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TAKE CARE OF HEALTH.

TAKE care of health. How many fail to appreciate the meaning of this phrase unless they have first passed through the vicissitudes and trials of losing health, in which the possibilities of life are sinking below their ken by inch, or until they are fully awakened by many signs and symptoms which prove to them that the dearest thing in life has slipped, or is slipping, perhaps forever, away from them. Very little concern is manifested until they have long passed the premonitory symptoms, that so faithfully endeavor to admonish them that they should take better care of health. But these they pass time after time, week after week, and often year after year, in stolid indifference to their warning, until the increasing indications of failing health send their warning notes through the body in their intense determination to save the wreck that lies in the immediate future.

People have a habit—it seems to be especially American—of rushing headlong into their work, having their minds fully absorbed with the busi-

ness routine of life and the pleasures and gayeties of the day, until it takes a herculean effort on the part of the system to awaken the mind to a realizing sense of their danger; and when awakened to the fact, it may take the closest physical economy and the exertion of all the vital powers to avert the danger and save the system from the crash from which it may possibly never fully recover. If it does recover, it may carry the evidences of the struggle to the end of life. Disease from overwork and errors in the habits of life often creeps in so insidiously, winding its serpentine length through months and years, around the various organs of the body, and changes the once normal process of nutrition to a grade so morbid that the organism becomes weakened and rendered less able to go on with the nutritive functions. These retrograde morbid changes pave the way for many physical evils to which flesh is heir. But even then, if courage remains, comes the tedious process of building up the system, repairing its wastes, and increasing its vitality until a good measure of it is secured, and they can again proceed in the pursuits of peace and happiness.

The process of getting well is often a very tedious one, and takes time in a measure comparable to the time that health has been failing; but when one passes through the experiences that have brought him step by step into a diseased condition of mind and body, and then carefully adjusts all the relations of life, so that step by step he or she makes continual progress up the rugged pathway to health, he will then appreciate, as never before, what a blessing there is in good health.

It is indeed true that we do not appreciate health until we have lost it. It is equally true that the most interesting, and often the most profitabl

part of life comes after one has passed through the experience of losing health and then recovering it. Such an experience truly constrains one to adapt himself closely to the laws governing health. Never before could he see the importance of the study of the laws of nature, or appreciate the fact that a willful violation of these laws brings upon the transgressor many unpleasant experiences. Certainly after such an experience, one is better able to maintain a vitality which will make him a positive entity in the world for good, marshaling his powers economically, and having a breadth of perception which will protect him in his future course against other dangers that may lie in his pathway. Consequently, we think it safe to say that the strongest men and women, mentally and physically, are those that have had some experience in losing their health, and putting forth careful, diligent endeavor to recover the same. They are then prepared to stand as lights to the multitude that have had less experience. Certainly no one would pay attention to the laws of health if someone had not suffered from the violation of those laws, and would appeal to them in distressing tones to avoid the shoals and rocks upon which they stranded.

There are certain requisites which every person who maintains health must understand. First of all is the appropriation of food to maintain the body. No one can enjoy life or do a reasonable amount of work without daily appropriating the quantity of food necessary to keep up the vital processes by which he can do the work he would like to do. Thus everyone should understand the first principles, at least, of the process of digestion. He should make it a study, in order that the quantity and quality of food may be properly adjusted to the needs of the body. This embraces the physiology and hygiene of the digestive apparatus. But this does not mean that we should take any food that comes to us which is simple and of sufficient nutritive value to sustain life. The question as to whether it can be readily elaborated and appropriated should be taken into consideration. It often happens that foods possessing minor nutritive value will be better appropriated than foods richer in nutriment, consequently the study of the individual characteristics of the digestive organs should not be overlooked. Next among health preservatives, sleep should be regulated. If one does not sleep well, he cannot digest his food well. The mind should be so free

from the trials of the day that he can lie quietly down, and give himself up to the "sweet restorer," with a sense of relief and relaxation that will induce Dame Nature to dispense her sweetest blessings.

The average individual should sleep eight hours, although some can recuperate much more rapidly than others. There is as much in being a good sleeper as there is in being a good worker. A goodly number of regular hours should be given to relaxation and repose. Children and youth should have the advantages of a much longer repose than grown people require. Unfortunately those laboring under a high nervous tension often take their business or their troubles to bed with them; and, while a portion of the brain may be quiet, there are many of the nerve centers working as assiduously as ever over the problems that should occupy the mind only during the business hours. This habit will sooner or later tell on the health of the individual. Fortunate indeed are those who have acquired the habit of dropping their troubles, be they ever so disturbing, as soon as they touch the pillow, when the whole system sinks to its repose.

Exercise is quite as important a condition by which health may be maintained. It is indeed rare to find a person of whom it may be said he has worked himself to death. It might be said, perhaps, of indefatigable brain workers, when accompanied with marked sedentary habits; but this is not physiological exercise. To maintain health it is necessary to take a reasonable amount of physical exercise; and the one who does not take physical exercise rusts out rather than works out. It is a well-established fact that the healthful condition of the blood depends upon the vital changes that take place largely within the muscles; and these changes are, to a great extent, regulated by the activity of the muscles. Hence we can see the importance of maintaining enough physical exercise to keep up the vital changes of the body, upon which life depends; and if this important function is neglected, it will result in poor muscles, poor blood, and a torpidity of the nutritive and eliminative functions. As a consequence, when called upon to work, they necessarily drive the fagging vital powers far beyond the nutritive status of the body, which sooner or later leads them to the alternative of taking a stimulant. The stimulant, often repeated, takes them farther and farther from health, culminating soon in well-established disease.

If one would maintain health, he must eat simple, nourishing food, take plenty of rest, and maintain a regular system of physical exercise sufficient to keep the muscles of the body hard and strong. In this condition he will be able to do a greater amount of work than he otherwise could.

W. H. M.

NOTES ON THIS, THAT, AND THE OTHER.

WE again present before our readers an interesting number of our JOURNAL. Besides the instructive matter in the Editorial department, Dr. Sanderson furnishes two articles on "Heart Depressents," and another in his regular series on the circulation of the blood. In our Temperance department we begin in this number a series of articles on "Man," by Elder G. K. Owen. A study of ourselves will better enable us to realize the destructive effects of narcotics and stimulants on the wonderful organism of man, and better to appreciate the value of true temperance. The department also contains another short chapter from that useful little book, "Alcoholism, Its Cause and Cure." In the Family Circle department will be found a domestic sketch of the Bartons, with directions for giving simple treatments. The paper on "Reverence" was designed for the Mother's Helper department, but as that was overcrowded we place it in the Family Circle. It is worthy of careful reading. The mothers will find in the department named for them some excellent suggestions developed by the Question Box, a timely article on "Summer Complaints in Children," and an excellent selected article on "Christian Motherhood." The Housekeeper presents a thoughtful article on "Food Elements," which is worthy of study by every housewife or cook. The Healthful Dress department is full of good things.

WE are sure that the mothers and wives among our readers will appreciate the Mother's Helper department. The hope of the future is in our children. Proper training embraces the physical, mental, and moral natures of the child. Mrs. Dr. Maxon is a competent physician, as well as a mother, and bears a heavy burden for the mothers of our country. We believe that her efforts will be seconded by many of our

readers in the organizing and holding of mothers' meetings, and in the work of enlightening their sisters on every side who so much need instruction.

THE PACIFIC HEALTH JOURNAL believes in giving proper credit for every selection if possible. With a great many journals the word "Exchange," or "Ex.," or "Exc.," or "Selected," or "Sel.," seems to be sufficient credit for anything, from a worthy and bright paragraph to a five-column article. It therefore becomes unsafe to credit this class of journals even with what seems to be original items, for the manner in which they quote from others makes it uncertain as to whether their "original" matter is not also quoted. On this point the *Sanitary Era* makes the following sensible remark: "The *Sanitary Era* is not favored with an exchange [that is, a paper from which it feels free to copy without credit], and is unable to use the "Exc.'s" items, except at second hand; but when the paternity of one we like seems doubtful, or has accidentally disappeared from the clipping, we feel safe in crediting it to the "Exc." from which the good items so generally come. In fact, so many of "Exc.'s" items are stolen outright, without credit, by some of our contemporaries, that it becomes a safe presumption that anything we find in them should be credited to "Exc.," if to anybody." And with our esteemed contemporary we agree.

Now that the cholera scare is over we presume that our cities generally under ignorant and corrupt municipal governments will, according to the true proverb, return to their filthiness like the dog to his vomit, or like the sow that has washed to her wallowing in the mire. (2 Peter 2:22.) But if there was need two months ago that our cities should be cleansed, there is the same need that they should be kept clean. It will be a most marvelous thing indeed if the cholera does not sweep through this country next year. The best preventives are clean cities, clean dwellings, hygienic living, and a conscience at peace with God.

ONE of the last organizations of which we have seen notice is a Society for the Prevention of Tuberculosis, brought about by the efforts of Dr. L. F. Frick, of Philadelphia. It will do the

greater part of its work among the poor. It will teach people how consumption is "caught" by infection, and how to avoid it. The society will, says the *Sanitary Era*, "cause all cases of consumption to be reported to the Board of Health and to be registered, and will urge the health officers to secure the disinfection of houses and rooms in which consumptive persons have died." And this is the very work that the Board of Health of every city ought to do, in fact, what every physician ought to do. Every society of this kind organized is an evidence of the general corruption and selfishness of the age.

ONE of the most beautiful places in California, one of the most restful and quiet, is Crystal Springs Rural Health Retreat, on the south side of Howell Mountain, near St. Helena. We have thought this in the past, we feel it doubly so now after a sojourn there of two weeks. We may have more to say next month, but in the meantime if any of our readers who are ill wish the best kind of treatment, if any who are weary want rest, if those who are nervous over the busy cares of city life wish quiet, with the best of medical advice, at reasonable rates, let them try the Retreat.

M. C. W.

TIPPLING AMONG WOMEN OF RANK.

To one who pays attention to the current news of the day, it becomes apparent that the evils of the social glass are steadily creeping into the social life of the different nations of the earth with an increasing virulence, which more than threatens its integrity. This is especially alarming inasmuch as the vice is growing rapidly among the gentler sex, and thus subverting the life and spirit of society in its higher and moral aspect. The habit of smoking as well as drinking among ladies is fast becoming a characteristic feature of aristocratic life, not so much in America, we are glad to say, as in other and more Eastern nations. But unless American society awakens to its danger in this respect, it, too, will drift in that direction, as many signs already indicate. It is, indeed, assuming alarming proportions in English society at the present time; and we might add that some of the nations of continental Europe are not behind in this respect. In all their social gatherings it is customary to indulge in some kind of intoxicating beverage, ladies as well as gentlemen, until the

finer sensibilities of the lady stand aghast at the debasing prospects of the tobacco and alcohol problem, as seen in their aristocracy. Some ladies of rank are raising their voices in condemnation of the growing practice. Under the heading of "Tippling among English Women," Lady Cavendish protests against the fashion of young ladies, and older ones, too, accompanying gentlemen into the smoking room after dinner, and sharing not only cigars but also spirits containing a higher per cent of alcohol than is usually seen on the tables. It is quite fashionable in many mansions to have what they term 'roomy dining room chairs,' the seats and backs of which are deeply curved to keep the gentlemen and ladies from falling out after dinner, signifying that they needed some special staying properties for a time after partaking of a social repast.

The lady goes on to say that, although heavy drinking has been given up to some extent by gentlemen, women were becoming inveterate tipplers. Many ladies have recourse to "pick-me-ups" and brandy in the morning, wine at dinner, and something hot at bedtime, with plenty of highly flavored soda water during the day. Many of the fashionable ladies say they cannot go through a London season without taking a "cordial," which they term "whitecup," a deceptive name for champagne. She also further says that a distinguished physician had assured her that many ladies leading idle lives consulted him for nervous symptoms which revealed a condition of alcoholism bordering upon delirium tremens.

But alcoholism was not the only fashionable failing, as chloral, chlorodyne, and morphine were taken in the secrecy of the boudoirs, and were adding greatly to the maladies of modern life of women.

The duchess of Bedford takes up the theme, and puts the blame for these evils on the straining of nerve power through the supposed demands of society until the nerves require a "fillip." They claim, of course, to be moderate. The duchess, however, maintains that while moderation is a very elastic term, it does not cover the evil.

It has long been a practice in European cities to have a bar to which ladies are especially invited; and while out on their drives, walks, shopping, or otherwise, it is very common to see the ladies of high social standing patronize the bar, thus displaying characteristics ill fitting the gentler

sex; and it often happens that the cup is indulged in to that extent that it requires the attention of the police to escort them back to their palatial residences.

While traveling in Europe one soon gets accustomed to the tipping habits among the gentler sex, as well as their smoking propensities. It is quite common in traveling by train, as one steps into the apartment, which, by the way, contains two seats, to find himself in company with a family of high social standing on a pleasure trip to some noted resort. Father, mother, and children are all enjoying their cigars, joking and chatting merrily, the lady deftly holding the cigar between the thumb and finger of her gloved hand, and as deftly displacing the ashes with a flirt of the little finger, and then puffing the cigar with the seeming assurance that she was made for that special object. It is indeed astonishing how prevalent among ladies of the East is the practice of using the weed and imbibing the various alcoholic drinks, which places both sexes, in this respect, on the same level. Prohibition clubs and temperance organizations would receive very little support in these lands. But if given up to drinking and smoking, they soon burn out their vitality, with little hope of a better posterity, unless the coming generation learn to avoid the rocks upon which their parents stranded.

W. H. M.

QUESTION COLUMN.

31. CATARRH OF THE STOMACH.

WHAT would be the proper diet for one affected with catarrh of the stomach?

All catarrhs of the mucous membranes are occasioned by some source of irritation; and whatever that cause may be, if it is removed, the diseased membrane will gradually regain its lost tone, and be in a condition to perform its function normally. Catarrh often appears to be obstinate, simply from the fact that the irritation is kept up. We will note a few of the causes, which will give one a better idea of how to relieve one's self of catarrh.

Overeating is among the most potent causes of the various forms of catarrh of the stomach. The mucous membrane is irritated by the overcrowding of the stomach; the food changes are slow; and often from one meal to another there is left in the stomach considerable food debris, the products of indigestion, which will keep the stomach in a continual state of irritation. One with this kind of stomach irritation should be very careful to take

just the quantity of food that will be readily digested. Irritable foods should not be taken into the stomach; consequently a proper amount of bland food only should be taken until the stomach is relieved of its morbid irritation. On rising in the morning, a glass of pure cold water will often be of great service. It should not, however, be taken within an hour or two before the meals. If, on the contrary, an individual finds that cold water does not give a pleasant sensation, it will be better to change it for hot water, in which case a glass or two should be taken from one to two hours before each meal. Regularity in eating and plenty of sleep are also necessary conditions.

32. ATROPHY OF THE LIMBS.

Another asks, What is the cause of one leg becoming smaller than the other? and how should it be treated?

Atrophy of one of the limbs may be due to several causes,—local paralysis of the general nervous centers, due to a diseased portion of the lower spine, or it may be due to the disease of the nutrition or circulation of the limb. Sometimes the nerve centers are diseased, and thus the nutrition of the limb may be impaired without any other distressing symptoms. Some of the blood vessels may be diseased or occluded, so that the proper amount of nutrition is not furnished. Whatever these causes may be, the method of treatment that will improve the nutrition of the limb is indicated.

Exercise is of paramount importance, as it is a well-known fact that the normal stimulus for nutrition in any part of the body is exercise. If the patient is not able to exercise very much in walking, it is always best to give more or less passive exercise to the limb, such as rubbing and special massages, in which the deep muscles of the leg are manipulated as well as the superficial. Occasional fomentations will be beneficial. Electricity is also a very potent remedy in stimulating the vital processes of nutrition, and is especially adapted if there is an element of paralysis in the case.

33. ARE TEA AND COFFEE FOODS?

Are tea and coffee in any sense considered a food?

No. It may be generally thought that tea and coffee enter into the structure of the body as food elements; but such is not the case. Tea and coffee pass into the body, have their influence as a stimulant on the system, and are then eliminated. The active principle in tea is theine, and in coffee, caffeine. Both of these are stimulants and poisonous in every sense of the word; and, consequently, have a very deleterious effect on the nervous system, which will be felt sooner or later.

W. H. M.



A SOUND BODY. NO. 6.

BY A. J. SANDERSON, M. D.

THE BLOOD.

HAVING made a complete circuit through the system by the path of the circulation, and briefly noticed some of the features of its organs, we will next consider the blood, the material with which we have been traveling.

The blood is a fluid tissue, of which all other tissues of the body are built up and sustained. It has been aptly described by Claude Bernard as an internal medium which acts as a "go between," or medium of exchange, for the outer world and the tissues. For this purpose it goes everywhere in the system. It is so universally present that a pin cannot pierce the skin but it enters its channels and draws from its store.

The appearance of blood is familiar to all. Upon analysis, however, it is not merely the homogeneous red fluid that it seems to be, but we find it made up of a liquid portion, in which are floating a multitude of little cells, the blood corpuscles.

About seventy-nine per cent of its volume is water. This so dilutes the essential elements that they can readily pass the minute channels and reach every tissue. We can readily see that the blood must change its character as it circulates. It gives up different elements as they are needed by the tissues, and receives from them a corresponding supply of waste. In this way the color changes from the bright red in the arteries, due to fresh oxygen, to the dark purple of the veins, where it is loaded with carbonic acid gas.

The blood corpuscles are of two kinds, the red and the white. Recent investigations have shown a third variety. They are so numerous that their volume equals over one-third of the blood. The

red are the smallest, having a diameter of $\frac{1}{3200}$ of an inch. They are only about one-fourth that thickness, being flat, or rather bi-concave, making them disc shaped. Their number can be appreciated when we realize that there are more than three millions of them in a small drop of blood. They act as carriers of oxygen from the lungs to the tissues, and also aid in bringing back the carbonic acid gas. They are supposed to have their origin in the marrow of bone, and some have thought from the spleen, and by transition from the white corpuscles. They are very busy bodies, and, consequently, short lived. In a few weeks they get old, break down, and are taken out of the circulation by the liver and spleen. The white cells are larger, but less numerous, there being in health only one for every three to five hundred of the red. Their usual shape is spherical, but that often changes. They are supposed to hold some office in repairing the tissues, as in case of injury they flock to the place in great numbers. One peculiarity with them is the way they get about. Sometimes they will send out an arm from their soft texture, and then the whole body will move to the other end of the arm. In this way they often get through the walls of the capillaries.

When moving about in the circulation they come in contact with any foreign particle, the latter will stick to its wall and the cell will gradually envelop it—eat it up as it were. In this way they act as scavengers in the blood. And it is claimed by some that they devour many germs, and thus protect the body against disease.

The liquid portions of the blood contain the nutritious elements, principally the albumen, that forms from ten to twelve per cent of it. It also has small quantities of fat, sugar, and different salts. From these it is the unseen hand of nature that takes the atoms of nutritious elements and locates them in their several places as they are

needed. The process goes on before our eyes continually but we see it not.

The oxygen that is taken to the tissues produces chemical changes there. The carbo-hydrates, such as fat and sugar, are burned, leaving water and carbonic acid gas. As a result heat and energy are liberated.

The elements which go to make up the tissues themselves are also acted upon by the oxygen, and after they have served their purpose are changed into urea and other waste products. These, as soon as free, are gathered up by the circulation, which carries them to the excretory organs, principally the lungs, kidneys, and skin.

The source of oxygen we have considered, and in the next number we will talk about the source of our nutrition.

HINTS ON EATING.

"If Senator Plumb's death teaches any lesson," writes Kate Field in *Kate Field's Washington*, "it is that eating and drinking are a science, a knowledge of which is absolutely necessary for the preservation of life, and that incessant work, combined with neglect of hygiene, is suicidal. Hard work does not kill if accompanied by an easily digested diet, with proper distraction after meals. The greatest scientist I know labors from 8 in the morning until 11 at night with little outdoor exercise; but he eats simply and slowly, rarely touches stimulants, never drinks ice water, and lies down whenever he has a spare quarter of an hour. He knows the effect of foods, and never puts into his stomach what it cannot digest."

Miss Field adds that the last time she saw Senator Plumb was in a hotel dining room. "It was past 9 o'clock when this big, strong man hurried to breakfast, after having been at work for three hours. Sitting down with the morning paper in hand, he gave his order while reading, and at one gulp disposed of a glass of ice-water. It gave me a shiver to see this reckless disregard of his stomach, but if I had protested I should have been called a crank. Yet the man who gave no thought to his own diet, had saved his wife's life by putting her in charge of a hygienist.

"Mr. Plumb's breakfast consisted of messes, swallowed without really masticating, and winding up with a glass of milk taken at a gulp. Then he strode off to more work. The spectacle frightened

me, and I wondered how long even his iron physique could endure such a strain."

It is an instance which points the moral for a not unimpressive lesson, and one which is at the very root and foundation of household life. Not only are eating and drinking a science, but a moral science. It is a part of moral responsibility to keep the body in such perfect repair that it may serve as a perfect instrument through which, and by means of which, one may accomplish his appointed work in this world. People do not, of course, live to eat, but they do eat to live.

Yet, as the average eating goes, people do not more than half live. They do not have over half the vital energy to which they are by right entitled. To contemplate the unhygienic quality and the excess of quantity that a very large proportion of people consume, is to be in a state of amazement that they overcome inertia at all, and contrive to accomplish what they do in the world.

The effect of foods should be a subject of careful study by intelligent people—by all people who hold worthy and intelligent ideals of life. The relation of food to achievement is a very near and direct one.—*Pacific Rural Press*.

INSOMNIA AND NERVOUSNESS.

THERE can be no doubt that many persons suffer from insomania (or sleeplessness) which has its origin, or at least its principal strength, in their own nervous apprehension that they are, or are about to be, afflicted with it. Any one of a dozen causes may induce wakefulness, and yet the person lying in bed with the faculties alert at the moment when they would naturally be expected to be wrapped in slumber, has nine times out of ten, or ninety-nine times in a hundred, nothing serious to apprehend.

The stomach may not be in quite its normal condition—and there is no more potent cause of wakefulness. Now an hour—ten minutes even—seems a long time in the middle of the night, when a person wishes to be sleeping and cannot. If a sensation of dread, of apprehension, is allowed to enter the mind, such a period simply becomes interminable. The nervous apprehension increases the difficulty, and, feeding upon itself, the derangement may quite possibly increase till it becomes a dangerous malady.

In such a case the very best treatment, if the

patient has any degree of will power, is simply to pay no attention to the fact of wakefulness.

Make no effort to court slumber, either by counting, repeating the alphabet, or imagining any monotonous thing. Keep the mind away from any business or domestic perplexity, but let it roam in full wakefulness where it will, among pleasant things, old associations, the friendships of the past and present—anything that is not of a disagreeable nature. As the physical or nervous system recovers its balance, or as the stomach becomes master of its complications, slumber will come along, searching for the individual, and the morning will find the night's rest quite satisfying, after all. *Drugs and dosing are out of place; they merely aggravate and fasten the necessity for their own use.* A simple bath, if no more than of the face, hands, and feet, is helpful, especially if followed by a generous rubbing with a dry towel, which will equalize and invigorate the circulation. If there is chronic trouble with the stomach, that may properly receive medical attention; when the disordered condition is remedied, the wakefulness, which was simply a symptom and not a part of the disease, will take care of itself.—*Good Housekeeping.*

HEART DEPRESSENTS.

BY A. J. SANDERSON, M. D.

AMONG the vital organs of the body the heart stands closely related to all that pertains to the welfare of the man. As far as nutrition is concerned, it is the means upon which every atom in the body depends for receiving that which has been prepared for it. As to its nerve relations, it is intimately connected with both mind and body.

No other organ can be abused or disabled but that the heart feels it; and no mind can become morbid but what the same influence is felt at life's fountain. Hence if we would keep the heart in good condition, we must recognize nature's laws as they relate to the whole being.

The function of the heart is under the control of different nerves. Those that keep up the immediate action of the organ, called the nerves of organic life, come from centers that are located in and near the heart itself. These belong to the sympathetic system. The higher centers in the brain sustain these and control them much as the governor does the engine. This delicate nerve arrangement is closely associated with that of other

organs, especially the stomach, which receives its supply from the brain by the same nerve.

The many things that have a depressing influence on the heart might all together be considered as the results of intemperance. So that if all men were perfectly temperate, there would be much less of heart breaking and of heart failure than at the present time. Temperance in eating and drinking requires abstinence from all things that do not either directly or indirectly act as a food to the body, and an appropriate use of all that do act as such. It also requires regularity and fitness in all other habits of life. Abstinence from alcoholic drinks, tobacco, teas, coffee, etc., comes under the first demands of temperance. These are often taken for a supposed stimulating effect, though perhaps in truth more to gratify appetite. But let us see what is their real action in the system. Alcohol is an irritant to some tissues, and as such acts as a stimulus, whipping up the circulation when it first reaches it, but once absorbed it acts as a poison. Its toxic effect is first seen on the higher nerve centers, producing intoxication.

We have observed that one office of these higher nerve centers is to regulate the heart's action. But when these are paralyzed by intoxicants, the heart, left to itself and being further irritated by the alcohol in the blood, tends to great irregularity. Anyone can see the folly of trying to stimulate in this way. One might as well take off the governor from a poor engine thinking to get more speed and better time out of the engine.

This is only one way in which alcohol depresses the heart. One that is alike injurious comes from the amount of oxygen that it uses up in its changes in the system, thus leaving the tissues without proper supply, resulting in a load of partially oxidized material in the blood, that greatly impedes the circulation and clogs the excretory organs. Tobacco, as has been noticed in a recent number of our JOURNAL has a similar effect. And many hearts that have been subjected to its influence for a long time get into a depressed condition. The very common "tobacco heart" sometimes results seriously. Teas and coffee must be considered under the same head. Their active principles, theine and caffeine, which they always contain, have a decided toxic effect on the nervous system.

The stomach and heart, as we have seen, are closely related by nerve influence. The many disorders of digestion are therefore depressing to the

heart, and often give rise to palpitation and other feelings of discomfort about that organ. If one would avoid these, he must not abuse the stomach. Again, as the heart is the propelling force of the circulation, anything which impedes the latter places upon it extra work. We have already noticed what influence alcohol has in this direction. Overeating or eating excessively on one kind of food results in placing a similar burden on the circulation. A lack of the proper amount of oxygen by leaving unchanged in the tissues worn-out effete matter, places a barrier in the way of circulation. Hence the necessity of the free use of the lungs and abundant supply of fresh air.

Exercise too is important to a good circulation, but exercise carried to excess brings a nervous depression that is quickly felt by the heart. We would not forget as adjunct to a normal circulation, proper and even clothing of the body. Let not the extremities, by a lack of their portion, be deprived of body temperature.

Intemperance in work, a lack of sleep, or a prolonged strain upon any function of the body, lowers nerve force and depresses the heart.

Lastly, we would mention worry and trouble as among the most depressing influences the heart has to meet. The connection is very intimate between the nerve centers involved in mental activity and those which regulate the various organs of the system, and the influence of one upon the other is powerful and doubtless mutual. This being the case, how important that the cause for ills of the body should not exist in the mind, and that the common everyday worry of many, that is depressing to both mind and body, should be laid aside. This alone might save many a case of troublesome heart disease.

A COMMON SIN.

It is one of the most disastrous effects of the medieval misconception and degeneration of the body that men and women abuse and misuse their bodies without any sense of criminality. There never was a worse heresy than the shame put upon God's glorious handiwork by a shallow and inadequate conception of the nature and universality of the divine; it has led to all kinds of mischievous errors and to all manner of violent reactions. Not until men comprehend that the body is a divine creation can they rightly value the spirit. The body shares the sanctity of the spirit. A broken

world, touched here and there fitfully and provisionally by the divine influence, is no longer credible to thoughtful men. If there is a God, the entire universe is his work, and every aspect of life is a revelation of him, and there is nothing unholy or unclean unless men choose to make it so. But it is difficult to make this evident truth real to men and women still saturated with the medieval atheistic view of the body. There are many who would lose a right arm sooner than violate a law of the spirit who constantly violate the law of the body. Ignorance of the laws of physical life was not long since so universal and so dense that there was, if not an excuse, an explanation of this anomaly of conscientious obedience to one set of divine laws and flagrant violation of another set. In these days, however, no intelligent person can plead ignorance as a justification of disobedience. Knowledge of the conditions of bodily well-being is accessible to everyone.

What is now needed is the education of the conscience to the point of realizing that a sin against the body is a sin against the soul, and that to misuse or abuse the body is to commit a sin as heinous as theft or falsehood. The man or woman who goes on working to the point of breaking down, in face of knowledge and experience, is guilty of a grave sin against the Maker of the body. It is not a matter of personal loss only, a piece of individual folly to be paid for only by well-deserved individual suffering; it is an act of gross impiety which betrays mental dullness and moral obtuseness. It is high time that these crimes against the body, so prevalent in our times, should be called by their right names. They are sins as distinctly as the grosser offenses against good morals. The man or woman who, in face of those notifications which the abuse of the body always gives, persists in driving the physical forces to the breaking point is a lawbreaker in the sight of God, and the terrible physical penalties which follow attest the divine wrath against the moral anarchist.

It is sometimes necessary to sacrifice the body by the slow martyrdom of overwork, as it is sometimes to give one's life in a swift and noble sacrifice; but the vast majority of those who overwork are not martyrs; they are deliberate and persistent violators of their own natures. In most cases, it is no exaggeration to say, nervous prostration is the physical penalty of a moral offense.

The man who drives recklessly over the precipice opening in his path is not more foolish or more criminal than the man who keeps on the road of overwork after the danger signals have begun to multiply. The waste of spiritual and moral force through overwork is incalculable; for the mind and the spirit are the real sufferers when the body ceases to keep them in harmonious relation to the word, and to furnish them with a superb instrument for work and growth. There could be no greater vandalism than breaking the pieces of a noble organ and wrecking its keyboard; but the man who destroys the sanctity and harmony of his body adds to vandalism sacrilege; he lays his hand on the only real temple of God in the world.—*Christian Union.*

OXYGEN AND PURE WATER FOR HEALTH.

IN a lecture on the advantages of vegetarianism in malarial climates, by Dr. J. H. Kellogg, he speaks of the necessity of an abundance of oxygen and pure water to insure good health.

There are no purifying agents for the blood like pure air and pure water. Oxygen is a general house cleaner; it saturates the blood, and thus reaches every part of the system, while water is just as good and necessary for cleansing the tissues on the inside of the body as it is for keeping the outside of the body clean. The notion that many people have of purifying the blood by putting something into it is absurd—as though impure substances could have any purifying effect. Would soiled clothing be much improved by being washed in a decoction of burdock root or sarsaparilla? Let one with blue lips and pallid face start out briskly for a run, and in a short time he comes in with rosy lips, bright eyes, and an altogether different countenance. The oxygen which he has been taking in has served to wash out the effete matter and burn it up, and he is a new man. Then take plenty of exercise in the open air, live in well-ventilated rooms, eat simple, wholesome food, and drink freely of pure water, and you will need no other blood purifier.—*Scientific American.*

THE VALUE OF FIGS.

ONE of the Persian kings caused the celebrated Attic figs to be set before him whenever he dined, for one reason to remind him that the land where they grew was not yet his, and that, instead of re-

ceiving the fruit as a tribute, he was obliged to buy it from abroad; and, for another, that it was not only the emblem of health, but the most wholesome fruit grown. The fig is now pretty well known to be, especially at certain seasons, almost the common food of the Italian people; and for months they may be said to live entirely upon them. It is not the superfluous, the luxurious; and thus, as Dr. Nichols says, it is not only possible for a man to live upon figs, but that, sitting under his own vine and fig tree, a man would have plenty of food and no landlord.

When eaten fresh, they are a medicine as well as food, and they who eat them freely need no potions and no aperients. Full of nutrition, and all those properties that make it valuable as an article of diet, we are confident that the fig will take a prominent position in the estimation of all who work for and believe in food reform. For myself, I would simply add that, again and again, without liquid of any kind, the luscious green fig, eaten with whole-meal bread, has formed a dish at once simple but rich, and, like the Spaniard's salad, fit for a king.

The fig is not only very popular, but it is the most ancient fruit we cultivate. In many countries the failure of this crop also means starvation and famine. Travelers in Asia Minor and Southern Europe provide themselves with figs and olives as provisions for long journeys, and not only live, but grow fat on the diet. The fig has more medicinal properties and more nutriment than any other fruit, with the exception of the olive.—*Sci.*

HOW MUCH WE EAT.—A clever Frenchman has been making an estimate of the amount of food eaten by an individual during a lifetime. He finds that a person who lives seventy years consumes a quantity of food which would fill twenty ordinary freight cars. A person who is a "good eater" may require, however, as many as thirty cars to carry the supplies for his inner man; but those who are always hungry, whose stomachs never seem to be filled so full that they cannot receive additional supplies, would probably require a special train, and a special engine to haul it, to represent the total amount consumed in a period of seventy years.

"THERE are many who would take better care of the body if they realized that it is a religious duty to do so."



TOBACCO USING LONG AGO.

IT is interesting to note that, while the use of tobacco to-day is almost universal, and highly appreciated by almost every class of society, and the pleasures of it are allowed to cover up the fact that the weed is poisonous and the practice of its use is a baneful one, nevertheless its early use was almost as universally questioned as it is now received. This is shown by a clipping from the *Science of Health*, and illustrates that the weed has grown into general favor in very much the same way as Pope said sin was received:—

“Vice is a monster of so frightful mien
As, to be hated, needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.”

“How smoking was regarded by Christian and Mohammedan authorities at one time, is seen in the following: The sultans and priests of Turkey in the seventeenth century stigmatized smoking as a crime punishable by the most barbarous of deaths; and Michael Federowitz, czar of Russia, executed without trial those of his subjects who were guilty of the practice. The popes Urban VIII. and Innocent XI. fulminated against smoking all the thunders of the Roman Catholic Church; and in Persia smokers were treated as criminals. King John, of Abyssinia, decreed that anyone discovered smoking in his dominions should be deprived of his lips by the public executioner. In Morocco persons disobeying the decree of the sultan which prohibits smoking, are imprisoned and flogged through the streets. Mahomet IV. had a hole bored in the noses of culprits, and a pipe introduced across the face. The Parliament of Paris proscribed tobacco. Queen Elizabeth, of Spain, authorized the confiscation, for the benefit of the church, of all the snuff boxes. Richelieu did better than that—he put a tax on it.”

W. H. M.

MAN.

BY ELDER G. K. OWEN.

IT has been said that “the proper study of mankind is man.” If this be true, the most important branch of his education is generally the most neglected; and whether true or not, it is a study of which he has ever present and constant opportunities.

RELATIONS.

As man looks down the scale of life through all its divisions and subdivisions, he finds himself standing at the head of the animal kingdom. While claiming the right to rule over and trample down the almost infinite varieties of his fellow-creatures, he often inflicts the greatest injuries upon his own species; and, in many cases, the most unceasing and lifelong abuse upon himself. Looking downward, he seems naturally to regard himself as the highest order of beings in the universe, responsible only to himself for his actions, and worthy of the respect and service of all other creatures. But when he lifts his eyes to the heavens, how his spirit sinks into the valley of humility, as the thought flashes through his mind that some of these numberless shining worlds above may be inhabited by beings of intelligence and power as far superior to him as he is above the most humble creature on this earth. David seems almost overwhelmed with a sense of man's insignificance, as he gazes into the upper deep. In Ps. 8: 3-5 he says:—

“When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; what is man, that thou art mindful of him? and the son of man, that thou visitest him? For thou hast made him a little lower than the angels, and hast crowned him with glory and honor. Thou madest him to have

dominion over the works of thy hands; thou hast put all things under his feet; all sheep and oxen, yea, and the beasts of the field; the fowl of the air, and the fish of the sea, and whatsoever passeth through the paths of the seas."

Here we find man's relationship declared in few words, placing him at the head of the Creator's works on this earth, but "a little lower than the angels." Of the glory and honor with which man was crowned before the fall, we are not very well prepared to speak; but to some of Adam's race this glory will be revealed in the future.

ENDOWMENTS.

The natural *attitude* of man is more noble than that of any other creature on the earth. To be convinced of this fact, anyone need only to imagine, for a moment, a man assuming the attitude of any other animal. Nor could less be said of the *symmetry* of the human form. David's heart was filled with praise to his Creator while reflecting upon the wonderful mechanism of the human body. In Ps. 139:14 he says: "I will praise thee; for I am fearfully and wonderfully made; marvelous are thy works; and that my soul knoweth right well." When we carefully reflect upon the skill with which the hand, the eye, the ear, the brain, and the vocal organs can be taught to do their work, we can begin to appreciate the thought with which this psalm is inspired. Perhaps the most sublime and solemn thought concerning this wonderful piece of mechanism is that it is designed to be the temple of the Spirit of the divine Architect; as we learn from 1 Cor. 3:16: "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you?"

ORIGIN.

Human theories of the origin of man, such as the Darwinian theory, are not worthy of our time and attention, as none of them account for the origin of life. No other explanation is worthy to be compared with the one in Gen. 2:7: "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." This record is in harmony with the highest developments of science, although it goes beyond them. Man is a material being, formed originally of the dust. The word "dust" may here refer to matter in its finest condition, even to

the ultimate atoms of which all the matter in the universe is composed. These atoms may be all exactly alike; different kinds of matter (even those kinds that are considered elementary) differing only on account of their arrangement, and the manner in which they are held together by force. According to the Bible record the Being who, by his unlimited force, controls all the matter in the universe, and molds and fashions according to his will, took some of these atoms and arranged them in such harmony with the highest pattern in the universe, that man is said, in Gen. 1:27, to be made in the image of his Creator. In all the infinite variety of ways in which matter is arranged, we find life only in connection with *organized* matter. The manifestation of life seems to commence with the lowest form of organization, and to increase with its advancement, the most perfect manifestation of life being connected with the highest development of organization.

Matter in its lowest form of organization appears as a sort of jelly-like substance, called protoplasm, in which there is a faint manifestation of life; and the biography of some species of the animal kingdom goes but little beyond this, as the amœba, the jelly-fish, etc. In all the classes of animals of a higher order this protoplasm is formed into cells and the cells are arranged in various ways, so as to form the several kinds of building material, or

ANATOMICAL ELEMENTS

of which the body is composed, namely, the *fibrous* tissue (white and yellow), the *adipose* (or fatty) tissue, the *osseous* (or bony) tissue, the *cartilaginous* tissue, the *nervous* tissue, and the *muscular* tissue. Of these different kinds of building material are formed all the

ORGANIC SYSTEMS,

bony, muscular, nervous, sensorial, circulatory, respiratory, digestive, excretory, etc. Each one of these systems, or sets of organs, when in its normal condition, is so wonderfully constructed and so marvelously adapted to the kind of work for which it is designed, that their many voices seem to blend in perfect harmony in David's song of praise:—

"I will praise thee;

For I am fearfully and wonderfully made."

Ps. 139:14.

"Bless the Lord, O my soul;

And all that is within me,

Bless his holy name." Ps. 103:1.

In the future we may present further thoughts on "Man," showing on what conditions, as a physical being, his life may be a perpetual anthem of praise to the Author of his being.

Angel's Camp, Calaveras Co., Cal.

ACTION OF ALCOHOL ON THE BOWELS.

JUST outside of the stomach the bowels begin with a somewhat larger circumference than is peculiar to the intestines proper. This larger circumference is about twelve inches long and is technically known as the *duodenum*. It might properly be called the second stomach, for in it digestion takes place of the fats, oils, and cheese particles of food, and such of the starchy foods as have escaped perfect digestion by the saliva. This second stomach digestion is accomplished by natural chemical elements contained in the bile secreted by the liver and by the more important pancreatic juice, which is secreted by the pancreas, the active principle of which is known as *pancreatin*.

These digestive agents break up the food particles into an emulsion, in which form it passes along the intestines, from which it is sucked up by thousands of minute mouths which open into and line the intestines.

This emulsified food, when thus sucked up, is received into the venous blood current, which drains towards and into the liver. The great portal vein enters the liver loaded with liquid food; here the vein breaks up into many subdivided branches which carry the blood to hundreds of cells, in which it receives a treatment of purification before it is again gathered up by the branches of the great hepatic vein, which carries it onward to the heart, from which it is pumped through the lungs and back to the heart in a still more purified state, and now in condition to be again sent forward through the arteries to supply nutrition and nourish the body.

Throughout the whole course of the intestines, portal vein, liver, hepatic vein, heart, lungs, and arteries, and their minute extremities, there are nerves of motion and sensation.

Upon the natural, healthy, unimpeded action of this nervous system depend perfect digestion, purification, assimilation, and nutritive action of food.

My experiments upon myself and my observation of those who came under my care, together with the recorded experiments of scientists here and abroad, all go to prove that alcohol seriously

delays bowel digestion, portal circulation, liver purification, and circulation of blood beyond the liver through the heart, lungs, veins, and arteries. The actors being intoxicated, and half paralyzed, play their parts badly, and the whole performance fails to go on correctly.

One of the most serious influences of alcohol in the intestines is to cause constipation, retention of effete matter, and consequently fecal poisoning. The headaches from constipation are most severe, and acute indigestion, or biliousness as it is called, arises very frequently from this cause. Fecal poisoning causes more illness and everyday ailments than all other causes put together, and alcohol is one of the most active agencies of this condition. The stomach and bowels are crowded with food, which lies dormant by reason of the interrupted natural action of digestive elements, and the narcotic influence of the alcohol has depressed nervous vitality, so that there is an absence of proper muscular movement to carry on the motion incident to natural digestion. This dormant condition of the bowels, the presence of the undigested food, soon results in fermentation and poisonous gases, irritations are set up, followed by great discomfort and pain, either in the stomach or bowels, or at some other part of the body by the reflex irritation upon a distant nerve. Relief from this distressing condition can only be had by expulsion of the mass of impurity from the body and the allaying of nervous irritation which has been caused by alcohol. This treatment should be followed by mild and soothing food, so that nervous prostration may be relieved and normal digestion reestablished.

CONCLUSION.—Alcohol partially paralyzes intestinal digestion, clogs and dulls portal vein circulation, causing piles, constipation, headaches, fecal poisoning, and intestinal inflammation, which frequently results in death. Alcohol partially paralyzes the functional action of the liver, thickens its membranous formation, clogs up its cells, hardens and enlarges it, causing inflammation, which brings the sufferer to death's door, and often succeeds in carrying him through it. Alcohol dulls the blood circulation after it leaves the liver on its way to the heart; it excites the nervous vitality of the heart, so that it labors rapidly and unnaturally. It is very hard work the heart performs in its effort to rid itself of alcohol; alcohol to the heart is first a powerful irritant, the reaction from which is depression. A human heart that has pumped alcohol-poisoned blood, drops down weary and tired with the struggle, and for days after the alcohol has been eliminated from the body, works on faithfully but with weakened force. The recuperative ability of the heart is remarkable; it will rally from a great many alcoholic fights, but there comes a time sooner or later when its natural power is permanently damaged, never to be restored.—*Alcoholism, Its Cause and Cure*, by "Joe Brown" Doctor.



IF MOTHER WOULD LISTEN.

BY MARGARET E. SANGSTER.

IF mother would listen to me, dears,
 She would freshen that faded gown,
 She would sometimes take an hour's rest,
 And sometimes a trip to town.
 And it shouldn't be all for the children,
 The fun and the cheer and the play;
 With the patient droop on the tired mouth,
 And the, "Mother has had her day!"

True, mother has had her day, dears,
 When you were her babies three,
 And she stepped about the farm and the house
 As busy as ever a bee.
 When she rocked you all to sleep, dears,
 And sent you all to school,
 And wore herself out, and did without,
 And lived by the golden rule.

And so your turn has come, dears.
 Her hair is growing white,
 And her eyes are gaining the far-away look
 That peers beyond the night.
 One of these days in the morning
 Mother will not be here;
 She will fade away into silence,
 The mother so true and dear.

Then what will you do in the daylight,
 And what in the gloaming dim;
 And father, tired, lonesome then,
 Pray, what will you do for him?
 If you want to keep your mother,
 You must make her rest to-day;
 Must give her a share in the frolic,
 And draw her into the play.

And, if mother would listen to me, dears,
 She'd buy her a gown of silk,
 With buttons of royal velvet,
 And ruffles as white as milk.
 And she'd let you do the trotting,
 While she sat still in her chair;
 That mother should have it hard all through,
 It strikes me isn't fair.

—*The Interior.*

THE BARTONS AT HOME.

BY MRS. M. J. BAHLER.

A FEW weeks after the return of our friends the Bartons to their pleasant Southern home, they were taking a little walk in the cool of the pleasant autumn eve when they met a neighbor, who asked:—

"Have you heard from Maggie Hyde to-day?"

Both replied in a breath by asking:—

"Is Maggie sick?"

"Haven't you heard?" asked Mrs. Smith, and then answered, "Yes, the doctor says she is in a critical condition. I supposed of course you had heard of it."

"What is the matter?" asked Mrs. Barton, "and where is she?"

"She is at Mr. Miller's, and her trouble is erysipelas. She has been suffering terribly for several days, and yesterday they had a council of doctors, and they said it was a very bad case, and there was little hope of saving her life without taking off the limb. Maggie said she would not consent to have the limb removed. They painted it, but said the chances were sadly against her recovery. I was in hopes you had heard from her to-day."

"We will go right over to see her," said Mr. Barton, and immediately their steps were turned towards Mr. Miller's. It was a humble home, but within its hospitable walls there were kind hearts who were doing all that lay in their power for the relief and comfort of this young lady, who, far away from home, supported herself by serving in families.

They found Maggie suffering much pain, and her leg was greatly swollen from the foot to the knee, and of a dark purple hue. Mr. Barton immediately proposed that Miss Maggie be removed to their home, and that a thorough course

of water treatment be given. To this Maggie gladly assented, and, as the crimson gleams of evening were fading from the sunset sky, a carriage drew up at Mr. Barton's, and Miss Maggie was lifted carefully, in strong arms, and carried to a large easy chair in the pleasant back parlor. While the arrangements for transferring the sick one from Mr. Miller's to Mr. Barton's were going on, Mr. and Mrs. Barton had returned to their home, and made speedy preparations for the treatment.

And now I trust my readers will remember that I am describing actual *home treatment*, where there existed no modern appliances for such work, but simply such things as are found in nearly every humble home. These preparations consisted of a cotton sheet, folded once each way, a light linen towel for the head, two flannel blankets, plenty of cold water, fresh from the well as it was needed, and quick fire, upon which was heated, in the large dishpan, because of its large flat bottom, and hence quick heating capacity, several gallons of water. This was kept on the stove to keep it hot while the treatment was being given.

First the towel wrung from cold water was wound about the patient's head, then one blanket, folded as the sheet had been, was dipped in the hot water and then wrung by the ends, which were kept dry. Thus a better heat was secured than could have been by wringing in the ordinary manner. This hot blanket was quickly wrapped around the inflamed limb (where there is intense inflammation a much greater degree of heat can be borne by the patient than under other conditions), and the dry blanket was folded lengthwise and wrapped over the other to confine the heat.

After five minutes of this application of fomentation the cotton sheet was wrung lightly from cold water, in which it had been lying some time, that it might be thoroughly cooled by the cold water penetrating the fibers, the woolen blankets were removed, and the cold sheet folded quickly and snugly about the limb. This fomentation and cold pack were alternated three times, then the limb was gently wiped dry, and the patient assisted to retire.

But before Mr. and Mrs. Barton left their young friend for the night, they knelt by her bedside and earnestly petitioned that the bless-

ing of the great Healer might rest upon the humble agencies used for her restoration. For the three preceding nights her sufferings had been such that she could not sleep; but so potent was the relief of this one treatment that she was soon sleeping sweetly, and the morning found her condition decidedly improved. For three days, twice a day, the alternate fomentation and cold pack were applied, with a steady gain over the disease, and then Mr. Barton decided to try a hot bath and alternate cold pack. This was accomplished by using the wash boiler, nearly filled with hot water, it being the only available vessel of sufficient depth to cover the diseased part. The cold pack was continued for need of another vessel of sufficient depth to use as a cold bath or plunge. But, crude though their contrivances were for the application of the treatment, success crowned their efforts, and in less than two weeks Maggie pronounced herself well, and insisted upon resuming her work.

But this was not the only good accomplished. In that eight or nine days Maggie learned that there was a more healthful diet than hot biscuits, pork, and coffee for breakfast, and that dinners could be gotten up savory and tasty minus lard pastry, spices, and tea. She learned, further, that proper diet had much to do in the maintenance of a good condition of health, and thus she began a reform which in after days extended to and benefited husband and children. And to-day she looks back with gratitude to those days with her friends the Bartons.

REVERENCE.

BY MRS. Z. E. ADAMS.

THAT it is a sad fact that the Christian people of this professedly Christian nation have been reproached by less enlightened nations for the lack of reverence among us, need not be stated.

How far this is true as compared with other nations may be a question; but that, as a well-informed and enlightened people, we are sadly deficient in this virtue, cannot be denied. Reverence for God and man, who was made in the image of God, seems in a fair way to become wholly extinct. And thus, while much has been said upon the subject, the present condition of

affairs indicates that much remains to be said, or, rather, done. The question then becomes a pertinent one, Wherein lies the cause of all this irreverence? Also, Wherewithal shall we seek for a remedy that will be effectual in bringing about a reform in this matter?

True reverence, like every other good and right principle, is the offspring of true love. True love is heaven born. God is the Author. When man was created in the image of God, he was imbued with the inestimable gift of the pure love of heaven. Oh, that it had always been retained! But when man forfeited his right to the dominion of all things which God had pronounced "very good," he also exchanged the pure gift for the spurious article which now sits enthroned in the hearts of men and women, the world over, claiming to be that element originally bestowed—but which is only a gross counterfeit, and which is responsible for the deplorable condition of affairs now existing, when love for God and divine things, when paternal and maternal love, seem to be fast leaking out of the world, while an unholy sentimentalism is taking its place, and comparatively little being done to check the tide of evil. We are glad, however, that a few faithful C—— and Hannahs have been found—even in this time of indifference to these things—who have lifted a warning voice and lent a helping hand toward staying the tide of evil in this direction, and restoring to the "old paths" the misguided feet who have not been perhaps wholly indifferent to these things, but who have regarded the situation as deplorable, and the work of bringing about a reform too great an undertaking to cope with, or too unpleasant to be desirable. But true love never shuns a task because that task may be fraught with pain and self-denial. Of Christ, in his great undertaking to rescue man from his fallen condition, it is written: "He shall not fail, neither be discouraged, till he hath set judgment in the earth." As professed Christians it is our privilege to be coworkers with Christ in this work, a part of which is to restore that love and reverence for man and his Maker that was designed by a wise Creator and loving Father to exist throughout all ages. That they do not exist is conclusive evidence that that essential element, *love*, is lacking.

As before stated, reverence is the fruit of love.

If, therefore, we would teach our children to reverence God, to reverence parents, we must teach them love. "But," says one, "how shall we do that? I have *tried* and *tried* to teach my children reverence and love for God, and the more I try the more indifferent they seem. I have *compelled* them to attend church, and I have compelled them to pray daily, sometimes even had to punish them to make them pray, and yet they do not seem to realize that God *will* and *must* be revered, and I have told them so often that he would *destroy* them if they don't love him." Dear parent, is it not probable that your *trying to teach* your children these things in *this way*, is just the reason why your efforts are not successful? I believe it may be. Did you say you had *punished* your child to make it pray? Is it punishment to you to have to pray? Do you think such devotion is what God wants? Does your child really think he *must* pray to appease God? What is your conception of God? What can be your child's if such is the impression of your own heart when teaching him and imparting such impressions of God? Oh, it cannot be that you yourself are acquainted *with* him enough to try to teach your children *of* him, for you do not seem to know that "God is love"! And since it is impossible for us to impart to others that which we ourselves are not in possession of, how then can we teach our children to love and reverence—which is the fruit of love—if we ourselves do not know that love? Do we punish our children to compel them to love us? or do we not rather win them by our love for them? And when we truly love, will we not also respect, reverence?—Yes; and it will be a delight, too, instead of a displeasure, a penance fraught with fear; for "there is no fear in love." "Perfect love casteth out fear." "Fear hath torment."

We only want our children to fear us in that sense that love fears; and that is, love us *so much* they fear they might do something that would grieve or offend us. Just so God would have us fear and reverence him.

"But," says another, "how are we to know that God loves us so much that we cannot help loving him in return?" Well, in the first place he has given his word, in which he declares his love for us in the most tender terms, in language which cannot be mistaken or misunderstood. He

proves that love by sacrificing the best gift of heaven—his only Son—for our sakes; he bestows on us all the blessings of this life, and offers life eternal in the kingdom of God,—not because we are worthy, but because he loves us! Dear parents, take his word and read it, look at nature and read *it*, till you *know* that "GOD IS LOVE." Then take your children and tell them what you have learned—tell them that God *loves them*, that Jesus loves them, that angels love them, that all the beautiful things in the world were made for us, for our happiness, that God wants us to be happy; tell them of the city of God with its mansions, with its streets of gold; tell them of the tree of life, of the crystal waters of the river of life, of the never-fading flowers, of the harps and crowns of gold, of the beautiful angels, of the home where sorrow and tears never enter. All, *all* these things, these beautiful things, God has prepared for us because he loves us! Become enthused yourselves with the love of God, and then it will not be difficult to teach your children these things.

Being a mother myself, and having had experience in moulding and training children from infancy to early manhood and womanhood, I recommend no plan that is new and untried, but such as has been tried and proved.

Our children will be just what we make them; in other words, they will be just what we ourselves are; we will invariably see reflected in our children just what we are. Therefore, if we would have our children develop true and right principles and pure motives, we as parents must be in possession of these qualifications, must have them *abiding in us*, must enter into our very makeup. Any amount of teaching by precept—though we heap precept upon precept, and talk continually—if not backed by the power of example, will be in most cases unavailing.

In the hands of the fathers and mothers of the present time lies the great responsibility of determining what the future destiny of millions will be. Will we realize the situation and arouse to action? We mourn that such a sad state of irreverence and infidelity exists; but let us not fold our hands and continue to mourn while idly doing nothing toward staying the tide of affairs which we fain would see counteracted by and by. The important need of the children of our land to-day is more real fatherhood in the home, and

a more enlightened motherhood. Consecrated, enlightened, reverential parentage is the great need of the nation! There is no need that one son or daughter shall fail to take a true man's, a pure woman's, part in all things good. Ruin is not their inheritance under God. Sorrow and disappointment have not been appointed for our portion as parents. God intends that every one of us shall be the spiritual benefactors of our own and others' children, leading them all the way along from birth to regeneration. If we meet the requirements, the promise is our children shall rise up and call us blessed, and not one word of that promise will fail. In God's mind stands an ideal of every human life, and this ideal is the highest possible development of all its faculties, physical, mental, spiritual. To realize this ideal, parents must be coworkers with God, who himself is love, and in love has intrusted to parents in a large measure the carrying out of his plans; on them it greatly depends whether God's ideal of manhood or womanhood shall be realized, or whether, dwarfed by neglect, deformed by sin, it shall become only a maimed, distorted caricature.

Therefore I would impress upon all parents a sense of the solemn responsibility, as well as the glad privilege, which the coming of each child brings to them. Parents, to you is intrusted the work of moulding such a character as will stand the test of the judgment. Begin, then, this solemn, yet grand and noble work, by cooperating with each other and Heaven in taking up the neglected work, not in a mechanical way, but in an intensely earnest way, with your hearts in your work, seeking guidance from that Source that *never fails*. With hearts enraptured with the love of God, turn to your children, that their hearts may be turned to you, and thus directed to Him whom to know is to love and reverence.

Live for your children, live with your children. Live that that you would see reflected *in* your children, and God will bless your efforts, and a harvest of souls in the kingdom of God will be the sure reward.

WHISKY is at the bottom of more trouble than it gets credit for. It is the devil's anesthetic for sorrow and shame, and it plunges the victim into deeper shame. A whisky bottle is generally part of the effects left by a suicide.—*Cumberland Presbyterian.*

Mother's Helper

CONDUCTED BY MRS. H. S. MAXSON, M. D.

THE SECRET OF A HAPPY DAY.

BY MRS. F. R. HAVERGAL.

"The secret of the Lord is with them that fear him."

JUST to let thy Father do
What he will;
Just to know that he is true,
And be still;
Just to follow hour by hour
As he leadeth;
Just to draw the moment's power
As it needeth.
Just to trust him, this is all;
Then the day will surely be
Peaceful, whatsoe'er befall,
Bright and blessed, calm and free.

Just to let him speak to thee
Through his word,
Watching, that his voice may be
Clearly heard.
Just to tell him everything
As it rises,
And at once to him to bring
All surprises.
Just to listen and to stay
Where you cannot miss his voice,
This is all; and thus to-day,
Communing, you shall rejoice.

Just to ask him what to do
All the day,
And to make you quick and true
To obey.

Just to know the needed grace
He bestoweth,
Every bar of time and place
Overfloweth.

Just to take thy orders straight
From the Master's own command;
Blessed day when thus we wait,
Always at our Sovereign's hand.

Just to recollect his love,
Always true;
Always shining from above,

Always new.
Just to recognize its light,
All-enfolding;
Just to claim its present might,
All-upholding.
Just to know it as thine own,
That no power can take away.
Is not this enough alone
For the gladness of the day?
Just to trust, and yet to ask
Guidance still;
Take the training or the task,
As he will;
Just to take the loss or gain,
As he sends it;
Just to take the joy or pain,
As he lends it.
He who formed thee for his praise
Will not miss the gracious aim;
So to-day and all thy days
Shall be moulded for the same.
Just to leave in his dear hand
Little things,
All we cannot understand,
All that stings.
Just to let him take the care
Sorely pressing,
Finding all we let him bear
Changed to blessing.
This is all, and yet the way
Marked by him who loves thee best;
Secret of a happy day,
Secret of his promised rest.

—Selected.

HINTS ON THE TREATMENT OF SUMMER COMPLAINT IN CHILDREN.

THE treatment of diarrhea may be studied under two heads; first, and perhaps the most important, is the prophylactic or preventative treatment. Under this we have to consider habitation, diet, dress, and exercise. A child may be fed and cared for most carefully yet if housed in a poorly

ventilated building with unclean surroundings, it can hardly escape a severe attack of diarrhæa, especially in the summer season. It is absolutely necessary to the proper development and health of every child that it shall freely enjoy pure, fresh air.

Children should be kept out-of-doors a good deal from their earliest infancy. The English have a habit of taking their newborn babes out-of-doors often during the first week of their lives, and we have never seen anything but good result from it. Most happy is that child whose home is in the country, "nearest to nature's heart," but if a child is destined to spend its days of infancy in a town or city, its greatest safety lies in the free use of its parks and suburbs.

To bad feeding perhaps more than to any other one cause can be traced troubles of the digestive organs. This is particularly true of infants so unfortunate as to be subject to the dangers of artificial feeding, but it is true also in a very large degree of those who receive their nourishment from the natural source. Too free indulgence, and, in some cases, any indulgence whatever, on the part of the mother in the use of acid fruits, green vegetables, highly seasoned food, etc., is followed by diarrhæa in nursing infants. Children who have been nourished from the breast and are just beginning to take artificial food are especially subject to this danger. The foolish allowance of fruits and vegetables to children just beginning to eat will be most apt to be followed by an attack of diarrhæa in any season of the year. Articles bearing on the special preparation of food for children of this age will appear in the *JOURNAL* from time to time, so we shall not consider it further at this time.

The dress should always be suited to the weather. A thin flannel should be worn next to the body even in hot weather, and a flannel petticoat by small infants. This last-named garment may be removed on very hot days but should be replaced as soon as the weather becomes cooler again.

Too much long-continued exercise is often the direct cause of serious trouble with the bowels. Children will bear much exercise if broken, as in frolic, but a child of two or three years should never be induced or allowed to take long, tedious walks, as such exercise is frequently a positive cause of diarrhæa.

When the trouble has been established, certain measures may be taken by the mother or nurse which, if applied promptly, will nearly always abort

the trouble. This consists first and foremost in the removal of the cause. This should be sought for under the headings above given. This being removed, it is usually well to administer at once a mild cathartic for the purpose of clearing the bowels of any offending or irritating matter. We would suggest castor oil in dose according to the age of the child, accompanied with four or five drops of paregoric to prevent griping. The diet should, of course, receive prompt attention; if nursing, the diet of the mother should be carefully investigated. The breast should be continued, as a rule, if the child is under twelve months of age, but restricted and followed with a little diluted lime water. If the child is artificially fed, it should be given only boiled milk, or, in some cases, this might be substituted by barley or rice water well cooked, or, in some cases when this does not seem to agree, the white of an egg dissolved in tepid or cool water may be used. Perhaps there is no one means more efficient in the treatment of this trouble than the use of large enemata of water as hot as can be borne, to which a little borax or boracic acid may be added in the proportion of a level tablespoonful to a quart of water. These may be frequently repeated. It will be found that fomentations to the bowels, followed by tepid wet bandages well covered with warm dry flannel for the night, will be a great help in the treatment of this trouble. If the fomentations are applied as warm as can be borne and then gradually heated with each change, the child will be able to bear them quite hot in a short time.

H. S. M.

CHRISTIAN MOTHERHOOD.

BY THEODORE L. CUYLER, D. D.

"His mother made him a little coat." There is a home touch of nature in this "wee" passage from the second chapter of the book of Samuel. Away back in those far-away lands and ages, there was a young wife whom the Lord blessed with an infant son, and her joy was overflowing. "For this child I prayed," exclaimed the devout Hannah, "and the Lord hath given me my petition which I asked of him; therefore also I have lent him to the Lord; and as long as he liveth he shall be lent to the Lord." This solemn vow of consecration was never broken.

Hannah placed her little son Samuel in the care of the high priest Eli in the house of the Lord at

Shiloh. Moreover "his mother made him a little coat," and brought it to him when she came to offer her annual sacrifices. What sort of a garment could the wee tunic or mantle have been? We do not know exactly; but we may believe that so sensible a mother did not degrade her only child into a doll. I wish I could say as much of thousands of Christian parents in these days who overload their children with costly finery. As if God did not make a child beautiful enough without being tortured with the tongs and screws of fashion and disfigured with extravagant upholsterings! This folly strikes through into the child's heart, poisoning it with pride and greed of admiration and vainglory. How can a child be taught humility and frugality and that best of all lessons *self-denial*, while its graceful form is smothered under the artificial trappings of fopperies and frivolities? Self-indulgence is the besetting sin of the church in these days; and one of its seeds is planted early, when a child that has been nominally dedicated to God is degraded into an overdressed doll.

But this little coat which Hannah made for her only boy has a far deeper significance. In the Bible clothing has a figurative meaning; Christianity is spoken of as a vesture, and believers are commanded to "put on Christ," so that whenever they are looked at, their godly character may be as visible as the garments they wear. In heaven the saints are said to be clothed in white raiment, which has been washed to a celestial purity by atoning blood. It is not a mere pun to remind my readers that the word "habit" is used to signify both a bodily dress and also the disposition of the mind towards good or evil. Mothers clothe their children in both senses of the word. They provide the raiment for their bodies, and, in no small degree, the habits for the mind and heart. God puts into your hands, O ye mothers, an unclothed spirit as well as an unclothed infant form. You make for your children the "coats," which no moth can eat or time deface—*the coats of character!* They are the mental and moral garments which your children are likely to wear through their whole lives. When you send your children away to school or college, you send with them and in them the family likeness. And the characters you are weaving for them—stitch by stitch every day—will outlast your lives, and may be worn by your children when they stand before the judgment seat of Christ.

This coat making for your offspring is inevitable and unavoidable. Your children will put on your ways and your habits in spite of you. Your character streams into them—through their eyes and through their ears every hour. What they see you do, they will do. What they hear from you will lodge in their memories, and come out in their conduct. How quick is a child's eye to observe, and how ready is a child's mind to receive indelible impressions! No photographic plate is more sensitive to the images painted on it. As Dr. Bushnell has happily said: "Every sentiment that looks into the little eyes, looks back out of the eyes, and plays in miniature on the countenance." A fright on a parent's face will frighten her child; a smile will kindle into a sunshine on the face which photographs the mother's.

The most effective part of education is really *atmospheric*. You mothers commonly create the earliest and the most influential atmosphere for your children's habits and hearts. The unconscious influence, too, is the most abiding. You may honestly want your boys and girls to be good, pure, truthful, unselfish, lovable—yes, you may sincerely desire them to be genuine Christians, yet your daily influence may be most unconsciously working right in the opposite direction. Your needless irritations irritate them, and sour their dispositions. Your dissimulations make them tricky and deceitful. If your boy is handled harshly or jerked into obedience, he will probably turn out a sulky, obstinate, irritable chap—just what your rude impatience made him. If gossip and scandal form a large part of your table talk, then your children's teeth will be set on edge. If you give your son a dollar for the toy ship and only a dime for a Christian contribution box, you thereby teach him self-indulgence is just ten times as important as charity. You may fancy that the playhouse is a safe school of morals and that the ballroom is a safe school for refinement of manners; but if your daughters shall have learned quite *too many* things in those schools, how will you like the apparel that you made for them? Remember that you are making the coat of character for your children. If you fashion it after a worldly pattern, then they may be poisoned with worldliness; but if you devoutly "seek first for them the kingdom of Christ and his righteousness," and if you draw them by the powerful traction of a lovable, winsome Christian example, then you may hope to see them arrayed in the "beauty of holiness."

Faithful, painstaking, prayerful Hannah! The little coat she made for her boy was a type of the character which he wore when he became the upright judge of Israel. Timothy's little coat of piety outlasted his mother Eunice and his grandmother Lois. . . . If all the ministers in our land were asked to name the most powerful influence which brought them to Christ, the vast majority of us all would trace our conversion back to maternal teachings and example. For one, I can honestly and gratefully say that my good mother's prayers and influence were worth to me more than all the wealth of the Astors and the Rothschilds. The patient, loving hands that wove for us the "little coats" may have crumbled into dust, but the characters that faithful Christian motherhood produces, will live

"When the sun grows cold,
And the stars are old,
And the leaves of the Judgment book unfold."

—Independent.

QUESTION BOX.

1. WHAT can be done for children of five years and upwards who have the habit of wetting the bed during sleep?

Incontinence of urine is a condition which requires tact and discrimination in its treatment. First, the cause should be sought for and removed. Among the common causes of this trouble may be mentioned general muscular debility, reflex irritation from the presence of worms, or retained fecal matter in the lower bowel, neglect to teach the child habits of cleanliness during infancy, allowing the babe, as some mothers do, to remain all night in wet napkins, thus destroying the sense of discomfort, which would act as a stimulus to awaken the child if it had always been kept dry during the night. Another very important, and also too common cause, and one which calls for the most vigilant watch on the part of the parent, is the practice of bad habits. The cause may lie in a disease of the bladder itself, or of the kidneys, or in abnormal conditions of the urine.

All other causes being removed, a search for the last two should be submitted to the care of some skillful physician. If the cause lie in general debility of the nervous and muscular system, it will be evidenced by other conditions of weakness, and demands, first of all, a diet carefully selected for its nutritiousness and digestibility, attention also to exercise, fresh air, and all things which will favor restoration to health.

Tepid sitz and cool sponge baths, rubbings, etc., are indicated. The use of electricity has yielded good results in the treatment of these troubles, but this should be intrusted to the care of a careful physician. When the trouble is the result of habit, as it is in the vast majority of cases, the patient should be required to abstain from all liquids and fresh fruits for several hours before retiring. The bladder and bowels should be thoroughly evacuated, and a tepid bath given. The child should be taken up at regular intervals during the night and required to empty the bladder—having first been aroused sufficiently to know what it is about. Some decided impression must be made upon the mind. A most excellent plan is to subject the patient, if robust, to a cold sitz bath (temp. about 60°). Treated in this way ninety-nine cases out of every hundred will recover in the course of four or six weeks.

2. Is it harmful for a child to sleep with an elderly person? If so, why?

J. H. B.

It is not good hygiene for two persons of any age to sleep together. In countries of the East the double bed is almost unknown, and this, perhaps, is one reason why the people of those countries are so much more hardy than Americans. The processes of absorption and elimination are carried on by the skin and lungs in sleep as well as in waking hours, though perhaps in less degree. The close proximity of two persons sleeping in one bed must of necessity expose each to the danger of absorbing in some degree the poisons eliminated by the other. In children, all the processes of the body being more active than in the adult, this danger is greatly augmented. It has been noted long since that infants put to sleep at once by themselves thrive better than those who sleep nestled in their mother's arms.

PROGRAM FOR MOTHERS' MEETING.

SCRIPTURE reading.*

Prayer.

Reading of paper† or selection (subject "Reverence").

Discussion of subject.

Poem—"The Secret of a Happy Day."

Question box.

Subject for December meeting, "Obedience."

* The following texts are suggestive: Reverence for God, Ps. 89:6, 7; Josh. 5:15. Reverence for parents, Ex. 20:12; Eph. 6:1-3; Prov. 23:22.

† As a selection upon the subject the article "Christian Motherhood," contained in this number, will be found to contain much practical instruction. A valuable leaflet, entitled "Reverence," may be obtained for the sum of two cents by addressing the W. C. T. U., Headquarters, 132 McAllister Street, San Francisco.



CONDUCTED BY MISS LAURA C. BEE AND MRS. C. E. L. JONES.

THE DECORATIVE MANIA.

On the wall hangs a dipper with ribbons all over;
A coal hod begarlanded stands on the floor;
A crazy old teapot with gilt on the cover,
And wreaths of gay clothespins are over the door.

Some household utensil of Mildred's adorning,
Bedecked and bespangled, is found every niche in,
But the hand-painted washboard is missing this morning,
For mamma is using it out in the kitchen.

—*Tribune of Chicago.*

FOOD ELEMENTS.

THE food that we eat is composed of nitrogenous and carbonaceous elements, of a certain amount of waste material, and some salts. The carbonaceous elements are starch, sugar, and fats in their various forms. Starch is the most abundant of these; and in some kinds of vegetables, such as the potato, turnip, and other fleshy roots and tubers, it composes the greater part. We find it in many forms, such as corn starch, beet starch, potato starch, etc., but these are all essentially the same in the sense of food. The starch of vegetables, however, is less easy of digestion than that of fruits, grains, and nuts, since the granules are surrounded with a case of cellulose, which is insoluble in the digestive fluids. This case, however, is ruptured by boiling, and then the starch may be digested. The stems and leaves of many trees contain starch. The pith of the bread tree is composed almost wholly of it. Fruits and grains are largely composed of it, but in the ripening process it is changed to sugar.

There are a number of kinds of sugar,—the vegetable sugars or cane, grape and fruit sugar, the animal sugars or milk, liver and muscle sugar; but the latter sugars are so much less

abundant that they are seldom spoken of. Cane sugar is obtained from the sugar cane, the beet root, and the sap of the maple tree, and is about three times as sweet as any of the other sugars. There is essentially no difference between grape and fruit sugar. They are taken directly into the blood during the digestive process, without being changed by the action of the digestive fluids. All starch is changed into glucose or grape sugar before it can enter the circulation. Cane sugar, however, is not changed by any of the fluids in the digestive process until it enters the intestines, where it is changed and absorbed by the blood; but since it is usually taken with other elements, it often causes them to ferment in the stomach while they are undergoing digestion. Three parts of sugar in a thousand parts of blood is all that is needed. More than this only hinders and overworks the organs of the body. The glucose of commerce, which is used for the manufacture of jellies and similar articles, is made from starch, and, like grape sugar, is only one-third as sweet as cane sugar. Sulphuric acid is used in its manufacture, and this is not always neutralized, so that what remains often injures the stomach. Honey is composed of several different kinds of sugar. It also contains the pollen of poisonous as well as other flowers, and the bee injects formic acid or poison from its poison bag into the honey to preserve it. Much more sugar is used in our cookery, as a rule, than is necessary. The best way to obtain it is through the use of sweet fruits, such as grapes, figs, etc.

Of the animal sugars, we use more of the milk sugar than of other kinds, since, as its name implies, it is always found in milk. Muscle sugar gives the sweet taste to certain forms of

flesh. Horse flesh, which is used in some countries, contains more of this sugar than the flesh of some other animals. Liver sugar is formed in the liver.

Fats are found, both in the animal and vegetable form. In vegetables as well as in milk the particles are very minute, each cell being surrounded by a thin film of casein. In this form it may be easily digested, and does not hinder the digestion of other foods, as it does when used as free fats or oils. For this reason it is much better to use cream in cooking than butter. In the process of churning the globules of fat have been broken, and the fat thus rendered free; and when melted, as is always the case when butter is added to hot foods, the particles of fat surround the starch and albuminous elements and protect them as thoroughly from the action of the digestive fluids as a well-oiled globe protects the foot from water. Since the juices of the mouth and stomach have no effect upon the fat, this food cannot be acted upon until it reaches the small intestine, where the bile emulsifies it, or breaks it up in fine particles, and leaves the other elements free. But these elements should have been mostly digested before they reached the intestines. Butter, if used at all, should be used cold, on cold food. Nature has wisely provided us fat in milk, nuts, and grains, so that in them we may obtain as much as the system requires, and in these foods it is so prepared as to be easily digested, and not to interfere with the digestion of other foods. Nuts, however, have a very firm texture, and should be thoroughly masticated until they are like cream in order to be easily digested. Brazil nuts, coconuts, and peanuts are especially rich in oil; but in the roasting process the oil of the peanut is rendered free to quite an extent, which makes it hard of digestion. Other nuts, also contain quite a large percentage of oil, and some kinds are more easily digested. Where good cream can be obtained, it is, no doubt, the best medium through which to obtain fats, as it is more easily digested than the nuts. Grains contain some fat. Corn meal contains the most of any. The yolk of eggs is quite rich in fats. Thus it may be seen that by the use of these substitutes it is not necessary to use free fats in cookery.

All of the above elements are used in the body

as fuel; that is, they give to it its warmth, its energy, and assist in keeping up all of the vital actions. Besides this, they build up the fatty tissue, which also aids in protecting the body from cold. But the machinery of the body,—the brain, the muscles, the nerves, and all of the highly vitalized parts, are built up by a different element—the nitrogenous. We find this element in a variety of forms. The white of an egg is the most perfect type. We also find it as gluten, which is abundant in wheat, and is found to some extent in rye and barley; as vegetable albumen, in oats, barley, and in small quantities in vegetables; as vegetable casein, which is very abundant in peas, beans, and lentils, and is found in oats. Milk contains a large amount of casein in the animal form; it also contains a very small amount of albumen. The fibrin and albumen of meat belong to the albuminous element.

In order that this class of elements may be of the most benefit to the body, they must be taken in a form in which they will be easily digested. In grains they must be cooked, but this renders other forms of these elements less digestible. For instance, the white of an egg, when cooked hard, is very indigestible; but if taken raw, especially if well beaten, so that the digestive fluids of the stomach can easily permeate it, it is very easily digested. For this reason, the less we cook the white of the egg in our food, the more digestible it is. The yolk of the egg, however, is different, being composed largely of the carbonaceous element; and a somewhat prolonged cooking renders it more easily digested. Alcohol, vinegar, and other articles that are sometimes used with food harden the albuminous element. In the case of meat, it is hardened and rendered indigestible if soaked in salt or brine.

Besides these two classes of elements, the carbonaceous and the nitrogenous, we need a certain amount of waste or bulk, which is found in the cellulose tissue of grains and vegetables, and to a less extent in fruits and nuts. We also need the salts to build up the bony framework of the body. Of these the most important are the phosphates and carbonates of lime. These are found quite abundantly in our food; also other salts to some extent, but of chloride of sodium, or common salt, there is a mere trace.

However, our body does not use these elements in a mineral form; at least they are not so taken in our food, but are partially organized, and can only be found as salts when the food is burned.

In summing up the necessary food elements, then, we find that in order to meet the needs of the body we should take from six to seven parts of the carbonaceous element to every one part of the nitrogenous, and with this, a small amount of salts, and some of the waste elements to give bulk to our food; and also that the more nearly our food at each meal corresponds to this proportion, the better will it meet the needs of the body. However, in this combination we need to know something about the digestive fluids, and also the adaptability of foods to each other in regard to the length of time required in their digestion. But of this we will speak in another article.

L. C. B.

USEFUL RECIPES.

THE following recipes are from "Science in the Kitchen," a new and valuable book on cookery, by Mrs. E. E. Kellogg.

BEAN AND POTATO SOUP.—Soak a half pint of dry white beans overnight. In the morning drain, and put to cook in boiling water. When tender, rub through a colander. Prepare sliced potatoes sufficient to make one quart, cook in as small a quantity of water as possible, rub through a colander, and add to the beans. Add milk or water sufficient to make two quarts, and as much prepared thyme as can be taken on the point of a penknife, with salt to season. Boil a few minutes, add a teacup of thin cream, and serve.

MASHED POTATOES.—Peel and slice potatoes enough to make two quarts. Put into boiling water, and cook until perfectly tender, but not much broken; drain, add salt to taste; turn into a hot earthen dish, and set in the oven for a few minutes to dry. Break up the potatoes with a silver fork; add nearly a cup of cream; beat hard at least five minutes till light and creamy; serve at once, or they will become heavy. If preferred, the potatoes may be rubbed through a hot sieve into a hot plate, or mashed with a potato beetle, but are less light and flaky when mashed with a beetle. If cream for seasoning is not obtainable, a well-beaten egg makes a very good substitute. Use in the proportion of

one egg to about five potatoes. For mashed potatoes, if all utensils and ingredients are heated, the results will be much better.

POTATO PUFF.—Mix a pint of mashed potatoes (cold is just as good if free from lumps) with a half cup of cream and the well-beaten yolk of an egg; salt to taste, and beat till smooth; lastly, stir in the white of the egg beaten to a stiff froth. Pile up in a rocky form on a bright tin dish, and bake in a quick oven until heated throughout and lightly brown. Serve at once.

SCALLOPED TURNIPS.—Prepare and boil whole white turnips until nearly tender; cut into thin slices, lay in an earthen pudding dish, pour over them a white sauce sufficient to cover, made by cooking a tablespoonful of flour in a pint of milk, part cream if preferred, until thickened. Season with salt, sprinkle the top lightly with grated bread crumbs, and bake in a quick oven until rich brown. Place the baking dish on a clean plate, and serve. Rich milk or cream may be used instead of white sauce if preferred.

EGGS AND MACARONI.—Break fifteen whole sticks of macaroni into two-inch lengths, and put to cook in boiling water. While the macaroni is cooking, boil the yolks of four eggs until mealy. The whole egg may be used if cooked so the yolks are mealy and the whites simply jellied, not hardened. When the macaroni is done, drain and put a layer of it, arranged loosely, in the bottom of an earthen pudding dish. Slice the cooked egg yolks, and spread a layer of them over the macaroni. Fill the dish with alternate layers of macaroni and eggs, taking care to have the top layer of macaroni. Pour over the whole a cream sauce prepared as follows: Heat one and three-fourths cups of rich milk to boiling; add one-fourth teaspoonful of salt and one heaping spoonful of flour rubbed smooth in a little cold milk. Cook until thickened, then turn over the macaroni. Sprinkle the top with grated bread crumbs, and brown in a hot oven for eight or ten minutes. Serve hot.

FARINA FRUIT MOULD.—Put a quart of well-sweetened red raspberry juice into the inner cup of a double boiler. Heat to boiling, and stir in four heaping tablespoonfuls of farina, first moistened with a little of the juice. Boil up until thickened, then set into the outer boiler, the water in which should be boiling, and cook for one hour.

Pour into mould previously wet with cold water, and cool. Serve with whipped cream or mock cream. Currant, strawberry, cherry, or black-berry juice may be used instead of raspberry. If water be added to dilute the juice, a little more farina will be needed.

MOCK CREAM.—Heat a pint of fresh, unskimmed milk in a double boiler. When the milk is boiling, stir in two tablespoonfuls of sugar, and two even tablespoonfuls of cornstarch which has first been rubbed smooth in a very little cold milk. Bring just to a boil, stirring constantly. Then pour the hot mixture, a little at a time, beating thoroughly all the while, over the well-beaten white of one egg. Put again into the double boiler, return to the fire, and stir till it thickens to the consistency of cream.

THE "HASTY PUDDING" POET.

AMONG those who paid more or less court to the muses in the early years of American literature was Joel Barlow, who also during his life—which began in 1775 and ended in 1812—figured as a preacher, editor, speculator, politician, and diplomat. His *magnum opus* was the "Columbiad," or the "Vision of Columbus," an epic celebrating the rise of free institutions in America and prefiguring the greatness of the future republic.

Barlow spent the best part of his literary career in the development and elaboration of this poem, and the first edition was printed and bound in sumptuous style. But not all the skill of printers and engravers could relieve the work of its dullness, which like a leaden weight soon dragged it down into the depths of oblivion. The "Columbiad" barely survived its author, and the book is only to be found now, dusty and worm-eaten, on the top shelves of old libraries.

But Barlow wrote another poem, which, though of little value or importance in his own sight, is the only one which keeps his memory green. The novelty of the subject, and the vein of quaint humor which runs through the poem, serve to insure the cantos on "Hasty Pudding" a place in almost every collection of American poetry. It was in an early number of *Harper's Magazine*, where the poem was reproduced and illustrated, that the talker first read the amusing lines. He remembers with what zest and keen delight he read over and over again those appetizing descrip-

tions of that wholesome and nutritious dish. If one had never eaten a hasty pudding he could hardly fail to have a desire awakened within him to taste its sweets after reading Barlow's verse. Among other things, the author does not neglect to give a minute description of the way the pudding should be eaten:—

"First in your bowl the milk abundant take,
Then drop with care along the silver lake
Your flakes of pudding; these at first will hide
Their little bulk beneath the swelling tide;
But when their growing mass no more can sink,
When the soft island looms above the brink,
Then check your hand; you've got the portion due;
So taught our sires, and what they taught is true."
—Selected.

HOW TO KEEP FOOD.

ALL foods should be kept separate from each other.

Keep potatoes and all root vegetables in a box or bin in a dry cellar.

Cranberries may be kept for months in crocks or jars, and covered with water.

Sugar, rice, hominy, farina, oatmeal, and the like, are best kept in bags or boxes in a cool, dry closet.

Milk should be as far as possible separated from other food, and kept clean and cool.

A basket kept on a swinging shelf is the proper receptacle for eggs.

Dried fruits are best kept in bags and hung upon a dry wall, but they may also be well preserved, if properly dried, in boxes.

Apples and oranges keep longest by being wrapped separately in tissue paper and spread out, so as not to touch each other, in a cool, dry place.

Cold cooked vegetables and the like must be covered, if not kept in a wired cupboard, or "safe," as they are called.

All food that is not perfectly sound, that is unripe, that is allowed to decay or accumulate the particles floating in the air, is unwholesome.—*Home Maker.*

ERRATUM.—In the article "Perfect Foods," in this department last month, by some oversight the word "fuse," in the eighth line from the top of the first column page 311, was made to read "pulse," which makes nonsense. Read it "fuse" and the sense is preserved.

STONE or marble hearths should be treated with pumice stone and soap, rinsing carefully afterward.



CONDUCTED BY MRS. H. S. MAXSON, M. D.

TRUE BEAUTY IN DRESS.

In a recent number of the *Jenness Miller Illustrated Monthly*, an article from the pen of Mrs. Miller speaking of the sincerity and suitability in dress is well worth careful reading. While "the life is more than meat, and the body more than raiment," while the grand work given into the hand of woman should be the all-absorbing theme of her existence, the fact remains that it is due ourselves—our greatest physical good—as well as it is due those with whom our lot is cast, that some study and thought should be given the subject of our physical appearance. If the end for which clothing is designed be studied, as well as a fitness in style to the various walks and occupations in life, there would be less disease as the result of improper clothing and far more comfort and beauty in dress.

"The body has a natural beauty of line and expression which sincere dress defines and accentuates. Artificial clothing denies and defies the law until the harmony of contour is lost. It is true that nature is so kind as to do her best to bring other parts of the body into sympathy with the changes ordained season by season, and the figure made by the exaggerations of fashion is often rendered less conspicuously unpleasant by this kindly generosity upon the part of nature in conforming to the general law of change; nevertheless, the fact remains that the highest types of nature and art are only possible when all bodily and mental conditions are studied with a view to the development and preservation of the nobler attributes. Any process which works against the laws of health and symmetrical evolution will disappoint in expression, if not in the first impression upon the eye.

"For example, the closely-corseted figure may be clothed in attractive fabrics, bearing the stamp of

good workmanship, and the first impression will be one of attractiveness, but movement having been restricted at the vital centers, radiation and expression have been lost, and although one may not be able to exactly define what is wanting, she will sense it and perhaps express this instinctive sense in such comments as, 'Stylish but not graceful,' 'Her figure is "woodeny,"' 'She seems so lifeless and stiff,' etc."

In changing from the artificial to the natural mode of dress one cannot hope to look as well at first, on account of the weakness of the muscles of the trunk, the result of long pressure and disease. Grace of form cannot be attained at once, but with care and study of a few of the principles of physical culture, these muscles can soon be developed, the spine strengthened, the drooping shoulders made erect, and the huge hip and unsightly protruding abdomen will disappear. A poise in standing and a carriage in movement will be attained that will be pleasing to see and most refreshing and invigorating to experience.

Doubtless the day is not far distant when woman will recognize her rights and the great aid to the accomplishment of her highest aim in life which will accrue from a proper adaptation of dress to times and seasons. It is not long since a large company of brave shop girls in New York City banded themselves together for mutual support and protection, pledging themselves that on the first rainy day each would appear on the street with dress skirts above the shoe tops. How much more noble to face the criticism of the idle public than to damage health and usefulness for life by standing or sitting all day long with damp skirts and wet ankles! What can be more disgusting than the style which is again imposing itself upon us, that of sweeping the sidewalks with our too long dress skirts? One need but to follow such a woman for

a few blocks and observe what an immense quantity of filth is thus turned over and gathered up by the dress skirts, to fill her with everlasting contempt for the fashion. Again in home service how necessary that the whole body be free and unimpeded in motion. While the drawing room or party dress furnishes ample opportunity for the elaboration of our most artistic designs, it is encouraging to note the change of opinion and practice in this matter among the more cultivated women of our day, and it is not too much to expect that in our generation we may see remarkable changes, not only in the fitness of attire to various occupations but in the general style of dress for all classes.

Canon Kingsley tells us that the first mention of stays that can be found is in the letters of Synesius, bishop of Cyrene, on the Greek coast of Africa, 400 A. D. He tells us how, when he was shipwrecked on a remote part of the coast, he and the rest of the passengers were starving on cockles and limpets; there was among them a slave girl, out of the far East, who had a pinched wasp waist, such as you see on the old Hindu sculptures, and such as you may see on any street in any town. And when the Greek ladies of the neighborhood found her out, they sent for her from house to house, to behold, with astonishment and laughter, this new and prodigious waist, with which it seemed to them impossible for a human being to breathe or live.

He goes on to tell us, this plain-speaking Canon Kingsley, that "in future years, when mankind has learned to obey more strictly those laws of nature and science which are the laws of God, the present fashion of tight lacing will be looked back upon as a contemptible and barbarous superstition, denoting a very low level of civilization in the people who have practiced it." H. S. M.

THE SALT SHIRT.—Dr. R. E. Nelson writes to an exchange as follows: "I read an article some time ago on the remedies for night sweats, in which the writer omits one which I consider as, *par excellence*, the best of any I have ever tried, and which is a 'salt shirt,' prepared by immersing the shirt in a saturated solution of common salt, drying it thoroughly, and having it worn next to the skin on retiring for the night. I have succeeded with this remedy after the failure of all others."—*Selected.*

How to Dress Healthfully.

THE Fashionable Corset and every other device for compressing the waist or any other part of the body, should at once be discarded, as they are the most fruitful sources of consumption, dyspepsia, and the majority of the ills from which women suffer. Suppose the waist does expand a little, the step will be more elastic and graceful, and a general improvement in health will soon result.

What Drags the Life Out of a Woman.

There are other modes of dress that cause serious injury to the delicate organs of the pelvis. The many heavy skirts and undergarments which are hung about the waist, drag down the internal organs of the abdomen, causing them to press heavily upon the contents of the pelvis. Soon the slender ligaments which hold these organs in place give way, and various kinds of displacements and other derangements occur.

Dress reform corrects these abuses, and educates the people in the proper modes of dress. It requires that no part of the clothing should be so confining as to prevent unrestrained movement of every organ and limb. It requires, also, that the feet and limbs shall be as warmly clothed as any other portion of the body.

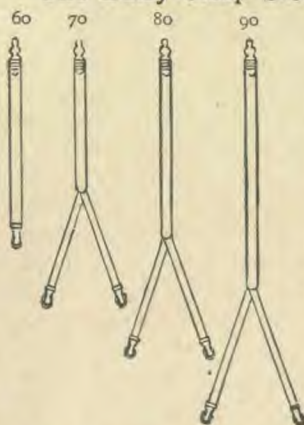
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Garters are another serious source of functural obstruction. Whether elastic or non-elastic, the effect is essentially the same. They interfere with the circulation of the blood in the lower limbs, and often produce varicose veins. Cold feet and headache are the ordinary results of their use. The stockings should always be suspended by being attached to some other garment by means of buttons or a proper suspender.

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RETREAT ITEMS.

—Mr. H. Saxtorph, of Oakland, made us a week's visit recently.

—Mr. W. W. Thompson and wife, of Napa, made us a short call the 18th.

—Mrs. B. F. Holden, of Napa, stopped overnight Wednesday, September 21.

—Dr. Huntington and family, of Oakland, took their leave early in the week.

—D. L. Galletin, of St. Helena, has been taking treatment with us for a short time.

—Elder Wm. Potter, our former chaplain, and wife have arrived from Oregon to take treatment.

—Mr. J. B. Crawford and wife, of Napa, stopped with us a short time the early part of September.

—Mr. Norton, of Napa, has made his wife frequent visits this month. Mrs. Norton is slowly recovering.

—Dr. F. W. Conn, of Napa, made us a few visits during the past month. We are always pleased to see the doctor.

—J. F. Lawson and wife arrived on the 18th inst. from Kansas, Ill. Mrs. Lawson stays to receive treatment for a time.

—Mr. Gillis, of San Francisco, makes his usual weekly visits to the Retreat. Mrs. Gillis and daughter are rapidly improving.

—Elder J. H. Morrison, of Milo, Iowa, arrived on the 18th inst., to assist for a time our overworked superintendent, Elder Fulton.

—Mr. Henry Hatch and daughter, of Los Gatos, arrived on the 5th inst. Mr. Hatch returned home, leaving his daughter for treatment.

—Old friends of the Sanitarium, in the persons of Mr. and Mrs. B. C. Epperson, of Epperson, Colusa County, made us a short visit on the 8th.

—Mrs. W. C. Grainger, of Healdsburg College, came over the middle of September to visit her daughter, Margie, and bring some wards for treatment. Mrs. Grainger is acting as matron for the College Home.

—Mrs. F. Jewitt, of San Francisco, and sister of Miss S. N. Jewitt, an old patient, made the latter a short visit on the 18th.

—The Food Company is still improving their quarters, and some big shipments of crackers have been made the past month.

—Mrs. Judge Crawford and daughter, Allie, of Santa Rosa, have been stopping with us since the 11th of September, taking treatment.

—Mr. C. Solomu, Jr., made a hasty business trip to the Retreat. Mr. Solomu is manager of the San Francisco Steam Pipe Covering Co.

—Mr. J. M. Bassford, of Vacaville, Cal., brought his father to the Retreat, on the 7th inst., for treatment. Mr. Bassford, Sr., returned a few days ago.

—Mr. John Eastwood, of San Jose, after a few weeks' visit with former friends, and invigorated by a short treatment, returned home the latter part of September.

—Mr. and Mrs. F. W. Parker, of Dubuque, Iowa, arrived Wednesday, September 7. Mrs. Parker remains with us for a time, while Mr. Parker pays an occasional visit.

—Mrs. Dr. Lovejoy and her friend, Miss M. D. Wescott, of Oakland, are making the doctor a short visit. The three have been on quite extensive exploring and sight-seeing expeditions.

—F. J. Brainerd, of Oakland, made the Sanitarium and his family a visit. Mr. Brainerd returned to his duties, after a couple of days' visiting, leaving his family till the latter part of the month.

—Mr. J. Canoll, of San Francisco, and a prominent business man of that place, made us a short visit. Mr. Canoll was well pleased with his stay, and much refreshed from the treatments. It is his intention to return soon.

—The opening of the health and temperance institute on the hillside is the most interesting feature of our work. Some one hundred workers are in attendance, and we hope to give a synopsis of their work in our next number.

—We are pleased to report a complete recovery of Mrs. Longnour, of Woodland, who departed with her family on the 24th inst. Mrs. Longnour has been dangerously ill for some time, and took treatment since the latter part of March.

—From the parting between Mr. R. R. Page and his friends, we concluded he was taking his final departure. He returned, however, in a few days to continue his treatment for a short time, returning to his work toward the end of September.

—Mr. N. D. Dutcher, of Livermore, and Mrs. Lowe, his mother-in-law, accompanied by her friend Mrs. Bane, of San Francisco, arrived October 3, and expect to make us an extended visit. Mr. Dutcher is one of our old patients, and all are pleased to greet his smiling countenance.

LITERARY AND OTHER NOTICES.

The *Sanitarian* is one of our best journals devoted to the promotion of the art and science of sanitation, mentally and physically, in all their relations; by the investigation, presentation, and discussion of all subjects in this large do-

main, as related to personal and household hygiene, domicile, soil and climate, food and drink, mental and physical culture, habit and exercise, occupation, vital statistics, sanitary organizations and laws—in short, everything promotive of or in conflict with health, with the purpose of rendering sanitation a popular theme of study and universally practical. Dr. A. U. Bell, editor, Brooklyn, N. Y. Each number contains ninety-six pages text monthly. Subscriptions at any time; \$4.00 a year, in advance; 35 cents a number; sample copies, 20 cents—ten two-cent postage stamps. Published as hitherto, in New York. For sale by news dealers.

The *Ladies' Home Journal* is one of our most enterprising exchanges. Its next issue begins reminiscences of the life of Charles Dickens by his daughter, Mamie Dickens. These articles will be run under the general head of "My Father as I Knew Him." Published at Philadelphia, Pa.

The *Mothers' Nursery Guide* (Babyhood) is one of the best journals for mothers in the country, and is continually growing better. Price, \$2.00 per year. Babyhood Publishing Co., New York.

Among our exchanges we notice the *Household*, published at No. 50 Bronsfield Street, Boston, Mass., price \$1.00 per year. It is full of excellent reading matter for the home circle, and embraces departments for children and mothers, and various hints and well-written articles covering every department of the home life. Among the miscellaneous articles we find a very interesting biography of Harriett, the modern Moses. We hope this journal will find its way into every household.

A model of "Lot's Wife," in salt, will appear at Chicago from the State of Indiana. We wonder if it will look like her. But who can deny that it will not?

California will have to look to her laurels in the matter of variety of woods that will be exhibited at Chicago. New York has decided to exhibit there all trees indigenous to the State, there being at least 43 species and 85 varieties.

A Creole kitchen, with native cooks and waiters, and dishes prepared in Creole style, will be a striking adjunct to the exhibit which Louisiana will make at the World's Fair.

The illustration of the great engineering work of the world will be one of the most interesting features of the Transportation exhibit at the World's Fair. Following the announcement that the large and very perfect model of the Forth bridge has been secured comes the application of the management of the Gothard Railway Company, of Switzerland, for space in which to show a large model or relief map of that road. This will illustrate in the most graphic manner possible the famous St. Gothard tunnel and the manner in which mountain inclines are surmounted by modern engineering science.

At a meeting of the San Francisco World's Fair Association, held September 8, it was decided as the sense of the members present that a relief map of the city of San Francisco, 60 feet in diameter, be prepared for exhibition at Chicago, together with a panoramic view of the city, the estimated cost being between \$10,000 and \$15,000. As no quorum was present definite action was deferred.

In the Minnesota building at the World's Fair will be exhibited the old printing press upon which the first newspaper printed in the State—the *Minnesota Pioneer*—was run off in 1849.

South Dakota will send to Chicago a two-and-one-half story cottage made entirely of minerals.

Fred Krempel, of Santa Ana, is engaged in making a collection of entomological and reptilian specimens for exhibit at the World's Fair. Among the specimens already secured is a large variety of insects, all arranged in their proper classes. The scale and insects that destroy fruit trees and vines will be exhibited, as well as those that prey upon these insects; also a large collection of mollusks which are found upon the Pacific Coast, reptiles and lizards from the hills and plains, and everything connected with the lower orders of animal life. In Mr. Krempel's collection is a large tarantula, which he has so tamed that he can hold it in his hand. Besides the specimens spoken of, he has gathered eggs of fishes, birds, reptiles, etc. He also has ladies' shoes, belts, etc., that he has made from the pelts of snakes, which pelts, he claims, tan a beautiful color and make a durable leather.

PRIZE ESSAYS.

WE are glad to see the many laudable efforts put forth for the enlightenment of mankind on the evils of the use of alcohol, and we therefore gladly give place to the following:—

"The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes:—

"1. One hundred dollars for the best essay on 'The Physical Action of Alcohol, Based on Original Research and Experiment.'

"2. One hundred dollars for the best essay on 'The Non-Alcoholic Treatment of Disease.'

"These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be in typewriting, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read.

"These essays will be the property of the association, and will be published at the discretion of the committee. All essays are to be scientific, and without restrictions as to length, and limited to physicians of this country.

"Address all inquiries to T. D. Crothers, M. D., Secretary of Committee, Hartford, Conn."

A FEW days ago a fishing party started for a two days' camp in the woods. This is the outfit they carried with them: Four quarters of beer, eight quarts of whisky, two loaves of bread. They caught eight small fishes, four colds, and brought back several "jags" and one loaf of bread.—*Little Falls (N. Y.) Paper.*

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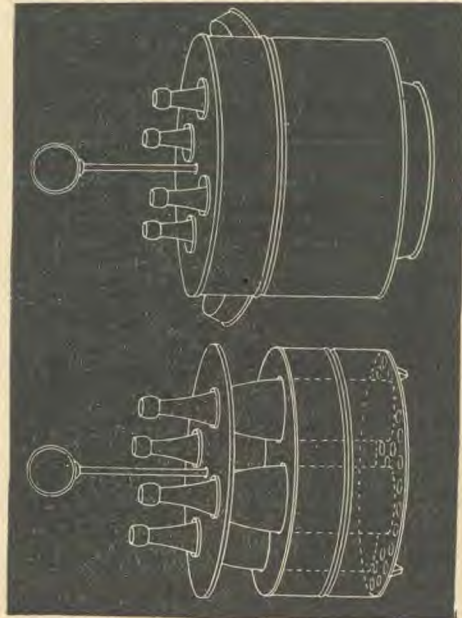
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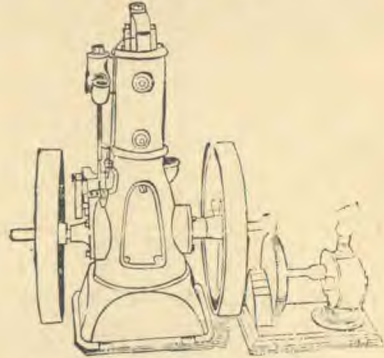
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