka that the proprietors of its great hotel are at pains to tell the public that they have 'adopted the Waring system, by which the sewage is conveyed to Leatherwood Creek, a mile and a half from the building.' The hotel is several rods from either of the springs, but it was deemed proper to make assurance doubly sure. Many cities that I could name turn their poisonous sewage into rivers and lakes that supply the people with water. Keep it before the people that foul water is a fruitful source of disease and pure water the preventive and cure."

A subscriber, living at Huntsville, Arkansas, thirty miles south of Eureka Springs, writes: "The city [Eureka Springs] is named in honor of the famous springs located there. The curative properties of the springs are wonderful; and chemical analysis demonstrates that they owe their medicinal virtues to the absolute purity of their waters, characterized by the entire absence of all mineral substances. I inquired of Mrs. Dowel, who lives at Eureka Springs, whether reports of the amazing cures from the effects of the application of these waters were not merely exaggerations. She said not, and that even cancers in their early stages have been frequently cured. They loosen and come out by their roots, and the place heals."

One of the decided advantages of Crystal Springs Retreat over many other health resorts is the fact that all the water used there is from mountain springs, as soft as rain-water, and perfectly pure, containing not the least trace of minerals.

In many instances water that may look clear may yet contain deleterious substances in solution. Miss Mattie M. Farley gives a home test for drinking water, which is as follows: "Put a spoonful of sugar in a small bottle of water and let it stand for a few days. If impure, the water will become milky." She tested water from five wells in Manhatten, also some distilled water. She boiled some samples from each before testing. That boiled and that distilled gave no results, while the others became milky. In so important a matter as the selection of that element—water—which constitutes so important a part of our blood, there cannot be too much care exercised. J. N. L.

INFLAMMATION OF THE LUNGS.

By request, we write a few lines concerning this very common disease. And while doing so, we shall bear in mind the wants of the people generally and write especially for them, and not for those physicians who pride themselves upon being able to criticise everything upon which their eyes may chance to rest. In order to reach the people where they are, we choose to leave the technicalities of medicine to be used by those who deal in theory, while we shall present plain, practical facts and terms, which are needed at the bedside of the sick.

By many, inflammation of the lungs is looked upon as a very formidable disease, and one which is attended with much peril to the patient; yet under proper hygienic treatment but very few cases prove fatal; while under drug treatment a large percentage are lost, or made consumptives or invalids otherwise for life.

It rarely occurs alone, but is generally complicated with asthma, pleurisy, typhoid fever, etc. If it is purely inflammatory, it will assume the nervous or typhoid form; but if the body is filled with gross matter from unphysiological habits, there will be a tendency to disorganization of the parts affected, in which case it will be typhus in character, which form is most likely to prove fatal unless the case can be removed by the remedial effort that is at the time going on. It is common to all ages, and neither sex is exempt.

It is usually fatal to aged persons. On January 1 and 2, 1864, known as the two coldest days, it was noticed in Ohio among the lake counties that many of the aged persons became chilled and had diseases of the lungs. These diseases prevailed in the form of an epidemic, causing the death of many of those attacked, in about two weeks after the time above mentioned.

This disease is usually ushered in by a chill, more or less severe, or by shiverings followed by fever, headache, cough, dry and hot skin, pain and soreness of the chest, and difficult breathing. The expectoration is frothy, streaked with blood; the urine scanty and highly colored, which, after standing a while, deposits a brick-colored sediment. The pulse becomes rapid or variable. There is an oppression and tightness of the chest; and if the pleura becomes involved, there will be lancinating pains, which are aggravated by deep inspirations.

The causes are as follows: Sudden exposures to cold, exhaustion from overlabor, overeating, and, in short, anything which tends to depress the vital energy, as grief, disappointment, chagrin, fear, entering into the sympathies and feelings of the sick, etc.

In all cases of fevers, there is too much fibrin left in the blood. This, in health, is appropriated to the wants of the body as building material; but, as the building process is arrested during sickness, this material acts as a source of irritation, and must be expelled. The fever, then, is an effort to expel this morbid matter, and all that is necessary at such times is to supply conditions by which we regulate the purifying process which is going on.

In the high temperature of the body, caused by fever, the serum, or watery portion of the blood, passes off by evaporation. The fluids of the body having evaporated, the friction of all its organs is increased, and there is a consequent waste of the vital powers; but by replacing the fluids lost by unnatural heat, we supply the means of more easily removing the morbid matter, thus overcoming friction and removing the offending causes. This may be effectually accomplished by the use of pure soft water, both as a beverage and by applying it to the external skin that it may be absorbed

TREATMENT.

One of the first things needed is to promote the circulation in the extremities. Apply to the feet water at 95° to 105° for five mintues if the patient is weak, but if otherwise strong, apply for ten minutes, and then cool the foot-bath down to 88° in the former case and 85° in the latter. Let the feet remain from one to three minutes in the bath thus cooled, and wipe dry. Then apply a warm compress to the lungs for from half an hour to two hours, followed by a cool one for the same length of time, after which let the patient rest a while. These compresses may be applied two or three times during the twenty-four hours. See that the bowels are regulated by enemas.

The pack may now be used for from half an hour to an hour and a half. The temperature should always be made agreeable to the patient's feelings. Hot fomentations should be avoided, as very hot applications tend to destroy the lung tissue; but moderately hot ones may be used at periods of short duration from once a day to once in two or three days.

A sponge bath each day will be of service as long as the fever continues; but when that subsides, all water treatment should be suspended for a short time. This precaution is absolutely necessary in eruptive diseases, such as small-pox, measles, scarlatina, etc.; for if medicine (or at times even water) is given, just as the eruption is about coming out, the process may be arrested, and the eruption repelled and driven to the internal organs, and cause the death of the patient. The wet-hand rub may be used to advantage by first dipping the hand in warm water and rubbing the body of the patient over the affected parts for one-half to one minute, then in cool water for the same length of time, applying the two alternately for from three to five minutes. The dripping sheet will also be beneficial during the febrile stage, if the patient is able to bear it.

As convalescence sets in, rest, and not treatment, is needed. The diet should then be light, but in a few days a more nourishing one should be given, as the stomach becomes able to tolerate it.

Be sure to wet the head in cold or cool water before giving any treatment. Congestion of the brain may be caused by a little carelessness upon this point, and cases may be cited where death has resulted from neglecting this simple precaution.

J. H. GINLEY, M. D.

LOVE is the dearest, brightest boon of life, the connecting link between man and man, the pivot on which hangs the happiness of angels. Without it mankind were not, and Heaven a blank—a universal chaos, therefore let us cherish and cultivate the love principle. Love is the fount of life; engrave it as a tablet on thy heart.

YOU may glean knowledge by reading, but you must separate the wheat from the chaff by thinking.

ROSES came to us from Persia, and into Persia from India. The potato is a native of Chili.

PASSION is a fever that leaves us weaker than it finds us.

A QUIET cheerfulness is often better than a medicine.

WE open the hearts of others when we open our own.

IF we subdue not our passions, they will subdue us.

Temperance.

VALUABLE KNOWLEDGE.

THAT man must daily wiser grow
Whose search is bent himself to know;
Impartially he weighs his scope,
And on firm reason founds his hope;
He tries his strength before the race,
And never seeks his own disgrace!
He knows the compass, sail, and oar,
Or never launches from the shore;
Before he builds, computes the cost,
And in no proud pursuit is lost.
He learns the bounds of human sense,
And safely walks within the fence.
Thus, conscious of his own defect,
All pride and self-importance check'd.

INTEMPERANCE.

INTEMPERANCE not only destroys the health but inflicts ruin upon the innocent and helpless, for it invades the family and social circle, and spreads woe and sorrow all around; it cuts down youth in all its vigor, manhood in its strength, and age in its weakness; it breaks the father's heart, bereaves the doting mother, extinguishes natural affections, erases conjugal love, blots out filial attachment, blights parental hope, and brings down mourning age in sorrow to the grave. It produces weakness, not strength; sickness, not health; death, not life. It makes wives widows, children orphans, fathers friendless, and all of them at last beggars.

It produces fevers, feeds rheumatism, nurses the gout, welcomes epidemics, invites disease, imparts pestilence, embraces consumption, cherishes dyspepsia, and encourages apoplexy and paralytic affections. It covers the land with idleness and poverty, disease and crime; it fills our jails, supplies our almshouses, and furnishes subjects for our asylums; it engenders controversies, fosters quarrels, and cherishes riots; it condemns law, spurns order; it crowds the penitentiaries, and furnishes the victims for the scaffold; it is the life of the gambler, the food of the counterfeiter, the prop of the highwayman, the support of the midnight incendiary and assassin, and the friend and companion of the brothel. It countenances the liar, encourages the thief, and emboldens the blasphemer; it violates obligations, reverences fraud, and honors infamy; it defames benevolence, hates love, scorns virtue, and slanders innocence; it incites the father to butcher his innocent children, helps the husband to kill his wife, and aids the child to grind the parricidal ax. It burns man, consumes woman, blasts life, curses God, and despises Heaven; it suborns witnesses, nurses perjury, defiles the jury-box, and stains the judicial ermine; it bribes votes, corrupts elections, poisons our institutions, and endangers our Government; it degrades the Legislature, and dishonors the statesman. It brings shame, not honor; terror, not safety; despair, not hope; misery, not happiness; and now, as with the malevolence of a fiend, it calmly surveys its frightful desolation, and, insatiate with havoc, it poisons felicity, kills peace, ruins morals, blights confidence, slays reputation, and wipes out national honor, then curses the world, and laughs at the ruin it has inflicted upon the human race.—*Selected.*

DRINK STATISTICS.

A GOVERNMENT report by the British Consul-General in Germany, points out certain serious facts. The adult male German drinks annually on the average about seventeen gallons of spirituous liquors. In the kingdom of Prussia, the whole expenditure in 1882 on wine, beer, and spirits amounted to ₹45,400. In Sweden and Norway, the consumption of spirits has been declining for some years past; but in Denmark the evil of spirit drinking has reached a terrible pitch. In Holland, in 1878, there was a drink shop for every ninety inhabitants, including women and children; but a restrictive law, passed in 1881, has reduced the number about one-quarter. The worst statistics in regard to the consumption of alcoholic liquors are those of Belgium, where, in less than half a century, the drinking of such liquors has far more than doubled for each person. In 1881 there was a public house for every dozen adult males. In France the amount of drunkenness has been reduced by the passing of a salutary law. In Switzerland, between 1870 and 1880, while the increase of population was but 6.5 per cent, the increase of public houses was 22 per cent. In Austria the condition of affairs is similar.

And all this drinking has its effect. There is a horrible array of figures giving the statistics of delirium tremens, suicides, lunacy, and accidental deaths as the result of drunkenness. In Denmark

74 per cent of the arrests were for drunkenness, or for crimes committed under the influence of drink. The inspector-general of Belgian prisons reports that four-fifths of the crime and social misery is attributable to intemperance. In Austria the hospitals, lunatic asylums, and prisons all testify to the advance of drinking habits. And continental workmen generally—even those who do not become absolute drunkards—spend a large proportion of their earnings in drink.

The foregoing statements, be it observed, are not the froth of a temperance harangue, but the cold statistics of a Government report. They show that earthquakes and cholera are not the most terrible evils of Europe. They should be studied by those who suggest that spirit drinking can be extirpated by introducing the free use of beer and light wines. In the very countries where the milder drinks are used, the consumption of ardent spirits is increasing at a terrible rate. The temperance question is a growing question, and it demands attention here as in otherlands.—*Independent.*

LIQUOR CRIMES.

EVERYONE agrees that crime is caused principally by strong drink; but do we sufficiently consider what a great and needless expenditure of money this implies?

Judges and magistrates have repeatedly said that as many as nine-tenths of the criminals brought before them are brought there by this cause alone, a statement which can easily be believed by anyone who studies the daily papers.

If drinking could be put to a stop, what a change would take place in the number of police, and in the size of reformatories, prisons, and law courts, and what a vast saving would at once be effected!

We are often told that there will always be a certain number of outcast, a lowest stratum of the population, whom it is useless to atte mpt to raise, and who must live by preying on the industrious. But can it be a necessity that this miserable class shall be constantly replenished and increased by means of strong drink?

For it is strong drink that drags down the workingman, taking from him both the wish and the power to earn an honest living, while it effectually shuts out from his children all hope of rising in the social scale. What chance is there for a child who is ill-fed, ill-clothed, and untrained, except in crime, or what prospect that he can become one of the wealth-producers of the country?

It seems absurd to talk of finding a remedy for poverty, while, at the same time, we do all in our power to produce poverty, by maintaining the drinking customs, and by planting at every street corner in the most thickly populated districts, houses which we know will turn workingmen into paupers, and honest men into criminals, and sane men into lunatics, as surely as the night follows the day.

The large sums of money which are spent annually on our hospitals and lunatic asylums might be reduced by at least half if the drinking habits of the people could be put to a stop. Sir Andrew Clark considers that seven out of ten of his patients in the London Hospital are brought there by this cause; and Sir William Gull says: "I hardly know any more powerful source of disease than alcoholic drinks. I do not think it is known, but I know alcohol to be a most destructive poison. I should say, from my experience, that it is the most destructive agent that we are aware of in this country.—*Temperance Record.*

WHERE DOES THE SIN COMMENCE?

To drink deeply—to be drunk—is a sin; this is not denied. At what point does the taking of strong drink become a sin? The state in which the body is when not excited by intoxicating drink, is its proper and natural state; drunkenness is the state farthest removed from it. The state of drunkenness is a state of sin; at what stage does it become sin? We suppose a man perfectly sober who has not tasted anything which can intoxicate; one glass excites him, and to some extent disturbs the state of sobriety, and so far destroys it; another glass excites him still more; a third fires his eye, loosens his tongue, inflames his passions; a fourth increases all this; a fifth makes him foolish and partially insane; a sixth makes him savage; a seventh or an eighth makes him stupid—a senseless, degraded mass; his reason is quenched, his faculties are for the time destroyed. Every noble and generous and holy principle within him withers, and the image of God is polluted and defiled! This is sin, awful sin; for "drunkards shall not inherit the kingdom of God." But where does the sin begin? at the first glass, at the first step

towards complete intoxication, or at the sixth, or seventh, or eighth? Is not every step from the natural state of the system towards the state of stupid intoxication an advance in sin, and a yielding to the unwearied tempter of the soul?—*John Bright.*

TEN COMMANDMENTS AND INTEMPERANCE.

THE following thoughts were suggested upon hearing the intimation that intemperance was not forbidden in the ten commandments.

By intemperance men break the first commandment by making rum a god before the God of Heaven. They break the second by making themselves without sense—in the likeness of a fool.

If men use the name of God in such a condition they certainly use it in vain; thus the third commandment is broken.

If men form intemperate habits they usually go to the beer shop on Saturday, buy drink, get drunk, forget the God that made heaven and earth, and all that in them is, and the Sabbath that he sanctified; thus they break the fourth commandment. Men dishonor their parents by getting drunk, and break the fifth command. Rum fires the blood and makes men unable to control their passions, and the sixth is often broken by murder. So the seventh; heated, diseased blood and inflamed passions result in adultery. Eighth, by intemperance men steal away their God-given faculties, the peace and bread of their families, and their baby's shoes. What intemperate man has not borne false witness, broken the ninth by saying, "It is for medicine." And tenth, intemperate men covet rum, etc. "Except your righteousness shall exceed the righteousness of the scribes and Pharisees, ye shall in no case enter into the kingdom of Heaven."

Has not God in his ten commandments forbidden intemperance? Yes, ten times yes.—*W. S. McF., in Kansas Republican.*

POISONED BY TOBACCO SMOKE.

THE fact has leaked out that Mr. L. Mallory, who fell dead in a Cincinnati Northern Railroad car, on his way to his home in Avondale, Monday evening, was slowly killed by inhaling the nauseous fumes of the deadly cigarette and the villainous cigar. At least his heart trouble, which had seldom given him any uneasiness, was so aggravated by the suffocating smoke in the car that he died after breathing it a few moments, and two other men, whose names could not be ascertained last night, fell in fainting fits. The "accommodation" on the road is a little bob-tail car, with only one compartment, into which men, women, and children are all jammed together. Until a few weeks since two cars, or one large car with a partition, were used. One-half of the latter was intended as a smoker for gentlemen. Under this arrangement lovers of the weed could take it easy and smoke at their convenience. When the car was taken off there was great objection, and many patrons of the road filed their protests. When Mr. Mallory boarded the train he was in robust health. The car was crowded with men and women. Many of the men were smoking. The windows were all down, and the smoke was so dense in the coach that it could be cut with a knife. Mr. Merriweather, the tea merchant, was on the train, and gives a vivid description of the scene. To a *News Journal* reporter who questioned him, he said: "The atmosphere in the car was stifling—suffocating. My wife was with me, and we were seated behind two young men who were smoking cigarettes. They puffed the smoke in immense volumes, and my wife began to get sick. I went up in the forward part of the car, and a couple of gentlemen offered me their seat, which I accepted for Mrs. Merriweather. It was the seat we vacated that Mr. Mallory and another gentleman occupied, so that they got the benefit of the same smoke that made my wife ill. It would be hard to describe the atmosphere in the car. When Mr. Mallory fell over and was in his death struggles, his companion on the seat, who was also affected by the nauseous air, fell in a dead faint. Those who rushed to the relief of both thought they had two dead men on the car for the other gentleman seemed to be as lifeless as Mr. Mallory. The first thing was to break the windows and let in some fresh air. Water was hastily procured, and all the usual restoratives applied, but it was found that Mr. Mallory was dead. The other gentleman no one knew. He was taken in charge by the conductor, and at the Zoological Gardens transferred to the other car and brought back to the city, where he was properly cared for. He was very sick, and for a while it was feared he would die. I also understand that another man of the car became sick and nearly fainted."—*Cincinnati News Journal.*

MEDICAL VALUE OF LEMONS.

WHILE you are giving people simple rules for preserving their health, why don't you tell them about the use of lemons? an intelligent professional man asked me the other day. He went on to say that he had long been troubled with an inactive liver, which gave him a world of pain and trouble, until recently he was advised by a friend to take a glass of hot water, with the juice of half a lemon squeezed into it, but no sugar, night and morning, and see what the effect would be. He tried it, and found himself better almost immediately. His daily headaches, which medicine had failed to cure, left him; his appetite improved, and he gained several pounds in weight within a few weeks. After a while he omitted the drink, either at night or in the morning, and now at times does without either of them. "I am satisfied from experiment," he said, "that there is no better medicine for persons who are troubled with bilious and liver complaints than the simple remedy I have given, which is far more efficacious than quinine or any other drug, while it is devoid of their injurious consequences. It excites the liver, stimulates the digestive organs, and tones up the system generally. It is not unpleasant to take, either; indeed, one soon gets to liking it."—*Chicago Journal.*

NOPATENT MEDICINE.

THE *National Educator* deprecates the enormous amount of patent medicines used at the present day, and says that these facts should be impressed on both young and old, in family and school:—

1. That remedies are not capable of giving vital power or activity.

2. That medicines are not food; that they contain none of the essential ingredients of food; that they do not furnish food, nor are they a substitute for it.

3. That which makes a person feel better is evidence of no benefit to him. The judgment based on the report of the nerves of sensation is a delusion.

4. That a true remedy develops the energies of the vital system. Exercise does this, healthful food and rest may do it, but medicine, alcohol, and other stimulants never.

5. Every neighborhood has examples of medicine wrecks—persons who are ever taking medicine. Hold these up to the young as crows anp hawks are nailed against trees when shot, as a warning to others. Patent medicines kill body, mind, and soul. Activity and work are the only proper medicines.

BREAD AND WATER.

FELIX OSWALD, M. D., a very brilliant hygienist and reform writer, instances the case of a Polander being sent to a Russian prison at the age of twenty-two. This Polander was allowed two pounds of rye bread and a jug of water per day, with absolutely no other food during the entire year except the week of the anniversary of the crime for which he had been imprisoned, and that week he was allowed one pound of bread per day. This man was pardoned and released at the age of ninety. A life of sixty-eight years on such a diet is surely a scientific proof of its adequacy, especially when you consider the sanitary conditions, bad air, lack of excercise, etc., to which all prisoners are subject. —*People's Health Journal.*

MR. EDISON has invented a new dinner clock which talks. Instead of striking the hour it speaks it. At dinner-time a voice issues from the clock, which says, "Dinner-time," also, "One o'clock," "Two o'clock," etc, as the case may be. Another device which he is perfecting in connection with the clock is that of a female face which he purposes to set in the face of the clock. The lips of this figure will move at the hour, the head will bow, and the fictitious lady will say, "Good-evening, ladies and gentlemen, it is bed-time."—*S. F. News Letter.*

CONSUMPTIVE CATTLE.—Congress at its late session resolved that all animals affected with tuberculosis should be condemned as unfit for food. This is sound sense, but we should have thought still better of Congress if it had made such arrangements that, at least in the great meat markets of the country, this doctrine was practically executed. —*Maryland Medical Journal.*

ONE watch set right will do to set many by; on the other hand, one that goes wrong may be the means of misleading a whole neighborhood, and the same may be said of the example we each set to those around us.

Miscellaneous.

LITTLE THINGS.

WE call him strong who stands unmoved—
Calm as some tempest-beaten rock—
When some great trouble hurls its shock.
We say of him his strength is proved;
But when the spent storm folds its wings,
How bears he then life's little things?

About his brow we twine our wreath
Who seeks the battle's thickest smoke,
Braves flashing gun and saber stroke,
And scoffs at danger, laughs at death;
We praise him till the whole land rings;
But is he brave in little things?

We call him great who does some deed
That echo bears from shore to shore—
Does that, and then does nothing more;
Yet would his work earn richer meed,
When brought before the King of kings,
Were he but great in little things.

We closely guard our castle-gates
When great temptations loudly knock,
Draw every bolt, clinch every lock,
And sternly fold your bars and gates;
Yet some small door wide open swings
At the sly touch of little things.

I can forgive—'tis worth my while—
The treacherous blow, the cruel thrust;
Can bless my foe, as Christian must,
While patience smiles her royal smile;
Yet quick resentment fiercely slings
Its shots of ire at little things.

And I can tread beneath my feet
The hills of passion's heaving sea,
When wind-tossed waves roll stormily,
Yet scarce resist the siren sweet
That at my heart's door softly sings,
"Forget, forget life's little things."

But what is life? Drops make the sea;
And petty cares and small events,
Small causes and small consequents,
Make up the sum for you and me;
Then, oh, for strength to meet the stings
That arm the points of little things! —*Sel.*

LIFE.*

WE will at this time examine some of the conditions under which life and health are manifested and maintained. First, a living thing or being is an organized thing or being. Life, being the result of organization, can only be manifested through matter when that matter is properly organized. We speak of life as a force. We call it the vital force to distinguish it from other forces, such as chemical forces, electrical forces, heat forces, etc., yet when we carefully consider the subject, we find that there is but one force in nature, and that the supposed various forces, called vital force, electricity, heat, light, chemism, adhesion, cohesion, gravitation, etc., are but the varying manifestations of the one common force of nature—the one force that exists in matter as its one inherent property, from which it is forever inseparable. I will endeavor to make this matter clear to you, for I wish you to see how impossible it is for you to have either good health or long life, except you supply yourselves with the conditions on which life and health depend.

Matter in its primary condition exists in very minute particles which we call atoms. With each atom there exists a certain definite amount of force which is unchangeable in quantity, although exhibiting many marked changes in its mode of manifestation, and yet this mode of manifestation never changes unless the conditions in which these atoms exist change. These atoms never remain as separate or single atoms. Their first force manifestation is in associating themselves together in groups containing varying numbers of atoms arranged in various modes. These groups are called molecules, and this first or primal force manifestation is called chemism or chemical force.

Human research has discovered sixty-four different modes in which the primary atoms are grouped or arranged in the formation of the primary molecules.

The next force manifestation of matter is in the union of like molecules to form masses of the so-called primary elements. For instance, a molecule containing a certain number of primary atoms arranged in a certain manner is recognized by us as a molecule of gold, hence all other molecules having just the same number of atoms arranged in the same manner would also be recognized as gold. Other molecules with their atoms arranged in different numbers or different modes are recognized by us as something different from gold, and we give to each a different name, calling different ones silver, copper, lead, carbon, oxygen, hydrogen, etc. We find that where these molecules are all alike they naturally unite to form a mass, and that in the mass in many of the so-called pri-

*Parlor talks to the patients at the Rural Health Retreat.

mary elements, as gold, silver, lead, etc., the molecules unite very firmly by what is known as cohesive force. When different masses of matter unite together it is a manifestation of what we term adhesive force. For example, water clinging to the vertical side of a piece of glass. Thus we have chemical force uniting atoms to form molecules, cohesive force uniting molecules to form masses, while adhesive force and the force of gravity unite masses.

Another manifestation of force is seen in the diffusion of gases. In this manifestation of forces the molecules do not unite to form a mass, but they constantly move one from another.

Then, again, we have electrical manifestations of force, in which the molecules of whatever substance manifests this force undergo certain vibratory movements. The same is also true of the molecules of matter when heat force is exhibited, and light also is only another form of molecular motion.

These various material or physical forces are really but varying exhibitions of one common force which exists in the primary atoms of matter, and they are all readily changed the one into the other.

Now as all living things and beings are material in their nature, are made up of matter, it follows that whatever force is inherent in, and inseparable from, the matter of which they are composed, must therefore exist in them, and that as *force* never exists separate from matter, therefore vital force can be nothing more nor less than the common force of nature manifested in a peculiar manner. This we find to be true when we examine the development and growth of any member of the vegetable or of the animal kingdom. In the lowest forms of living beings we have a very simple organization, and only a simple life manifestation, while in the higher forms of life we see a more complicated organization and a more diversified life manifestation.

Again, wherever we find life we find a progressive organization, or a growth of the organized structure. It is true that growth takes place in the inorganic world, but there is a vast difference between the growth of stones and metals and other inorganic substances, and that of the plant or the animal. In the inorganic world all growth takes place by accretion, the simple process of accidentally piling up. To illustrate, running water piles up into ponds, lakes, seas, etc., not by design, but by the accident of the rain falling on elevated lands and gravitating to lower levels until some barrier is met against which the water piles. The grains of sand are carried by wind and wave until, meeting a barrier, they accumulate and a bank is formed, the particles of which in time adhere or cohere into a solid rock.

Living things, on the contrary, grow by taking into themselves substance differing from themselves and transforming it, and then incorporating it into their own structure. This power of transforming inorganic or dead matter into a living organism is most marvelous and is only possessed by organized things or beings. This power is called vital power, vital force, life; yet it is only the common force of nature manifested in this peculiar manner by reason of the peculiar organism through which it operates. In proof of this we will take a kernel of corn and examine the vital operations that result from its organization. In the kernel of corn we find a living thing—the chit, or germ. Associated with the germ, and inclosed in the same capsule with it, we find certain substances among them, starch, sugar, fat, vegetable albumen, vegetable fibrin, and vegetable casein, all of which serve as food for the chit when it begins to grow. We will plant this kernel of corn, or what will serve our purpose equally well, place it in a warm, moist place, and watch the result. At first the absorption of water causes our grain of corn to increase in size; this is because of the swelling of the starch granules. In a short time these starch granules burst, and with the other substances contained in the kernel, undergo decomposition. The chit, or germ, is the only part of the kernel which consists of living cells which are organized in a peculiar manner.

While the other portions of the kernel were undergoing decomposition, the germ was busy sucking up the semi-fluid and gaseous material resulting from the decomposition, and organizing it into additional cells within its own body. As the chit increases in size, we see two blades put forth and push upward towards the air and sunshine, and numerous tiny rootlets put forth and push downward and outward in the earth and moisture. The leaves take in gaseous food from the atmosphere, and the rootlets absorb fluids from the earth. These gaseous and fluid materials are carried to every part of the new plant, and are incorporated within its cells, which increase in size

for a time and then subdivide into numerous new cells, which are properly arranged into fibers, leaves, stalks, tassels, husks, cobs, and finally into new kernels. Now, after a few months of development and growth, we have from one hundred to two hundred kernels of corn, each of which possesses an amount of vitality, or life, equal to that at first possessed by the original or parent kernel, and is as capable of exhibiting these various life manifestations as was its predecessor. Whence comes this additional life force? The parent kernel, parent stalk, parent ear, all lived for a time, and then ceased to manifest any of the phenomena of life, leaving behind them, however, a numerous living progeny. It was this wise the substances taken into the corn plant were transformed into starch cells, fat cells, etc., which were organized into the chit or germ. While being thus organized the force inherent in this material was manifested as life force; in other words, the chemical material of the inorganic world was transformed into organized structure and the chemism of this material was transformed into vital or life force.

The requirements of vital law in order that these transformations might take place were: 1. Water, containing proper food in solution. 2. Air, containing proper food in gaseous condition. 3. Heat and sunlight. If these conditions all be properly fulfilled, then a vigorous plant life is maintained, but when these do not properly exist the plant life is but poorly manifested, and the plant has but an imperfect or sickly growth, and a partial development, or it may utterly fail to arrive at maturity.

When we come to investigate animal life, especially the higher orders, we find a much more complicated organization, and a much more complex series of requirements for the manifestation of the vital forces. In our next we will study some of the simpler, or lower, orders of animal life.

M. G. KELLOGG, M. D.

BEWARE OF THE COW.

TUBERCULOSIS is apace, and the bosom friend of the family is spreading consumption far and wide, so, while giving her an equal footing with bread—since she supplies the butter—we must not stare with helpless unconcern at the subtile poison that Jove is dangling over the merited friend of man. If the white marble slabs guarding each victim that has fallen by the silent hand of this mute destroyer were placed in witness array with the plaintive murmurs of desolate loved ones, such a chorus of convincing testimony would rend the people of this land dizzy, with their minds whirling in the feint of terror. The grave shades the ghastly deed from us as the black cap does from the executioner's view.

The cold, dangerous grip of this relentless foe, whose attack marks a tragedy to be concluded in death, lies couched in the beef we eat, the milk we drink, and the butter we use. Cattle are becoming walking depots of death. There is no fever poison so powerful or disease germ so malignant but it may be robbed of the major part of its terrors by attention to the known rules of hygiene. Something besides drugs and Cod's liver oil is needed to stay the marching bacilli. What we want is a law to declare this disease contagious, and proper authorities to condemn and destroy cattle affected with it. Animals affected with phthisis do not exhibit the same symptoms that human subjects do, and this explains why it has been so often overlooked. In the State of New York, where investigation has been most thorough, the news comes to us that 50 per cent of some of the herds supplying New York City and Brooklyn with milk are affected with this disease. In connection with one of the insane asylums of that State a herd of 200 was destroyed by its spread in 2 years. Of 53 calves selected for examination from this herd there were killed at ages varying from 5 weeks to 4 months, and 29 of them had contracted tuberculosis through the milk of these cows. To prove that the meat could convey the disease a herd of 300 swine were allowed to eat the diseased animals, which resulted in the infection of most of the hogs. It is a noteworthy fact that the lungs were seldom afflicted, but large abscesses were especially common in the side. Also some 20 rabbits were fed this meat, and inside of 54 days they were all diseased. Such is a very small fraction of the experimental work that is going on. We may refer to some of the direct sources of its spread. The person who has phthisis walks amongst us with his spray of poison; we inhale or swallow it, and if our system is favorable for its development we fall heir to his legacy. He may expectorate, and chickens feeding upon it contract and convey the disease; or perhaps he is feeding his cow and spits upon the hay, and thus she becomes the source of supply to the balance of the

family; or, possibly, flies feeding upon his spittle infect bread and other articles of food, for it is positively determined that the tuberculous germ will pass through a fly active and capable of producing the disease. In cows the disease is mostly located in the bowels, liver, spleen, lungs, and udder, and of these the most important locality by far is the milk bag. There an abscess forms, myriads of these living germs are washed out with the milk, and we feed it to our baby. After a while it grows white and poor, and we cannot understand what is the matter; it may have brain trouble, or diarrhea, or abscesses on its head or neck, and finally dies, or it gets well with a weak constitution. We give it tonics, castoria, and Mrs. Winslow's soothing syrup, and are perfectly amazed that it does not present the picture of health. We think it must have malaria. The importance of this subject can scarcely be estimated. The health and life of ourselves and little ones are thus dependent upon our uncompromising destruction of this scourge of mankind. Curative medicine stands in impotent wonder and gazes over this dead-line of resources in appalling dismay. We may obtain partial protection by boiling our milk and cooking well done our meats, but we must call upon our Legislators to join in this battle, and the responsibility of our veterinary surgeons, who have so much experience with sick animals, is very great, and they should respond promptly to this cry for protection by locating and isolating diseased or suspicious animals. Let us with one accord ask for, and furnish to our children, pure milk, the most wholesome of all nature's foods.—*W. H. Miller, M. D., of Hanford.*

TESTIMONY OF A PATIENT.

DIXON, Dec. 10, 1888.

PACIFIC HEALTH JOURNAL: Permit me through the pages of your welcome JOURNAL to state how I was treated, and how, after a few weeks' treatment, I regained my health at the Rural Health Retreat.

For a long time I had been troubled with malaria in my system. This gradually grew worse, and began to tell heavily upon my digestion. I had a bad taste in my mouth, headache and confusion. My tongue was thickly coated, my breath became offensive; I became so very nervous that it was difficult for me to sleep nights, and I suffered so much from dyspepsia that life became a burden. I found myself on the verge of malarial typhoid fever. I hastened to the Rural Health Retreat, where I knew they would take good care of me, and treat my diseases without any bad-tasting, debilitating medicines, and where fever patients are treated so skillfully that they neither lose their reason nor their temper.

I did not arrive any too soon, for my fever chills proved to be the precursors of typho-malarial fever that lasted me about three weeks. My fever at this time ran very high, but all the time I was kept very comfortable. The fever was often reduced by cool applications externally, and sometimes by warm applications within.

While sick my husband came down to the Retreat to see me, and he could hardly find words to express his joy and praise of the care taken, not only of me, but of all the patients with whom he came in converse. He said he had heard a great deal in commendation said by those who had been at the Retreat, but he said he never had a faint idea of the accommodations and facilities of the institution. He expected to find me at death's door, but when he saw how well I was looking and how comfortable I was for a patient with so serious a fever, how pleasantly I was situated, and how home-like and friendly the doctors and assistants all appeared to be, he said, "This is the place to come to, this is the way to treat fever."

After the fever left me I continued to receive treatment for nearly a month, regaining my health and strength, and was cured of my dyspepsia. My mind feels clearer, and my heart lighter and better, than for many years. I feel none of the malaria, nor any of the bad symptoms that follow when such diseases are treated by medicine. I can only close by thanking the Retreat for my restoration to health and for the knowledge I have gained of how to preserve my health and happiness.

With much regard,

MRS. ELIZA HAFFNER.

"WELL, how is this, my dear sir?" inquired the local practitioner; "you sent me a letter stating that you had been attacked by small-pox, and I find you suffering from rheumatism." "Well, you see, doctor, it's like this," said the patient; "there wasn't a soul in the house who could spell rheumatism."

HE who wants health wants everything.

Household.

QUESTIONS.

CAN you put the spider's web back in place
That once has been swept away?
Can you put the apple again on the bow
Which fell at our feet to-day?
Can you put the lily-cup back on the stem,
And cause it to live and grow?
Can you mend the butterfly's broken wing
That you crushed with a hasty blow?
Can you put the bloom again on the grape,
And the grape again on the vine?
Can you put the dewdrops back on the flowers,
And make them sparkle and shine?
Can you put the petals back on the rose?
If you could, would it smell as sweet?
Can you put the flower again on the husk,
And show me the ripened wheat?
Can you put the kernel back in the nut,
Or the broken egg in the shell?
Can you put the honey back in the comb,
And cover with wax each cell?
Can you put the perfume back in the vase
When once it has sped away?
Can you put the corn silk back on the corn,
Or down on the catkins? say.
You think my questions are trifling, dear?
Let me ask another one:
Can a hasty word ever be unsaid,
Or a deed unkind undone?

—*Wide Awake.*

THE BEST BED-TIME STORIES.

AN enthusiastic young lady, on her introduction to my mother, exclaimed, "Oh! I am so delighted to know you. I have heard about you for years as the lady who is always telling such wonderful stories to children, and they invariably turn out to be Bible stories. How do you do it!" "Very easily," replied my mother; "the Bible stories are the most wonderful stories in the world."

I never thought the Bible anything but interesting, and to this day think my mother's stories better than all other tales. I began telling Harry the Bible stories younger than many mothers think worth while, and I used to put his chubby hands together and say his little prayers months before he could lisp the words after me.

My practice has always been to go up with him at night, oversee the undressing, and then, after he is tucked in bed, tell the story. I don't believe in telling the tories at hap-hazard, and from ancient and hazy recollections. I carried the boy (quite unconsciously) through a regular plan of Bible history; and I used to spend a little time every morning in getting up the story. The more knowledge the mother has, the more dramatic the story can be made.

I must say (if I speak frankly) that I think the reason why so many children find the Bible dull is because they have had it taught to them by a lazy intellect. Dullness is a crime sometimes. No indolent and heavy mind can interest and entertain a bright, wide-awake child. I think, also, that the great time to make this glorious and lasting impression of the charm of the Bible is before the child is seven. The things told them take on wonderful hues. Does morning or mid-day ever give us colors like the early dawn?

I like the "Bible Story Book" very much. I have read that aloud three times to my boy. There is nothing in all the world after the Bible like "Pilgrim's Progress." I feel sorry for the mother who has never rested herself and her children with the wonderful melody of Bunyan's dream.

Many mothers don't believe in telling stories to children after they are in bed. I do. Have the children go to bed half an hour earlier if necessary for the privilege.

The trouble so many times is with ourselves. We make studying the Bible a duty, and keeping Sabbath a burden. I think Sabbath afternoon ought to have more privileges than any other day of the week, and I think the time of hearing the Bible ought to be a little cosier than any other hour.

An ignorant young mother talked to me once, in great dismay, about her boy, who often refused to say his prayers. The result would be a pitched battle between the two, and a compulsory repeating of the prayers. "Don't ever let that happen again," I entreated. "If you see the battle coming, focus it on another point. A good general chooses his own battle-field if possible. Then have everything specially pleasant about prayer-time. Tell him a story, give him a new toy, and, in his happiest mood, have prayer-time come." She promised to do this.

Two months afterward that boy was run over by an engine and instantly killed. I was with his mother in a few hours, and almost her first words were, "I never had any trouble about his prayers after that day at your house."—*Ladies' Journal.*

STUDY WITH THE CHILDREN.

IT is the little things that make the whole, in mental improvement as in all other of life's duties. One of the greatest aids of a woman, and one that she ought to have, even if she must go without a new dress to get it, is a cyclopedia. When, in her reading, she sees something that she does not understand, a few minutes spent with her cyclopedia will be of great benefit to her.

While you are at work, get your husband or the children to read to you. Talk over the latest news items, and encourage the children to make use of their school-books as you do so. For instance, take the accounts of the strike on the C. B. & Q. Railroad. Get the children to find the road in their atlas; then if you are not capable of doing it, ask your husband to explain to you and them the probable effect of the strike on the whole Western country. When you read of some occurrence in another part of the country, if it be nothing more important than the account of a severe storm, have the children find it in their geography, and try to think of something that had once happened near there, that was of national importance. Interest yourself in your husband's favorite reading, and, if you have a hobby—and what woman has not—get him and the children interested in that.

Another thing, and in this I expect criticism—don't be too particular about your housework. Do your cooking and your dish-washing just as neatly as possible, but think of life as too short and too precious to be spent in brushing away imaginary dust. The rooms don't all need to be swept every day. In spare rooms a monthly dusting and sweeping is sufficient. The sewing machine is a blessing for those who do not make it a curse, by doing needless sewing upon it. It is better to read than to wear tucks and ruffles. I have read several books while churning and several more while knitting.

One thing I would strongly urge upon the sisters, and that is that they do not neglect letter writing. If the children are grown up and gone, write them good, long, home letters, telling them of the books you are reading, and the little, daily happenings in the family, if they are pleasant ones. Send a cheerful letter now and then to some of the "shut ins" of your acquaintance.

Don't put all your books in one room. Have them scattered around, that they may be at hand and enable you to improve moments that might otherwise be wasted.—*Lucile, in Housekeeper.*

TRAINING FOR GIRLS.

NOTHING is more significant of the social condition of a people than the training of its girls in domestic life. In Germany the daughter of the nobleman, of a prince, and of the small shopkeeper, learns alike to cook, to sweep, and to keep house. After the training in books is over, Fraulein Lena and her royal highness, Princess Sophia, both begin their home education.

There are establishments where they are taken by the year, as in a boarding-school. In one month they wash dishes and polish glass and silver; in another, they cook meats; in another, bake; in the next, "lay down" meat for winter use, or preserve fruit, make jellies and pickles, sweep and dust. Plain sewing, darning, and the care of linen are also taught, and taught thoroughly. The German "betrothed" is thus almost always a thorough housekeeper, and spends the time before marriage in laying in enormous stores of provisions and napery for her future home.

In France a girl begins at twelve years of age to take part in the household interests. Being her mother's constant companion, she learns the system of close, rigid economy, which prevails in all French families. If there be but two sticks of wood burning on the hearth, they are pulled apart when the family leaves the room, even for half an hour, and the brands are saved. The nourishing soup, the exquisite *entrées*, and the dainty dessert are made out of fragments, which in many an American kitchen would be thrown away. The French girl thus inhales economy and skill with the air she breathes, and the habit she acquires lasts her through life.

English girls of the educated classes seldom equal the German and French in culinary arts, but they are early taught to share in the care of the poor around them. They teach in the village school, or they have industrial classes; they have some hobby, such as drawing, riding, or animals, to occupy their spare time with pleasure or profit. Hence, the English girl, though not usually as clever or as well read as her American sister, has that certain poise and *a plomb* which belong to women who have engrossing occupations outside of society, beaux, and flirting.—*Youth's Companion.*

HINTS TO HOUSEKEEPERS.

THE statement made by a recent writer, that "good housekeeping is an accomplishment, and more difficult than to command an army," may seem extravagant to the inexperienced; but to the individual who knows by actual experience of the ceaseless round of daily toil and of the almost innumerable and perplexing duties that devolve upon the lady who does her own work, sees in it, to say the least, an appreciation of the constant care and attention to details so necessary in general housework.

If good housekeeping is an accomplishment (and who can say it is not?) *good* cooking is a science and an art combined. Good hygienic cooking is an art rarely attained. With the hope of helping those who wish to become good cooks, we submit the following:—

Breakfast.—Crushed oats with cream; plain egg omelet; cream toast; wheat berry flour muffins; graham bread; baked apples.

Dinner.—Barley soup; potatoes boiled; mashed parsnips; scalloped tomatoes; fruit bread pudding; canned strawberries; dessert, oranges and apples.

Crushed Oats.—Prepare the same as crushed wheat. To one part of oats take three parts of water, stir the oats into the water while boiling, and cook slowly for thirty minutes. Add a little salt if desired.

Cream Toast.—Toast to a delicate brown slices of bread cut about a quarter of an inch thick. Have ready a dish of hot milk, in which dip the slices, to soften the crust. Place at once on a hot plate and pour over the toast sweet cream, and serve immediately.

Plain Egg Omelet.—Take two fresh eggs, beat the whites to a stiff froth, add the yolks well beaten, a little salt, and two tablespoonfuls of cream; stir well together, and turn into a hot frying-pan, well buttered to prevent sticking to the pan. As soon as the omelet begins to cook around the edge, loosen from the pan and roll toward the center; continue to do so until the omelet is cooked. Be careful not to let it overcook. Have ready a hot dish, and serve at once.

Wheat Berry Flour Muffins.—Three teacups of wheat berry flour, two teacups of new milk, one-third cup of good yeast; stir well together and put in a warm place to rise until morning. In the morning add a tablespoonful of sugar and a little salt, bake in muffin rings or hot gem-pans. These are excellent for breakfast and quickly made. Muffins can be made in the same manner from graham flour or whole wheat flour.

Barley Soup.—Boil half teacup of pearled barley in a pint of water for two hours; in case the water boils away add more. When it is well cooked have ready two quarts of hot milk, in which put the barley, and four or five soda crackers rolled fine, one teacup of thick sweet cream, and a little chopped parsley. Just before serving, add salt to taste. In cooking the barley care must be taken to prevent its sticking to the pan and thus burning.

Mashed Parsnips.—Scrape the parsnips, and put at once into cold water, to prevent discoloration. Slice them into quite thin pieces, and steam in a steamer over a kettle of boiling water until very tender. When done, mash very thoroughly, add salt to taste, and a few spoonfuls of sweet cream, and serve.

Scalloped Tomatoes.—Peal as many large tomatoes as you wish to prepare. Slice and lay in a buttered pudding dish (granite iron is preferable), first a layer of tomatoes, and then a layer of bread crumbs, or crackers rolled fine, over which sprinkle a little sugar; alternate until the dish is nearly full, having tomatoes last. Now dust over with some sugar, and drop here and there, over the top, a little butter, and last of all cover lightly with bread crumbs or rolled crackers, and bake half an hour, having the dish covered; then remove the cover and bake brown, but be careful not to scorch.

Fruit Charlotte.—Take slices of stale bread cut about one-fourth of an inch thick, toast evenly a light brown on both sides, butter and lay in a pudding dish. Have ready hot fruit (canned blackberries sweetened to taste are good), pour over the toast, then another layer of buttered toast, then another of fruit, and so on until the dish is nearly full, having the last layer of fruit. Cover tightly and place where it will keep hot, but not cook. This is good with or without sauce.

A. M. LOUGHBOROUGH.

THERE are no more vicious habits than adopting measures to "keep awake," or employing artifices, or, still worse, resorting to drugs or other devices, to induce or prolong sleep. Dozing is the very demoralization of the so-called sleeplessness, more accurately wakefulness, from which multitudes suffer.

GOOD RULES TO REMEMBER.

1. Be regular in your habits.

2. If possible, go to bed at the same hour every night.

3. Rise in the morning soon after you are awake.

4. A sponge bath of cold or tepid water should be followed by friction with towel or hand.

5. Eat plain food.

6. Begin your morning meal with fruit.

7. Don't go to work immediately after eating.

8. Be moderate in the use of liquids at all seasons.

9. It is safer to filter and boil drinking-water.

10. Exercise in the open air whenever the weather permits.

11. In malarious districts walk in the middle of the day.

12. Keep the feet comfortable and well protected.

13. Wear woolen clothing the year around.

14. See that your sleeping-rooms and living-rooms are well ventilated, and that sewer gas does not enter them.

15. Brush your teeth at least twice a day, night and morning.

16. Don't worry. It interferes with the healthful action of the stomach.

17. You must have interesting occupation in vigorous old age. Continue to keep the brain active. Rest means rust.—*Herald of Health.*

Fresh, ripe fruit is the best preventive of worms in children. A Dr. Ross pointed this out a hundred years ago. He made a series of experiments on earth-worms (which he regarded as more nearly allied to those which infest the bowels of children than any other), with a view to test their power of retaining life under the influence of various substances which might be used as worm medicines The result proved that worms often lived longer in those substances known as poisonous than in some of the most harmless articles of food. For instance, in watery solutions of opium they lived 11 minutes; in infusion of pink root, 33 minutes; in claret wine, 10 minutes; but in the juice of red cherries they died in 6 minutes; black cherries, in 5 minutes; red currants, in 3 minutes; whortleberries, in 7 minutes; and raspberries, in 7 minutes. From these experiments he argued that fresh, ripe fruits, of which children are very fond, are the most speedy and effectual poisons for worms. In practice this theory has proved to be correct.—*Adelaide Observer.*

HELPFUL HINTS.

To prevent door hinges from creaking rub them with soap.

Put a little brown sugar in stove blacking. It will not burn off so soon.

To keep ants out of a case or refrigerator sprinkle sulphur around edges of the shelves.

Camphor for burns is the best remedy ever found, it takes the fire out in a few minutes.

A tablespoonful of turpentine boiled with white clothes will greatly aid the whitening process.

For inflamed eyelids and hair falling out, I use tepid salt and water; make it so it will taste pretty salt.

A large onion planted in contact with the roots of a rose-bush will, it is said, increase the odor of its flowers.

Boiling-starch is much improved by the addition of sperm, or salt, or both, or a little gum arabic dissolved.

Tin dishes should be scoured once a week with soap and sand or with sapolio to keep them bright. They must be thoroughly dried with a soft cloth.

Take a teacup of sage, steep in one quart of soft water, strain and put in one-half teaspoon borax, and sponge the head with it to promote the growth of hair, and use a stiff brush.

Dust furniture and woodwork by wiping with a slightly dampened cloth, and not with a feather duster, which flirts the dust into the air only to settle again in another place. For cleaning carved furniture, a new paint brush is excellent.

Cleaning Tinware.—An experienced housekeeper says the best thing for cleaning tinware is common soda. She gives the following directions: Dampen a cloth, and dip in soda and rub the ware briskly, after which wipe dry. Any blackened ware can be made to look as well as new.

Two cups of Indian meal, one cup wheat,
One cup sour milk, one cup sweet;
One good egg that you will beat,
One cup of sugar add thereto,
With one spoonful of butter new;
Salt and soda each a spoon;
Mix up quickly and bake it soon.
Then you'll have corn-bread complete,
Best of all corn-bread you meet.

—*Selected.*

Publishers' Department.

NEW YEAR'S AT THE RETREAT.

AFTER an absence of several weeks it was our privilege to be again at the Retreat to enjoy, with the managers, physicians, helpers, and the numerous patients and boarders, the greetings of the New Year. We found the walls of the gymnasium still bearing their Christmas mottoes of evergreen and fir, with festoons of pine and scarlet "Christmas berries," which are so abundant on Howell Mountain.

January 1st was a very pleasant day, thus giving ample opportunity to view the eclipse. The dinner furnished in the Retreat dining-room was strictly hygienic, embracing a liberal variety of relishable dishes, with fruits and nuts. Some rare bits of flesh-meats were furnished for those of feeble stomachs, who were not yet fully recovered in health.

Many were the expressions of gratitude which came from the lips of patients for the benefits they were receiving at this mountain resort. It was indeed a happy opening of the new year to many such. One man whose wife came here some two months since, fleeing from a malarious district to find some place where she could even live, most in despair of ever being well again, said to the writer: "You are doing a great and good work up here on the hill. The people where I live could hardly credit my word when I went home the other day and told them that my wife was about well, running all about here, and had already gained twelve pounds in flesh. They would not have been surprised to hear that she was dead. They little expected that she would ever walk again when she left home." To another he said, "Beside my wife gaining her health here, what we have learned of how to live, and how to keep well, I would not take a million dollars for."

We have not room here for the many expressions of gratitude heard from the lips of patients for having found this resort. In the evening there was an innocent entertainment in the gymnasium, comprised of instrumental and vocal music, readings and declamations, mostly by convalescing patients. And so closed the happy New Year's day of 1889, at the Rural Health Retreat. J. N. L.

THE TOTAL ECLIPSE.

THE Health Retreat is only about seven miles from Calistoga, which was designated as one of the points where the eclipse of the sun of January 1, 1889, would be total. Old Mt. St. Helena, which is a few miles further north, is in plain view from the verandas and roof of the Retreat building. Our guests anticipated a fine time in viewing the eclipse, and in this they were not disappointed. The day was fair, and for three hours the porches of our institution presented a fine array of smoked glass observers of the scenes. Of course we had not the instruments for very thorough astronomical observations, but it was the unanimous decision of all that, if they had not been convinced of it before, this day's observations would have satisfied them of the fact that the moon was neither a luminous body nor an originator of heat. Especially did the latter fact become apparent as we neared the time of total eclipse, when for about fifteen minutes additional wraps were in good demand.

Viewing this total eclipse under so favorable circumstances, was an event of a life-time. Mt. St. Helena was plunged into the moment's darkness of the moon's shadow, with its surrounding sky quickly tinted with varying shades of gold, brass, copper, and darkness, and was as quickly out again into gradually returning light. Over our heads were brightly shining stars, and a few degrees to the east of the obscured sun, the evening star poured forth its silver rays. The animal creation seemed to know that something unusual was "up." Roosters were crowing, and fowls and birds were seeking their perches. Cattle were returning from the fields to their sheds as though night were coming on. Indeed, it was a rare occurrence to have a clear New Year's day with the total eclipse, a new moon, and the evening star and other luminaries shining out at 1:40 P. M.

OUR GENERAL AGENTS.

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"FIGURES won't lie," is an old saying; but in the January number of this paper a statement was made concerning the PACIFIC HEALTH JOURNAL which needs a little correcting of the figures in order that it may say the exact truth. On page 27, first column, it says this paper was started "a 16-page bi-monthly, and with the second volume it was increased to a 24-page bi-monthly," etc. The facts are these: The Journal was a 24-page bi-monthly for the first year. With the second number of the second volume, it was increased to a 32-page bi-monthly. With the third volume it was made a 32-page monthly with a cover. Now the figures tell the truth.

PACIFIC HEALTH JOURNAL, Pacific Press Publishing House, Oakland, Cal. Price, $1.00 per year. Issued monthly. Its motto is, "Pure Air, Food, Water." Its purpose is to diffuse general information in regard to diet, water, air, etc., on the hypothesis of "Physical Reform the True Basis of Mental and Moral Reform." A gospel of health, as it were.—*American Baptist.*

THE *Good Health* for January comes to our table in a new dress and with the page enlarged to 8½ by 11½ inches. The price too has been increased, but not as much as one would expect from the improvement in the journal. The price is now $1.25 instead of $1.00 as formerly, and those who have seen the *Good Health* in its new dress need not be told that it is well worth the money.

HEALTHFUL FOODS.

HAVING lately added to the facilities of our Health Retreat a revolving oven, and first-class cracker machinery, we are now prepared to furnish the foods advertised below, at their respective prices. These foods are especially adapted to those suffering from digestive ailments, but are also excellent for all persons who wish food free from lard and all other deleterious shortening. None but the purest and best articles are used in the manufacture of these foods.

OATMEAL BISCUIT.—These are about twice the thickness of an ordinary cracker, are slightly sweetened and shortened, and made light by yeast, exceedingly palatable. They are recommended for constipation, if the person is not troubled with acidity or flatulence; per lb.....12 cts

MEDIUM OATMEAL CRACKERS.—Made about the same as the above, only they are not fermented; per lb.....10 cts

PLAIN OATMEAL CRACKERS.—These are neither fermented, shortened, nor sweetened. They have an agreeable, nutty flavor, and are crisp and nice; per lb.....10 cts

NO. 1. GRAHAM CRACKERS.—Slightly sweetened, and shortened. Just the thing for persons with fair digestive powers and inactive bowels; per lb.....10 cts

NO. 2. GRAHAM CRACKERS.—Shortened but not sweetened. Very palatable; per lb.....10 cts

PLAIN GRAHAM (DYSPEPTIC) CRACKERS.—These crackers contain nothing but the best graham flour and soft water, yet by the peculiar preparation of the dough they are as crisp as though shortened. If by exposure to dampness they lose their crispness it may be restored by placing them in a hot oven for ten or fifteen minutes; per lb.....10 cts

WHITE CRACKERS.—These are made of the best patent flour, shortened. But they are not mixed with lard or any other deleterious substance; per lb.....10 cts

WHOLE WHEAT WAFERS.—Composed of flour and water. Made especially for dyspeptics, and those of weak digestion; per lb.....12 cts

GLUTEN WAFERS.—Especially good for those troubled with acid or flatulent dyspepsia; or those suffering with nervous exhaustion, and who wish to restore nerve power speedily. Such as have to live largely on meat, because they cannot digest vegetable food, will find in these wafers a valuable substitute; per lb. ....20 cts

ANTI-CONSTIPATION WAFERS.—Composed of rye meal and whole wheat flour. Crisp and palatable. Persons suffering with painful dyspepsia, or tenderness at the pit of the stomach, should use whole wheat crackers in preference to these. For all other forms of dyspepsia or constipation, these are just the thing; per lb.....12 cts

PASSOVER BREAD.—Made from patent flour. Neither shortened nor fermented. In the form of wafers. Is very light, thin, crisp and toothsome; per lb.....12 cts

FRUIT CRACKERS.—The best varieties of foreign and domestic dried and preserved fruits are used in the preparation of these crackers. They are exceedingly wholesome for those of normal stomachs, but are not recommended for confirmed dyspeptics; per lb.....20 cts

CARBON CRACKERS.—These are especially intended for cases of dyspepsia in which there is acidity of the stomach, heartburn, and flatulence of stomach or bowels. The black color of the cracker is due to the presence of pulverized carbon, which acts as a preventive of fermentation, and is an absorbent of irritating gases resulting from indigestion; per lb.....15 cts

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AVENOLA.—This is some like the preceding in the mode of its preparation, except that it has also the finest oatmeal with the wheat in its combination. It contains a large proportion of bone, muscle, and nerve-forming material. It is a good food for infants, and for all invalids of weak digestion; per lb.....13 cts

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Thoroughly Revised by Elder A. T. Jones,

Who has added valuable notes, and a chapter on the "**Peopling of the Earth,**" which is an exposition of the tenth chapter of Genesis, being an outline of the beginning of history, and of the origin of nations. No student of history can well do without it. It contains a vast amount of information in a small space, and is withal as interesting as a story, which it really is. 300 pages, cloth binding and side stamp, $1.00. Address,

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The Abiding Sabbath and the Lord's Day.

THE $500 AND $1,000 PRIZE ESSAYS.

A REVIEW.

The above is the title of a pamphlet recently issued. In its pages the author reviews the two most recent and without doubt the best contributions to the defense of Sunday, popularly called the "Lord's Day." The first of these essays was written by Rev. George Elliott, and took the $500 "Fletcher Prize," offered by the trustees of Dartmouth College for the best essay on the "Perpetual Obligation of the Lord's Day."

The other essay was written by A. E. Waffle, M. A., and was awarded a $1,000 prize by the Committee of Publication of the American Sunday-school Union.

We state thus definitely the source of the essays reviewed that all may see their importance. Certainly if there was any argument in favor of Sunday, we should expect to find it in these prize essays. Elder Jones in his *Review* takes up their arguments and assertions, and shows very plainly how several times the authors have *proved what they did not want to prove* at all—namely: The Seventh-day Sabbath is still as binding on all as when the law was given.

This *Review* will be read with interest and profit by all, and those who have friends that are interested in the Sabbath Question should see that one of these pamphlets is placed in their hands.

WORDS OF APPROBATION.

Elder R. A. Underwood, President Ohio Conference, says:—

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