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COMING TO THE FRONT.

ELECTRICITY has been a powerful agent ever since the laws of nature were framed. It has been slumbering in its cradle for six thousand years, waiting until the latter part of the nineteenth century for the child of curiosity to awaken this little giant and bid it expand its powers and show to the world what a mysterious yet mighty agency for the promotion of the welfare of the race has been slumbering before them. Surely to-day the world is being aroused over its power and adaptation to the needs of man, making the many-fingered infant a child of wonder. As a mechanical power it is fast superseding many other forms. As a motor we are realizing to-day its wonderful capability, and its machinery is noted for its uniqueness of construction and the ease with which it may be controlled by man. One cannot cease to look with admiration and wonder upon the electric cars as they flit hither and thither through the streets, seemingly imbued with a ensuous animation, obeying the demands of the traveling public.

Power, it matters little whether of steam or water, owing to the perfect electrical devices now at hand, can be transmuted into electricity, carried on wires for miles, and turned into power again with a very low per cent of waste. No doubt the time will soon come when most all the vehicles of public locomotion by rail will be sped from State to State, from Atlantic to Pacific, by means of electricity. It will also be used for motor power in factories and mining as well. The Comstock mines at the present time are preparing to put in an extensive plant, the power being furnished by water sixteen miles below, and transmitted to the extensive machinery of the mines. Indeed, we believe the time is not far distant when the stupendous power of the Niagara will be utilized in this way for various purposes.

Electricity has also been a useful factor in the dissemination of knowledge. In a flash the thoughts of men have been for years transmitted to the various nations of the earth, binding the ideas and feelings of men everywhere into one vein, which in a moment can be measured, weighed, and understood. For lighting purposes it is showing a record *par excellence*, and is superseding all other means in its race to the front.

None the less important from a medical standpoint is its advancement. To-day medical electricity is recognized as one of the most potent means of curing disease. There is no power that can be so easily used to stimulate, develop, and nourish the body, and none so quick and powerful to destroy if necessary. It can be used with great satisfaction in various forms, faradism

galvanism, magneto or thermo electricity, or static electricity. Of all these faradism and galvanism have long been placed upon a substantial basis, and have done much in the promotion of the science and art of healing. Indeed, there are few physicians to-day that are not acquainted with it and do not put into practical use these measures of promoting health. There is certainly no quicker way of restoring lost nerve and muscle power in the various forms of paralysis, or developing organs that have atrophied from various causes, healing ulcerated surfaces of long standing, and destroying fungus growths, than by this wonderful agent that has been so recently intrusted to the use of man. Many cases can be cured permanently in a short time, other things being favorable, under the salutary influence of medical electricity, properly applied. We are sure that those who have made a study of the subject, and have had a personal experience with it, would not think of giving up the use of electricity and relying altogether upon other agents. There certainly can be no better adaptation of means to the desired end than through the agency of medical electricity. It may yet prove a potent means of restoring those who have become unconscious from drowning. While artificial respiration is of prime importance, it can never approach electricity as a natural stimulus, causing the nerve centers to send down their life-giving impulses to the heart and lungs.

An interesting experiment was made a short time ago by a physician in Rhode Island. A man had, to all intents and purposes, been dead for some little time. All other means having been exhausted, the physician thought he was justified, as he truly was, in performing a surgical operation by the use of electricity, to restore, if possible, the dead to life. He had at hand a small, hair-like needle, which he thrust through the walls of the chest into the muscles of the heart; then, by a proper application of the current, he soon succeeded in causing a contraction of the heart, another and another, until it began to show unmistakable signs of regular action; this continued until the man began to show signs of life, and was soon able to sit up and speak. Many new experiments are coming to us day by day, showing that electricity, as a remedial agent, is slowly, but surely, coming to the front.

W. H. M.

EXERCISE AS A REMEDY.

EXERCISE as a remedial agent seems to be growing in general favor year by year. Exercise clubs, gymnasiums, and schools of physical culture, have sprung up in almost every city of importance. A course of systematic wrestling has gained some notoriety in New York City as a means of restoring weak people to health, but we are sure that physical exercise is yet far from reaching its zenith of usefulness in promoting health.

Many invalids seem to think that exercise is not what they want. They feel tired after the exercise, which is a sure proof to them that exercise is adapted only to the healthy ones, or those that can walk or work without fatiguing them. Invalids could not be nurtured into a more pernicious phase of existence from a physiological standpoint. The body was made for exercise, and by virtue of exercise it was endowed with capabilities of improvement and development; and the existence of such capabilities implies the possibility of retrograde changes in the body, the opposite of development, the opposite of vigor and vital power, and admits of a wasting away of the tissues and the lessening of every vital function.

People who are sick often say, Oh, if I could only rest, I would get well! In short, in the common acceptance of the term, they seem to think that rest is a general panacea for almost every ill, and, indeed, in acute cases it is of prime importance; but in most chronic cases a wholesale misconception of the term and the conditions of rest has driven a large majority of the people of to-day, and those, too, not altogether invalids, into a condition of luxury and idleness that is rapidly sapping the system of all vitality.

Ever since the going forth of the decree that man should eat bread by the sweat of his face, the price put upon all true accomplishments of life has been labor, and the price put upon the vitality of the body has been exercise. This is in harmony with the laws governing all matter as well, for everything in nature is in motion, if not as a whole, as truly in part, and life everywhere expresses it. The sun's light comes to us filled with its genial warmth as the result of vibration; the air is purified by sweeping back and forth over the face of the earth;

the purest water is always found in the running, rippling rills. Likewise physical rest is not a cessation of motion or of the vital activities, but a change in such activities that relieves and changes the tension of the body.

A cessation of exercise becomes stagnation, and stagnation brings death. Disease is always preceded by a relaxation and cessation of the vital functions to an extent that admits of morbid functions and the formation of morbid tissues. Hence in chronic cases especially the aim of the remedial agent is to stimulate the depleted functions and waning powers. Where exercise is admissible, it is a natural stimulant more far-reaching in its results and less deleterious in its consequences than any other kind of stimulus to which the body can be subjected. In fact, exercise is the only stimulus that can produce a physical poise of all the vital functions, for the simple reason that its effect is general, and the preservation and development of the body by law depends upon it. Exercise creates a demand upon the body, and the body by law responds to that demand, the result being physical development, and, if carried out on all the physical lines, it may be termed physical culture. It is too true, however, that the most common acceptance of the term "rest" by those who need rest is a stagnation which dwarfs all the vital powers.

The difference between physical rest and physical stagnation is quite aptly illustrated by the following: Two artists were asked to paint pictures embodying the features which would be suggestive of their version of rest. After careful thought one of the artists chose for his design a quiet, limpid lake in the bosom of the mountains, bordered by a rich foliage of trees of various deep shades. Around the water's edge, here and there, the lilies flourished, the mountains were green, and every feature of the place bore the unmistakable evidence of quietude. Scarcely the rustle of the trees or the singing of birds broke the silence. Just the place, many people would say, where, reclining on its banks, one could recuperate health, reclaim wasted powers, and smooth down ruffled and irritable dispositions. The other artist chose a scene far different, it being a high, raging waterfall, where the water, breaking over the rocks, burst into white fragments as it plunged down the abyss,

its dew covering the foliage in its downward sweep, while the deep reverberations of its roar awakened all life to a sense of its stupendousness. Growing out over the chasm was a small tree. Securely in one of its limbs rested a snugly built nest, containing the brood of an energetic dame of the feathered tribe. She flitted back and forth with the necessary food, full of life and interest for the brood, full of activity in the presence of dangers, yet perfectly secure and happy by virtue of her supremacy of the situation.

The pictures were finished, and placed side by side for the admiration of the public. Both were admired, but few could see rest in the latter; and yet in it is physiological rest, while in the former is stagnation. The more one rests in the former the weaker he becomes, and the more he wants to rest. The more he rests in the latter the stronger he becomes, for there is no true rest except in the power to maintain a poise of the body above the obstacles and diseases of life, as well as the counter currents that make life miserable. Thus true rest lies in the power of the body to rise above every condition that weakens the body. These powers come by development, stemming the tide, if you please, until that poise of the body is gained in which is rest.

Our bodies depend upon that which comes to them, as food, air, and water, in a continual stream, flowing and percolating through the meshes of the tissues in every part of the system, giving out nutriment here and there, as the tissues have need, and in turn receiving into the wastes of the body, then passing on and out of the body. This stream passes into the body full of nutriment; and passes out of the body full of the effete matter and wastes of the body. If the stream of supply and discharge is slow and stagnant, the body will become morbid, and the tissues become filled with the débris of their own waste, while, on the other hand, if this stream in and through the body moves like a stream rippling down the hillside, it will give activity and impart life to the tissues, which cannot possibly come from the slow, stagnant stream. Activity is the exponent of life; systematic exercise is the regulator by which the powers of the body may become even in their work, and strong to sustain that poise in life so essential to true rest.

W. H. M.

A FEW WORDS ON VENTILATION.

WE are sure that there is no one cause more prolific of disease, especially of lung disease, than bad ventilation, by which we mean a lack of sufficient quantity of pure air for breathing. While we will not attempt to exhaust the subject, we wish to offer a few plain thoughts for the consideration of our readers.

1. *Pure air.* Of what is it composed? The composition of pure air is seventy-nine parts of nitrogen, with twenty-one parts of oxygen. There is also a mere trace of free carbonic acid gas, or, as it is sometimes called, carbon dioxide, and some other gases, but these are so small in amount as not to be worthy of measurement. Carbonic acid gas should not exist in a proportion of above one part to one thousand. In pure air it is one part to two thousand five hundred. If the air contained less oxygen and more nitrogen, life would soon become extinct. If it contained less nitrogen and more oxygen, it would become inflammable. The real life-supporting element is oxygen, and oxygen supports life by combustion. Air becomes impure generally by becoming impregnated with carbonic acid gas. Of course there are other gases noxious and deleterious, which vitiate the air and render it unfit for breathing; but the chief cause, by far, in this respect is the gas already named, which is deadly to all animal life, although necessary to plant life.

2. *Carbonic Acid Gas.* This gas comes from the decay of animal and vegetable substances, from combustion, and from the breathing or respiration of animals and human beings. There is another poison more deadly than carbonic acid gas exhaled in respiration, a deadly alkaloid recently discovered.

3. *Respiration, or breathing.* Respiration consists of two distinct acts: inspiration, or the inhaling of air; and expiration, or the exhaling. Adults breathe, on an average, about twenty times a minute; children, more rapidly. We speak, of course, of the normal, healthful breathing.

4. *The object of breathing* is (a) to purify the blood, (b) to support combustion and sustain the heat of the body, (c) to give energy and motion.

5. *The blood.* We will not take time to give any lengthy description of the circulation of the blood; that has been given in the articles by Dr. Sanderson. We will simply say here that the blood goes from the heart to the arteries supposedly pure. Its color then is bright red. From

the arteries it is distributed through the capillaries to every part of the body, where it builds up the broken-down tissue, and repairs the work of wear continually going on. From the capillaries it enters the veins, laden with the broken-down matter which it has replaced, which is the result of combustion in the body, and which is saturated, so to speak, with carbonic acid gas. From here on to the heart the blood is a dark maroon. From the heart it is carried to the lungs, where it is purified.

6. *The lungs.* Before the purifying process is described, it will be necessary to say a few words in regard to the lungs. The lungs, as a whole, are composed of numerous little air cells. In a healthful, average pair of lungs these cells are computed to be about 600,000,000. Between these cells run minute little capillary tubes, which carry blood to every part of the lungs. By a wonderfully wise provision of that Being who made us, which we need not try to understand, but which we may, nevertheless, know, the carbonic acid gas in the impure blood brought from the veins passes out into the air in the lungs, and the oxygen from the air in the lungs passes into the blood, changing it from a dark maroon to a bright red color, whence it is carried back to the heart, and from there sent on its mission of life to all parts of the body. Thus will be seen the necessity of inhaling pure air. If the air which we inhale is laden with carbonic acid gas, it certainly follows that the blood will receive but little purification. It will return to the system laden with poison as it came. The amount of carbonic acid gas exhaled in each expiration is said to be about one cubic inch. This renders unfit for breathing so much air as to necessitate the constant supply of one thousand cubic feet of pure air per hour for each adult in order to preserve the very lowest standard of purity tolerated by liberal sanitarians, while some authorities insist that three thousand cubic feet per hour is necessary. Dr. Parkes advises four thousand cubic feet per hour for sick persons.

Some persons have the idea that if a room be large and high no ventilation is necessary, except as a door is opened occasionally for other purposes; but there could be no greater health-destroying fallacy. However, a large room is much better than a small one, as it presents more surface, through which, thanks to more or less imperfect workmanship, the air crawls out and in through the cracks, chinks, and crannies.

A common-sized sleeping room, 10x10x10, contains one thousand cubic feet, enough air to last an adult, supposing there were neither outlet nor inlet (to be liberal we will say) one-half hour. And yet we have seen four persons, two adults and two children, occupy a smaller plastered room than that for nine hours during the night, with neither door nor window opened. No wonder that the man was subject to morning headaches and catarrh; no wonder that the woman was subject to heart difficulty and fainting spells. The blood sent back to the heart by the lungs at every pulse beat was an insult to the organ of life. What wonder also that the children were cross and irritable? They could not be otherwise. With two persons in a room of the above size, the air would fall below the standard of purity in fifteen minutes. With an ordinary lamp in addition, ten minutes would suffice to make it impure. An ordinary gas burner of twenty candle power will consume as much pure air as four adults. Persons who are particular to fastidiousness in drinking from a cup or glass the contents of which another has tasted, will breathe over and over for hours, sometimes, the breaths of ten to four hundred persons, mixed with the exhalations from their bodies caused by perspiration, in all stages of filth, and protest emphatically if anyone else raises a window to let in pure air.

There are three prime requisites in every system of good ventilation: 1. There must be an inlet for the pure air. 2. There must be an outlet for the impure air. 3. There must be a motive force, or some means by which the air is stirred up to act. The wind sometimes furnishes this; sometimes the artificial heat in the rooms creates currents of air; sometimes fans or furnaces are provided for this purpose. Of this the JOURNAL will have more to say some other time, when it hopes to present a good system of ventilation; and, if time permits, we will sometime present a bit of personal experience in learning blindly the value of pure air. In the meantime our readers need not go without this precious boon of the Creator. The world is full of it. Open your windows so as not to make a draft upon its inmates if they are susceptible. If there is but one window in the room, open it at top and bottom. Four inches each at top and bottom are better than sixteen inches at bottom or top alone. Pure air is free, untaxed by tariff; live on it, feast on it. It will do you good and not evil all the days of your life.

M. C. W.

QUERIES.

33. FLATULENCY.

WHAT is good for flatulency of the bowels?

Flatulency is due to a disturbance of the digestive functions, and is a constant symptom in cases of extremely slow digestion. Putrefactive instead of digestive changes take place in the alimentary canal, as a result of which different gases are generated. A diet composed largely of vegetables, especially potatoes, will increase the tendency. Any measures that will improve the digestion and elimination will remedy the trouble. A change of diet is important, and should be recommended. Less vegetables, especially potatoes, and such articles of food as honey and pastries, should be avoided. To live exclusively upon a milk diet for a little time will often bring about a radical change. Fruit will not always be borne in these cases. Take plenty of outdoor exercise, manipulating the bowels daily. A wet bandage worn about the bowels at night will sometimes give relief. These measures, with plenty of sleep, will aid in relieving these distressing symptoms.

34. CURABILITY OF CATARRH.

Can catarrh be cured?

Yes, catarrh can be cured, if all the conditions necessary are complied with, with persistency in carrying out the treatment. In nasal catarrh it is often necessary to have a surgical operation performed in the way of taking out polypi, if any exist, or reducing hypertrophies, as the case may be. Much more can be done in the way of improving the general health, and in taking due care in the manner in which the voice is used. In taking the necessary care in this regard, it may not be necessary to take other treatment, unless there is some special condition to be overcome, in which case it is best to consult a specialist.

35. SUBSTITUTE FOR FLESH FOOD.

What will take the place of meat in one's diet?

The gluten of grain is of the same nature as meat, and, when obtainable, will take the place of meat. It is, in fact, the vegetable meat. Gluten made into thin wafers, and baked in the oven until brittle, just before eating, is very palatable as well as nutritious. The Retreat gluten is highly appreciated, and is fast becoming an article of diet. Peas, beans, and grains also are nitrogenous in their composition, and take the place of meat in a large degree.

W. H. M.



A SOUND BODY. NO. 7.

BY A. J. SANDERSON, M. D.

NUTRITION.

THE chief source of the nutritious elements with which the blood supplies the various needs of the body comes from the products of digestion. Also we might mention nature's economy in using some portions of the material that has once traveled through the system. The lymphatics are a system of vessels that do a work of this kind. They exist in every portion of the body, and by their little open mouths take up whatever surplus fluids they find. The fluid they carry is called lymph. It is composed mostly of water, with some of the waste material of the broken-down tissue, but it also has in it some elements valuable for nutrition, and for this purpose it goes back into the blood again. The lymphatic vessels meet and run into each other until finally most of them form two trunks, which empty into the large veins on the right and left sides of the lower part of the neck. It is through these vessels also that a portion of the digested material is absorbed from the intestines, and thus taken into the circulation. All the nutritive material which they collect comes primarily from the alimentary canal, which we will now proceed to study.

This canal includes the whole digestive tract, and has connected with it the glands that furnish the digestive fluids. First we have the mouth, with the salivary glands; from this the œsophagus leads to the stomach, which performs a very important part of digestion. Below this are the small and large intestines, measuring, in length, twenty-five feet or more. The pancreas and liver are also large glands situated near the stomach, which contribute the products of their secretions

to the intestine. These fluids aid materially in the completion of the work of digestion, which takes place here.

The mouth is prepared for first receiving the food and masticating it so that the digestive juices can freely act upon it. The teeth do this work and thus hold an office that stands importantly related to a sound body. For this purpose nature has provided two sets, and the permanent ones do not grow until the individual comes to years to appreciate their value and learn to take care of them. It is encouraging to note at the present time the increasing interest that is taken in the care and preservation of children's teeth. The teeth are made of durable material, and might last indefinitely, provided they are well cared for and only come in contact with natural food and the alkaline secretion of the mouth. The enamel, that protects the softer and more sensitive structure of the teeth, is very thin and can be easily penetrated by acids, which may either be taken into the mouth or formed there by fermentation of food, etc.; hence the importance of removing particles of food that might remain upon them.

The next conspicuous organ in the mouth is the tongue, the most unruly of all the members of the body. It is made up altogether of strong muscles that have great freedom of motion; it is covered with a mucous membrane. The lower surface of this membrane is of the same character as that which covers the rest of the mouth, but the upper surface is covered with fine projecting points, called papillæ. They vary in size and shape, being the largest at the back part of the tongue. These furnish an appropriate papillæ for the terminals of the nerves of taste, the most acute of which occupy the last-mentioned papillæ, and from their peculiar shape are called taste goblets. These act as little sentinels placed at the entrance of the nutritive system, and, when

they have been educated normally, they play a very important part both in the selection of food and in giving that which has been chosen a pleasant reception and a healthful start on its new mission. With its approval the glands all along the line start merrily about their work. The saliva, or digestive fluid of the mouth, comes mostly from three glands. The parotid is the one that secretes the best quality of the fluid; they are two in number, and situated one on each side of the face, just in front and below the ear. They are connected with the mouth by small tubes or ducts. The structure is much like that of other glands, first being surrounded by a hard fibrous tissue, which so divides portions of it as to make the gland consist of a number of lobes. These are then divided into smaller groups, the lobules, and finally each of these is made of a number of little cell chambers where the fluid is secreted. The other two glands of importance are the sub-maxillary, situated just beneath the lower part of the under jaw, and the sub-lingual, that lies beneath the tongue. These are very active when food is being taken into the mouth, and may be excited even by the smell of savory food. This fluid begins the process of digestion, acting, however, only upon the starchy elements in the food, converting them, in a degree, into sugar, thus giving a sweet taste when the food has been masticated sufficiently long. The fluid is alkaline in its reaction, and continues acting until the food has been in the stomach long enough for the acid of the gastric juice to change the reaction, which is usually from half an hour to an hour. Its influence in the food is produced by the active principle in the saliva, the ptyaline, the presence of which produces the above change upon the starch.

Just back of the mouth is the pharynx, which seems to be the common property of both the alimentary and respiratory tracts. The pharynx opens into the mouth, the back part of the nose, the little tubes that run up to the ears, the larynx, and œsophagus, by which latter opening we will leave to go on our way. The œsophagus connects the pharynx with the stomach; it is lined with mucous membrane and surrounded by two sets of muscular fibers, one set running lengthwise, the other encircling it. Its walls are soft and flexible and lie in contact when not in use. The action of the muscular fibers facilitates the

act of swallowing. The longitudinal ones contracting open and draw up the tube to receive the entering bolus of food, which is forced down by the contraction of the circular muscular fibers behind it. The lowermost fibers, which are much stronger than the others, when the food has entered the stomach, contract firmly and form a barrier against its return.

CONSTIPATION IN YOUNG CHILDREN.

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

WHILE diarrhea is directly the cause of more deaths than constipation, perhaps on the whole the latter condition is productive of as much evil as the former, not to individuals, but to the human race in the aggregate. This is true, first, because it is so widespread, and, not being generally considered by the laity to be a serious condition, is usually neglected, and allowed to become chronic; secondly, interfering seriously as it does with the nutrition of the growing child, its influence upon the constitution must be lasting and most harmful. Many children suffer from sluggishness of bowel action, and hence suffer its consequences without their true condition ever being recognized. The child is chided for being cross and irritable, when in fact its peevishness is but the audible cry of its sensitive nerves irritated by the retained poisons which should be eliminated by the bowels. Many a child is stunted in growth, pale and sallow in complexion, and irritable in temper, from the effects of this condition and its causes, which otherwise might be as fresh and sweet as the most admired.

1. *What is constipation?* Every child under one year of age should have from one to five or six soft stools daily. Any deviation from this, either in frequency or consistency, must be considered as abnormal.

2. *The causes of constipation* are various and numerous. Many children suffer, no doubt, from an atonic (relaxed) condition of the muscular coat of the bowels which is hereditary, or at least congenital. This may be relieved by measures which we will describe later. It is a noticeable fact that costiveness in children is much more common at the present day than it was fifteen or twenty years ago. By far the most common causes of constipation are referable

to the diet. Artificially-fed babies most commonly suffer from this affection, but nurslings are by no means exempt. When this is the case, we may generally find the cause, if we look for it, in the diet and habits of the mother. She may herself be the subject of constipation, and the retained poisonous matters, being absorbed into her system, are imparted through the secretion of the breast to the child. Even though the mother may not be constipated herself, her child may suffer as a consequence of a too concentrated diet on her part, or the lack of fluid foods. Again, an insufficient proportion of sugar or oil in the mother's milk will cause constipation in the child. Many of the so-called "infant foods," upon which so many children subsist at the present day, are constipating in their nature. Mellin's food acts as a laxative in some cases, especially when made up with oatmeal or barley gruel, while it often has the opposite effect if made up with boiled milk. In older children the too early or too free use of a meat diet, free indulgence in sweets, and the lack of fluids, may be the cause.

Excessive perspiration, either from disease or medicines, will render the contents of the alimentary canal hard and dry, and hence induce constipation. The presence of piles, or an irritated condition of the rectum by producing painful defecation, causes the child to resist the call to stool as long as possible, and favors constipation. The pernicious habit prevalent in many homes of giving narcotics in various forms, soothing syrups, etc., to the newborn and young children, is a most common cause of this trouble.

Constipation, when due to a mild catarrhal condition of the intestines, is owing usually to overabundant and improper feeding. It may, however, be the result of improper clothing of the trunk and limbs. The abdomen should always be covered with warm flannel, and no space allowed between it and the napkin. It is as necessary, also, that the lower limbs be warmly clothed.

3. *Treatment.* Since costiveness is so often the result of dietetic errors, we naturally look here first for relief. If the patient be a nursing babe, the mother should look well to her own diet, eating freely of grains, vegetables, and such fruits as tend to loosen the bowels. The wearing at night of a wet bandage about the bowels, well covered with flannel, will aid in

effecting a cure. Thorough rubbing, also, at times of attempted stools, which should, of course, be at a regular fixed hour, will be of benefit. If all these measures do not relieve the difficulty, the mother should drink of some saline water. Tarrant's Seltzer Aperient furnishes an excellent and agreeable laxative for this purpose.

For immediate relief in both the nursed and artificially fed child the use of a few drops of glycerine (fifteen or twenty) in a teaspoonful of sweet oil, injected into the rectum, will usually give the desired effect promptly. The glycerine is sometimes irritating, but if used with oil, the evil is usually avoided, unless the rectum be very irritable. Occasional enemas of clear warm water, or soap and water, to which a little oil has been added, enough to make an emulsion, may be used if desired to give the bowels a thorough cleansing; but this should not be often repeated, as their continuous use would distend the bowels, weaken the muscular coats, and only tend to aggravate the real trouble. A glycerine suppository or a bit of soap inserted in the rectum will accomplish the same result. But it must be remembered that all these measures will give only temporary relief, and are in no degree curative.

If the child is artificially fed, the addition to the milk of thin oatmeal or barley gruel, with plenty of sugar of milk and a little cream, will often give relief and aid to bring about a permanent cure. If the trouble be from muscular atony, due to malnutrition, the condition of the stomach should be well considered, as, indeed, it should always be in all cases, also the nutritiousness of the food. The diet of older children should consist largely of grains, cream, and milk, with a liberal supply of nice ripe fruit. Temporary relief having been obtained, and the diet properly regulated, we may reasonably hope in time to effect a cure. However, other hygienic measures may be brought to our aid which will greatly hasten the desired result, and avoid many of the evil effects attendant upon delay.

Massage is coming to be recognized by the most scientific members of the medical profession as a most valuable means of cure in many disorders, but special massage or manipulating of the bowels for the relief of constipation is considered especially valuable. This should be given gently at first, but with firm pressure. Very soon the little one will be able to bear

quite severe pinching and rubbing. The stroke should always be given in the line of the large intestine. Beginning low down on the right side, rub up to the upper part of the abdomen, then across to the left side, and then down. This should be done daily, the favorite time being in the morning, just before the child is put to stool, which last should, of course, be done at a regular hour every day. The careful use of electricity to the bowels furnishes another most valuable remedy. This, however, had better be applied by the hand of a physician. The wet bandage worn at night, if carefully covered with flannel, is an invaluable remedy, especially when the trouble is due to catarrh.

There are many remedies in the line of drugs which are recommended for this trouble. We think it safe to say that none need be used if the above directions are faithfully followed. If, however, it should seem necessary to resort to these, the child had better be taken to a skillful physician for examination, and his advice secured as to the course best adapted to the condition present.

HARMONY AND DISCORD, HEALTH AND DISEASE, HEALING AND HINDERING.

THE life of an individual in its entirety is the result of the total functional activities of every organ in the body. The life of an individual, in relation to all the functions of the body, may be compared to an army. The medulla may be likened to the general, who, by a single surrender, may paralyze the entire force; the cerebrum, to the staff officers, or minister of war, whose counsels may be either good or bad; the heart and lungs might represent the trusted corps, whose failure would bring destruction to all; the pneumogastric and sympathetic nerves connecting the heart and lungs with the central organs, to the lines of communication between the corps and the central command, and, if broken, favor irregular action that would be disastrous.

The rank and file of private soldiers are the representatives of the many simple functions, such as the special gland and nerve cells, whose extensive destruction brings direct disaster, and *any* destruction is dangerous to all in proportion as such loss yields the balance of advantage to the enemy. Perfect health can continue only

when all the functions of the body are perfectly performed.

Any degree of bodily vigor is consistent with health so long as all the functions are performed in harmonious relation; the powerful athlete and the frail woman may possess equal health, though the forces or quantity of life possessed by each are widely different.

If we could imagine a being endowed at birth with organs and functions so related as to constitute perfect health, and preserving all those fine adjustments till every organ had served out its appointed time, death to such a one would be but the opposite boundary of the total endowment of vitality bestowed at its conception, a mere disunion, just as the ripened golden fruit which always grew in harmony with nature's law falls, loosened by the dew or evening's breath.

Organs are so related that derangements of the function of one affect the working of others, and the fine balance which constitutes the basis of health is disturbed, imperceptibly at first, but, unless corrected, always tends further from health and nearer recognized disease, just as two parallel lines, made to diverge ever so little, at last are widely separated.

Some organs may be performing vicarious functions, and be loaded so near their own limit that a little extra emergency, which ordinarily they would be competent to withstand, determines their failure. "The last straw broke the camel's back."

We never know the weak point in our organic machinery till it breaks, or begins to break. Nature's handiwork should be looked on with reverence, and we are surely wrong if ever we oppose the laws which govern it. Nature left alone may fail to successfully combat disease, but meddling treatment—that which is opposed to natural laws—will surely hasten failure.

Nature at times seems prodigal with her supply, but often her provisions are not so abundant as we think. "The sands run out," and nothing turns the hourglass to restore our youth; wasted energy does not come back. Man is not provided with new organs for those removed by the surgeon's knife; his sun of life is lessened by disease, even though he lives out his appointed years. There is more life lived in a year of health than in the same time spent with the functions clouded by disease.

Organs are the vehicles, and nutrition the force of life; digestion, the process on which that force depends, and food, the substance on which digestion acts. Man needs a varied supply, to meet which the digestive organs constitute a series of chemical laboratories stationed along the food stream, for the extraction of every needed principle of force. . . .

Thorough reduction of food is essential, and digestion is active or sluggish, according to whether the reduction was perfect or imperfect. Insalivation is directly related to mastication. Dalton showed that on the side engaged in the act of mastication, the parotid gland secreted three times as fast as that of the opposite side. Besides facilitating the reduction of food, it is more and more evident in physiological studies that the thorough mixing of saliva with the food in the mouth is essential, and that the saliva is a true digestive of certain food elements.

We may also suppose that the well being of the individual requires that mastication be perfectly performed, not simply for the mere reduction of food, but that insalivation may also be completely accomplished, and to that end both sides of the dental arches ought to be equally competent to perform their functions. Dentists stand guard over the beginning of this holy process. Shall he mar this important work, or shall he restore the harmony of the disturbed function?—*Items of Interest, September, 1892.*

MEDICAL PRACTICE EARLY IN THE CENTURY.

BY DR. S. P. CRAWFORD.

THE therapia of seventy years ago kept abreast of the times. The belly ache (we call it *dolores intestinorum* now) was cured by pukes of lobelia or polk root, that made us so sick that the belly ache was happiness to it. Worms were expelled by vinegar of rusty nails, or copperas water. Butternut and polk root were the favorite purges, and "boneset" the universal febrifuge. These were some of the domestic remedies. The doctors carried big saddlebags holding about a peck in each end. These were stuffed, until they stuck out like a peddler's pannier, with bottles and herbs and roots, pewter syringes, tooth "twisters," and forceps.

The doctors in those days meant business.

They could make a man sicker, and come nearer turning him inside out, and keep life in him, than any modern son of Æsculapius would dare to attempt. Now all the doctors carry are little morocco cases in their side pockets, and hypodermic syringes. The doctor in olden times, in my beat, was clad in homespun, booted, spurred, and legged, and, in cold weather, with a caped great coat that came to his heels. He could not visit many cases in a day, for he had his medicines to prepare for administration, in decoctions or sirups, after he had got to his patient. He generally stayed until he bled, puked, and purged his patient. The doctors now flit in and out of the sick chamber like butterflies, clad in broadcloth, kid gloves, and French calf boots. Taking from his side pocket his case of pellets, after unglowing one hand and feeling the pulse, adjusting his glasses, and looking at the tongue, he leaves a few of them to be given, or writes a prescription, and is gone. The old-time doctor knew every article of medicine by taste or smell. The modern doctor, but for the labels, would not know what they were. The old timer could no more decipher a modern prescription than he could read bird tracks in snow.—*Southern Practitioner.*

TO PREVENT THE GRIP—TO EDITORS AND DOCTORS.

As this paper goes to about *three thousand physicians* and *about ten thousand American editors*, we think it well to republish the following, cut from the *Boston Herald* of January 16:—

"Mr. Geo T. Angell, president of our Humane Society, said yesterday:—

"A gentleman calling on me to-day tells me that he has seen in one of the Boston dailies a letter from a physician recommending as a preventive of grip the putting of powdered sulphur in the stockings, so as to be constantly walking on sulphur.

"Some years ago Casey Young, member of Congress from Memphis, Tenn., told me that, during the great yellow fever epidemic at Memphis, in which I believe thousands died, he and various other gentlemen of his acquaintance saved their lives by constantly wearing powdered sulphur in their stockings, while others of his acquaintance who refused to use it died.

“In one instance he stated that out of a considerable number of gentlemen assembled in his office, who discussed the subject, every one who used the sulphur escaped, and every one who did not had the fever. It is well known that a few doses of sulphur taken internally will pass through the body, clothing, and pocketbook, and so blacken the silver in the pocketbook as to make its reception doubtful. It is also equally well known that men working in malarial districts in sulphur escape malaria. I think it my duty to state these facts, which may be of value in preventing sickness and saving life.”

To all our readers we add to the above:—

If, after consulting your doctor, you conclude to try the experiment a day or two, you will find that you are, when warm, surrounded by a very perceptible sulphurous atmosphere.

We have asked the dean of our Harvard University Medical School to have experiments made in regard to the effects of sulphur on dangerous germs, which we hope may result in some important discoveries.—*Our Dumb Animals.*

BE GOOD TO YOURSELF.

THINK deliberately of the house you live in, your body. Make up your mind firmly not to abuse it. Eat nothing that will hurt it, wear nothing that distorts or pains it. Do not overload it with victuals or drink or work. Give yourself regular and abundant sleep. Keep your body warmly clad. At the first signal of danger from any of the thousand enemies that surround you, defend yourself. Do not take cold; guard yourself against it; if you feel the first symptoms, give yourself heroic treatment. Get into a fine glow of heat by exercise. Take a vigorous walk or run, then guard against a sudden attack of perspiration. This is the only body you will ever have in this world. A large share of pleasure and pain of life will come through the use you make of it. Study deeply and diligently the structure of it, the laws that should govern it, the pains and penalties that will surely follow a violation of every law of life or health.—*Oakland Tribune.*

RULES FOR GOOD HEALTH.

1. BE regular in your habits.
2. If possible go to bed at the same hour every night.
3. Rise in the morning soon after you are awake.

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

5. Eat plain food.

6. Begin your morning meal with fruit.

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

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

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

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

11. In malarious districts do your walking in the middle of the day.

12. Keep the feet comfortable and well protected.

13. Wear woollen clothing the year round.

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

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

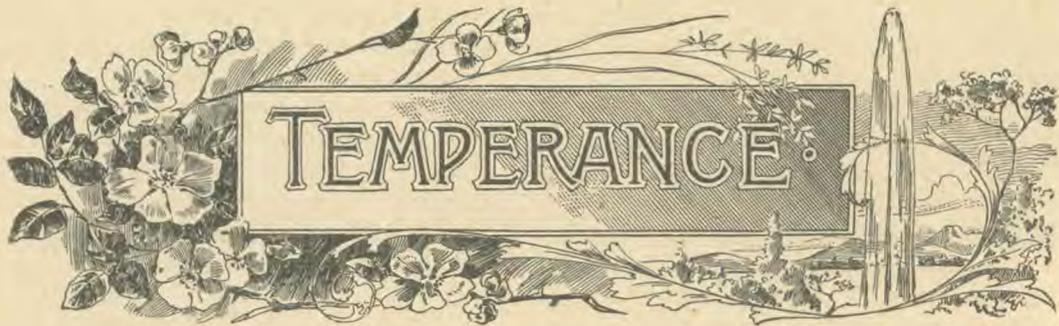
16. Don't worry; it interferes with the healthful action of the stomach.

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

DANGER FROM SYPHILIS.

AN unpleasant thing, but of great and unsuspected prevalence, needs to be repeated with line upon line. The following incident tells the story, which is so common, yet so seldom hinted, and enforces its warning, without comment. A South American correspondent of the *Satellite* writes:—

“A fact perhaps not known to many except physicians is that many [supposed] cases of leprosy are nothing else but chronic syphilis. Recently there was such a case in “high life” in South America, which, for those interested, cannot be minutely entered into or detailed. The young lady was supposed to be a victim to leprosy, and was treated accordingly for some time by the best specialists. After a time a physician known to the family returned to the place and saw the case. He examined the patient, but said nothing. He returned to his home and sent a message to the young lady's intended husband, requesting him to call and see him. The young man obeyed the order, and after a few questions and examination, the mystery was solved. He, the lover, had contracted syphilis, had treated himself privately, and had, by kissing his intended when suffering from syphilitic lesion in the mouth and throat, given her the disease. Quietly and without comment she was cured, and up to the present moment the public in general believes that Dr. So-and-so cured a very bad case of leprosy.—*Sanitary Era.*”



PITCHER OR JUG ?

WHICH, in the heat of noontide sun,
Which, when the work of day is done,
Refreshes most the weary one,

Pitcher or jug ?

Which makes strong to cradle the grain,
Which heaps highest the harvest train,
Which gives muscle and heart and brain,

Pitcher or jug ?

Which sows kindness over the soil,
Light'ning the heavy hours of toil,
With friendly words that never rile,

Pitcher or jug ?

The pitcher, filled from the bubbling spring,
Playing and spraying,
Curling and whirling,

Over the pebbles, under the hill,
It cools the brow and steadies the brain,
Making the faint one strong again;
For its daily task it nerves the arm,
And lends to labor a borrowed charm;
It is a step on the road to wealth—
Many a step on the way to health;
It lightens home with a cheerful glow,
And banishes from it useless woe;
It smiles in the children's winsome ways,
And leaves no sting in the holidays.
So in all the best things a man will be richer
If he gives up the jug and drinks from the pitcher.

—*Temperance Record.*

MAN. NO. 2.

BY ELDER G. K. OWEN.

"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." Gen. 2: 7.

What a world of meaning is comprehended in these few words! It involves the work of arranging the atoms of lifeless matter into thousands, yes, millions of organs, each designed and

fitted for a special, important use, giving a degree of life to each, and combining them into one harmonious, though marvelously complicated, organization, in which is developed intelligence superior to that of all the other creatures on the earth.

MATTER AND FORCE.

As a foundation for some further thoughts about this wonderful piece of mechanism and the powers connected with it, we present a few facts concerning the vast universe, of which man forms so insignificant a part.

There seem to be two primary elements in the universe, matter and force. If there is anything else, what is it? Force is the cause of all the forms, properties, and motions of matter. Can matter have any other modifications? Every form in which matter was ever arranged must have been so arranged by force. Every property that matter ever possesses must depend upon how the atoms are arranged and operated upon and through by force. The Creator gives to organized matter the ability to exercise force.

The force that causes all the voluntary motions of the body we call the will. When we throw a ball, it continues to move by the force imparted by the will, even after the ball has left the hand. Millions of larger balls are moving in the universe, with no visible hand accompanying them. Is not their motion continued by the same will that started them? All the matter in the universe is controlled by force. Force appears in an almost infinite variety of ways, in connection with matter; but we know of no possibility of its being revealed separate from matter. Neither can form, property, nor motion exist without matter. It would be equally impossible to explain how character could exist independent of matter.

An understanding of the

IMPORTANCE OF THE ORGANIC SYSTEMS

in the human body will reveal the necessity of preserving them in their best condition. The principal purposes of the bony system are support, protection, and motion. If not supported by the bones, we should sink into a heap of soft tissue. Without their protection, any slight pressure upon the brain might cause unconsciousness, insanity, or death. Without their help in locomotion, we should hardly be able, in a race, to compete with a snail, or even with a jellyfish. Without the muscular system, we could only be posted up to scare away the crows. But what would men be without the nervous and sensory systems? Ideas come from without, through the sensory organs. These impressions are conducted by the nerves to the nerve centers, where they are recorded by the brain cells.

We reason concerning the ideas that are thus recorded, we compare them, we judge them, by the action of the brain. We could have no idea of color if we had no organ of sight. One who was born blind was asked the question, "What is your idea of blue?" The blind person replied, "I think it is like the sound of a bell." Without the organ of hearing, we could have no idea of sound. Nor could we have any idea of taste, smell, nor feeling except through their respective senses.

Destroy all the organs of sense, and no ideas could be introduced into the mind. Destroy the brain, and there could be no brain action concerning any idea or impression, nor any means of recording any impression. Without the circulatory, respiratory, digestive, and excretory systems, to carry away the constantly breaking-down cells and other waste matter, and to supply new material to all parts of these ever-changing bodies, all of their organs would soon be destroyed, and man would suddenly be turned to corruption, and of this human form there would soon be left "nor track, nor trace."

Or, as Bryant says:—

"Yet a few days, and thee,
The all-beholding sun shall see no more
In all his course; nor yet, in the cold ground,
Where thy pale form was laid with many tears,
Nor in the embrace of ocean, shall exist
Thy image. Earth, that nourished thee, shall claim
Thy growth, to be resolved to earth again;
And, lost each human trace, surrendering up
Thine individual being, shalt thou go
To mix forever with the elements,
To be a brother to the insensible rock."

In our consideration of man, having thus briefly noticed his relations, endowments, origin, anatomical elements, and organic systems, we shall expect, as we advance, to find the subject increasing in practical interest.

Angel's Camp, Cal.

ACTION OF ALCOHOL ON THE LUNGS.

THE purpose of the lungs in the economy of animal existence is probably the most important of any functional action in that mystery called life.

We can exist without food for many days, and live for months upon a few mouthfuls of "willow tea" or the meager nourishment to be gotten out of a piece of leather soaked in water, as did Greeley's Arctic explorers.

We can live weeks with the mind beclouded with unconsciousness; we can survive years with limbs and body partially paralyzed, apparently not really dead. But when the lungs cease to have air for a few moments, or are filled with impure blood and pus, as in pneumonia or consumption, death follows quickly. The lungs are composed of hundreds of small, delicate, web-like cells, into which the dark venous blood is pumped by the heart. By osmosis or absorption through this delicate, web-like formation, the oxygen of the atmosphere is mingled with the blood, and burns, actually consumes, like a fire, the impurities in it, which in turn come forth from the body in a smokelike form, called carbonic acid gas. The blood also carries a portion of this purifying agent, oxygen, to every part of the body, where it continues to perform its part as a destroyer of impurity. Oxygen may properly be called the true elixir of life.

When the blood stream takes up alcohol from the mouth, stomach, and bowels, one of the most active expellers of it from the body are the lungs.

The moment alcohol is taken into the body, it immediately begins to be absorbed by the delicate mucous membrane which lines the mouth, stomach, and bowels. It passes at once into the blood, for the water of which it has a powerful affinity; so rapid is this action that in a moment after the alcohol has been swallowed, its odor may be distinctly observed in the expired breath. The animal body is at war with alcohol, and no sooner is it taken in than every vital action is aroused to cast it out, and it comes away just as it went in, unchanged, undigested. Alcohol goes into the body, as it were, a solid liquid, with the coloring

matter and peculiar flavors of alcoholic liquors. It comes forth as a moisture, which may be condensed in a proper receiver into alcohol, pure and simple, freed from the flavors and coloring matter with which it was associated.

During the period of time the alcohol is in the body, it is carried by the blood stream to every minute part reached by circulation. Upon each minute or large portion of muscular or nervous tissue it leaves its impress of irritation, causing inflammation or congestion, in proportion to the quantity in the body and the length of time it is in contact with the tissue. Brain, heart, liver, kidneys, every organ, every vital spot, receives a passing blow, severe or light according to the quantity and its strength.

CONCLUSION.—Alcohol irritates, inflames, and excites this delicate, web-like tissue, the lungs, and produces disease, which not infrequently results in death. Heavy drinkers of alcoholic liquors rarely recover from severe inflammation of the lungs, such as pneumonia and consumption.—*Alcoholism, Its Cause and Cure.*

HOW SHE SAVED HIM.

THE following, clipped from an exchange, tells how one woman, in Fulton, Ky., saved her husband; it might not work well, however, in all cases:—

“When we were married I am satisfied that he loved me and meant to earn an honest living; but in about two years he took to drink, and for the next five years his course was steadily downward. At last his habits became so bad that he would stay in the saloon all day, and sometimes all night. When he did come home, he was no help or comfort to me; he would only sleep off one drunk, and then start out for another. Myself and my children were sadly neglected. I was determined to do something; in fact, the time had come when I was obliged to. One night when I was driven almost to desperation, I resolved to go to the saloon. I found him talking to some others, all pretty drunk. His back was toward me when I entered, and he did not know that I had trespassed upon his place of worship; but the bartender saw me, and asked me what I wanted. This did not frighten me, for I had determined to go through the ordeal, come what might. So I replied: ‘Nothing; only I want to be with John. He won’t stay with me, so I am going to stay with him.’

“At this moment John recognized me and exclaimed: ‘Mary, what in the name of heaven are you doing here? What does this mean? Have you lost your mind?’ ‘Oh, no, John,’ I replied, ‘but I was so lonesome at home! The children cried for their supper until they cried themselves to sleep; I had nothing to give them. So I thought I would come down and stay with you until you go home. I will wait until you are ready.’ He seemed lost in thought. I had no idea what his next remark would be. But after a minute’s reflection he exclaimed: ‘Mary, I have taken my last drink. From this time henceforth and forever I am done. This place shall know me no more.’ Drunk as he was, I could see that he was crying. ‘Come, Mary,’ he said, ‘let us go home.’ We walked out of the saloon together, and on the way home he told me he would quit drinking if it killed him. He has kept his word. Over a year has elapsed since that long-to-be-remembered night. Now he loves his wife and children. We have plenty to eat and to wear. If John will hold out (and I believe he will), I shall never regret my visit to that saloon.”

THE CIGARETTE VICTIM.

THE cigarette victim is becoming a daily feature of the current news now. It took the filthy little rolls longer than was expected to perfect their work, but they are now making a brave showing, which may be expected to increase rapidly as the constitutions of the victims give way. It should not be forgotten by those contemplating this form of suicide that cigarettes owe much of their attractiveness and their daily effect to opium. The lower brands contain nothing worse than refuse tobacco and rubbish of various kinds, but they are soon succeeded by higher grades, flavored with opium, and the smoker becomes an opium fiend before he knows it. Consequently, if one must die of opium poisoning, it is more expeditious, though not more deadly, to go to a “joint” at once and hit the pipe for all there is in it.—*Philadelphia Bulletin.*

A LADY has been advertising in a certain weekly journal for a German governess “to mind a little girl three years old.” The lady’s English is doubtless defective, but the fate of the governess is thereby indicated with much greater candor than is usual.—*Dr. Wiggin.*



A CRY OF THE SPIRIT.

BY MRS. G. B. HUDSON.

OUT of the depths, not of sin, but of sorrow,
Under the billows of sadness and pain,
Under a cloud which shroudeeth the morrow,
Gropeth my soul in darkness again.
Must I carry the load to the end of the road,
And sing nevermore a glad refrain?

With a sore heart beat must I yield to retreat
Before life's battle is won?
And with the old pain of heart and of brain
Halt in the race which my soul would run?
Must I weakly lay down the cross with a frown,
Before the star-gemmed crown is won?

In this struggle and strife the world calls life,
Must I ever be kissing the rod?
Must I still grope for light in earth's dark night?
Must I e'er be chained to the sod,
In my heart storing doubt, the gloom cloud without,
All hopeless and faithless in God?

NAY, nay, weary feet, yield not to retreat;
Struggle on to set of the sun;
Let not the heart shrink, but the bitter cup drink,
Till earned the reward of "Well done."
For all that is willed must aye be fulfilled,
Ere the life that's immortal is won.

September, 1892.

THE WONDERFUL THREAD-AND-NEEDLE TREE OF MEXICO.

IMAGINE the luxury of such a tree, and the delights of going out to your needle-and-thread orchard and picking a needle threaded and all ready for business. Odd as it may seem to us, there is on the Mexican plains just such a forest growth. The tree partakes of the nature of a gigantic asparagus and has large, thick, fleshy leaves, reminding one of the cactus, the one popularly known as the "prickly pear." The "needles" of the needle-and-thread tree are set along the edges of these thick leaves.

In order to get one equipped for sewing, it is only necessary to push the thorn, or "needle," gently backward into its fleshy sheath, this to loosen it from the tough outside covering of the leaf, and then pull it from the socket. A hundred fine fibers adhere to the thorn-like spider webs. By twisting the "needle" during the drawing operations this fiber can be drawn out to an almost indefinite length. The action of the atmosphere toughens these minute threads amazingly, to such a degree as to make a thread twisted from it not larger than common No. 40, capable of sustaining a weight of five pounds, about three times the tensile strength of common "six-cord" thread. The scientific name of this forest wonder is *tensyana mucadina*.—*St. Louis Republic*.

THE BARTONS AT HOME. NO. 2.

BY MRS. M. J. BAHLER.

IT was ten o'clock at night. Mrs. Walker, weary and anxious, listened eagerly for the whistle of the locomotive which should announce to her that her husband would soon be at home; but as she listened she heard instead that of No. 22, and now she knew that her husband had been sent farther north, and would not return till to-morrow, perhaps not then. The run of a freight engineer is uncertain. Sometimes they are out two or three days.

What could she do? Gussie was out at a party and would not return before midnight. Lillie was too young to help her any, and that heavy breathing surely indicated croup. "Oh, what shall I do?" Mrs. Walker asked herself, and then added, "I'll run and call Mrs. Barton."

Swiftly she sped across the street, and as she crossed the long west veranda, her quick footsteps awakened Mrs. Barton, so that, as she rapped and called, "Mrs. Barton," that lady answered, asking,

"What is it, Mrs. Walker?" and as she asked the question she opened the door with neighborly hospitality.

"Clarrie is very sick. I fear it is croup. Can you come over?"

"Certainly, I will come immediately." In a few moments she was at Mrs. Walker's side, the two bending anxiously over the little restless sleeper in the crib. As Mrs. Barton noted the heavy, labored breathing, accompanied by a hoarse whistle, she asked:—

"Don't you want to send for a doctor?"

"No, Dr. Heller says he doesn't know anything about doctoring children. He says women can do more any time than he can, and there isn't another doctor in town I would trust. No; go ahead, Mrs. Barton, and do what you think best. Do just as you would for Millie. I shall be perfectly satisfied if you will." With this assurance Mrs. Barton went to the kitchen, and soon she had a crackling fire and water heating in the wash boiler and tea-kettle.

Returning to the room where the anxious mother sat watching, she took a towel from the wash-stand, dipped it in cold water, and laid it on the little throat. Then going to the well she brought a glass of cold water, and a teaspoon, and began feeding the little one the cold water. Though stupid with sleep and the drowsiness of the dread disease, little Clarrie sipped the cold water eagerly for some time, and it seemed in a measure to relieve the heavy breathing.

Asking Mrs. Walker for a heavy blanket and bed comfortable, Mrs. Barton took the boiler from the stove, spreading a newspaper upon the kitchen floor to set it on, and then, being careful that the water was not too warm, she spread a large, heavy towel over the top, and, taking little Clarrie in her arms, lowered her gently and slowly into the water in a sitting posture.

Feeling Mrs. Barton's arms around her, and sinking so slowly into the water, the child was not frightened, though the water was many degrees warmer than was that of her ordinary bath. She gasped a little, and clutched her fingers tightly around her mother's, as she held her hands, but that was the only manifestation of disturbed nerves, and that was quickly over.

The towel spread over the water tempered the water, as also the heat of the bottom of the boiler. Blanket and quilt were then folded over the top of

the boiler, and securely fastened with clasp pins at the back of Clarrie's neck. Her head scarcely reached the top of the boiler, but, notwithstanding this, it answered nicely as a bath. Especially was it convenient in that there was ample room to add hot water without danger of scalding, as the little feet did not reach the end of the boiler.

Giving the mother a seat by the side of this improvised bath, with instructions to keep the head cool with a towel dipped fresh in cold water every little while, Mrs. Barton herself attended to adding hot water to the bath, as much as the child could bear, and also to giving her all the cold water she would drink.

In a few minutes the hoarse, shrill breathing softened; there was perspiration over the face; the little lips ceased their eager sipping of the cold water; the little head tipped to one side into the tender mother's hand, and the little one was asleep.

Carefully closing the doors and windows, Mrs. Barton wrung a sheet from tepid water, unpinned comfort and blanket, and spread them over the crib, and then, directing Mrs. Walker to lift Clarrie from the hot bath, she quickly folded the wet sheet around her, enveloping her from head to toes, laid her upon the spread, blanket, and comfort, and swiftly tucked each snugly and tightly about the little form.

Then, with a cold napkin on the little one's head, and windows open to admit fresh air, the two ladies sat down to watch the effect of the treatment. It was most satisfactory. Little Clarrie was soon in a sound, sweet sleep, breathing free and easy, and she slept thus until Mrs. Barton said:—

"She has now been in the pack an hour; we will have to take her out sleeping I think." Closing the windows again, she folded back the covers from the sleeping child, and, bathing gently with her hand, and wiping carefully, yet quickly, with a soft linen towel, small portions of the body at a time, Clarrie slept on sweetly, never waking till morning.

Then she seemed almost as well as ever, and as Mrs. Walker watched her at her play, she could hardly realize that not twelve hours before she had laid dangerously sick with that dread disease the croup.

Ever after if anyone was sick Clarrie would say: "I will tell oo what to do. Put dey in de boiler, and give dey a baf, and dat will make dey well."

RULES FOR SINGERS.

It is imperative that the student of singing lead a regular and healthful life, avoid late hours, late suppers, overeating and drinking, and in general keep good habits. Dissipation of any sort is the certain ruin of the best and strongest of natural voices, and a bar to anything like a satisfactory musical education. Smoking is injurious, and the use of alcoholic beverages destructive. Reasonable care should be taken of the bodily health, especially during the formation of the voice, when the vocal organs are heavily taxed and the throat is peculiarly susceptible to physical conditions. The neck and chest should be properly protected, but by no means bundled up and thereby rendered delicate and irritable. Above all, the feet must be kept dry. Some convenient form of chest exercise calculated to expand the lung capacity or volume should be adopted and continued regularly, at least during the period of primary study. Bathing the neck and chest in a warm solution of salt and water, and gargling the throat with some warm, mildly astringent liquid, as ordinary black tea liberally diluted, are calculated to clear the voice and tone up the vocal apparatus.

In singing the body should be held in an easy, natural position. The voice must come freely, from the chest, the sound being hindered neither by the tongue, lips, nor teeth. The tongue should lie flat in the mouth, the lip lightly touching the lower teeth. The mouth should be opened as in smiling, always *before* beginning the note, its position being that which it takes in saying the broad "ah." Carefully avoid any slovenly pronunciation; each word as it is sung should be clipped clear and round, and never be run into the next one. "Is singing," for instance, must not be rendered, "issing-ing," a very common and unpleasant trick. Take breath quietly in singing, without gasping, and never in the middle of a word, or between two words which naturally follow each other quickly. Panting, hissing, sounding a note as if the mouth were filled with cotton, jerking the word outward, and similar blunders, are too easily fallen into by the beginner, and are very difficult of eradication when once acquired, but may readily be avoided by a degree of care at the start.—*How to Sing without a Master, in Demorest's Family Magazine for August.*

HE GOT HIS PAY.

It happened in a Clifton cable car in Cincinnati. A very pretty girl, faultlessly attired from the top of her bonnet to the tips of her dainty patent-leather shoes, jumped on the car in a great hurry at the Clinton Avenue crossing. She had been busily engaged in putting on a pair of gloves, which, after she entered the car, she proceeded to button with that indispensable adjunct to a woman's toilet—a hairpin. This article proved refractory after a moment, and flew from her fingers. It landed at the feet of a young man who happened to be sitting beside her. He was a calm-eyed, confident young gentleman, and he picked up the hairpin, and, instead of returning it to her, gently took her wrist in his left hand and gravely continued the buttoning process. Everyone in the car had been watching the pretty Clifton girl, some openly and others furtively from behind their newspapers. Now all the papers dropped; everyone looked aghast and gazed at the pretty girl to see what she would do. She did nothing. She showed no consciousness of what was going on.

The young man, with a conscious look of triumph, finished his pleasant task, and the girl, with a preoccupied air, and not even a glance in his direction, opened her purse, took out a nickel, and placed it in his hand. His expression changed with lightning-like rapidity; the color came to his face, and he quickly murmured what was evidently an apology. She listened with a willfully misleading air, and handed him another nickel. By this time his face had become scarlet, and he began a low-toned, earnest protestation. The calm, cool, and collected young lady signaled the conductor, and as she rose to depart said in a clear, distinct tone, audible to everyone on the car:—

"You must be satisfied with a dime. I never give more than ten cents for having my gloves buttoned or my boots cleaned."—*Selected.*

In an old English cookbook is the following recipe for restoring oilcloth: Melt one-half ounce beeswax in a saucer of turpentine. Rub the surface of the oilcloth all over with it, afterward rubbing it dry with a soft cloth.

Mother's Helper

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

A BOY'S HYMN.

JUST as I am, Thine own to be,
Friend of the young, who lovest me;
To consecrate myself to Thee,
O Jesus Christ, I come.

In the glad morning of my day,
My life to give, my vows to pay,
Wit no reserve and no delay,
With all my heart I come.

I would live ever in the light;
I would work ever for the right;
I would serve thee with all my might,
Therefore to thee I come.

Just as I am, young, strong, and free,
To be the best that I can be
For truth and righteousness and thee,
Lord of my life, I come.

With many dreams of fame and gold,
Success and joy to make me bold,
But dearer still my faith to hold,
For my whole life I come.

And for thy sake to win renown,
And then to take my victor's crown,
And at thy feet to cast it down,
O Master, Lord, I come.

MOTHERS' QUESTION BOX.

9. SHOULD a child eat fruit as early as one year of age?
MRS. H.

The diet of a child of this age should be confined mostly to grains and milk. Very little fruit, if any, should be allowed. A little soft baked apple or berry juice, or perhaps the carefully scraped pulp of a very nice ripe sweet apple, might be allowed with safety, but this should be taken only in small quantities at first and the effect carefully watched.

10. What can be done to relieve "snuffles" in very young infants?
H. G.

"Snuffles" is nothing else than a cold in the head, and, since an "ounce of prevention is

worth a pound of cure," we cannot forbear to emphasize here the importance of keeping the newborn very warm and free from all drafts and exposure. Not infrequently the cause of "snuffles," and the foundation of a lifelong troublesome catarrh, is found in undue exposure at the first dressing.

To relieve this condition, the old-fashioned treatment of oiling the nose and forehead is not to be despised. Applying warm cloths to the forehead may give relief. Causing the child to inhale the steam from hot water containing a little of the compound tincture of benzoin, is often very gratifying in its results. If the condition is severe, the child should be put into a warm bath, and then taken out into warm blankets, and allowed to remain for some time. After sweating, the body should be well rubbed with oil, and kept warm.

11. Will you tell us through the columns of the JOURNAL how one may remove the dirty-looking material which often collects on the top of infants' heads?
A. J. H.

This is usually easily done by the following measures: Let oil—sweet oil is preferable—be applied freely to the affected surface for a day and a night. It is necessary that there should be a free application. In the morning, wash thoroughly with warm water and white castile soap, and apply the oil another day and night, then follow with washing as before. This repeated for a few days and nights has seldom, if ever, failed to effect the removal of this sebaceous collection. A repetition of the treatment from time to time, as new collections form, will keep the head clean and tend to restore the scalp to a healthy condition. The collection should never be removed forcibly, as by a comb or the finger nail, as this irritates the tender, sensitive scalp, and only aggravates the trouble.

HOW SHALL WE TEACH OBEDIENCE.

MARY ALLEN WEST, in her admirable chapter on "Character Building," in "Care and Culture of Children," places obedience as the third corner stone preparatory to that grand superstructure which tells for this life as well as for eternity. It is true, as all will admit, that the training of the child to obedience is most necessary to his happiness as an individual, his usefulness as a citizen, as well as his best good in relation to his God. Henry Ward Beecher has truly said that to neglect to teach obedience, to neglect to inspire it in the child, to neglect to require and secure it, is to neglect the education of the child in one of the ordinary elements of success in after life.

"It is scarcely too much to say that a child brought up in the family not to know how to obey his parents, will be a bad citizen, a breaker of the laws of his country, and a violator of the rights of his kind; for, although he may, by and by, learn better, of himself, by the development of his reason and his moral sentiments, there are thousands that do not learn this afterwards, and in not learning it, become criminals. Nay, more, the submission of one's self to the law of God, the humbling of one's self before divine Providence, the yielding of one's heart to the supreme law of divine love—all this is very easy to one that has been taught to yield his will to the love of father and mother, and very difficult to one who has been reared in self-will and obstinacy. We teach our children how to walk, how to talk; we teach them a thousand things that are absolutely necessary; but there is not one of these things that is as important as teaching the child to submit its will to that of its parents. They are to it in the place of God; they are to it in the place of king and magistrate; they are to it in the place of nature itself; and the child ought to be taught as its earliest lesson implicit obedience to parental rule. No land in the world needs this teaching as much as our own does."

The very gravity of the consequences of a lack of training to obedience in the home makes the question of greatest moment. That it is necessary all will agree, but how to attain it is the question which confronts us from the face and heart of every true mother.

Perhaps there is no one thing so necessary to

the training of the child in the spirit and principles of obedience as a realizing sense on the part of the parent of the fact that he or she is dealing with a being like himself human. In a special sense this is so when the relation is between parent and child, for, in accordance with fixed laws of heredity, the child partakes of many of the characteristics of the parent. Do not, then, expect him to be born perfect. Accept the truth as it is, and enter upon the work of training the child with the understanding that he is perverse by nature, and, if he ever becomes submissive and obedient, it will be the result of patient training. There is a truth in the words of Herbert Spencer which should comfort the heart of that mother who feels to despair because of the waywardness of her child. We will quote: "We must not expect our children to be too good. Beware of hothouse virtue. Already most people recognize the detrimental results of intellectual precocity; but there remains to be recognized a truth that there is a moral precocity which is also detrimental. Our highest moral faculties, like our higher intellectual ones, are comparatively complex. By consequence they are both late in their evolution; and with the one as with the other, a very early activity produced by stimulation, will be at the expense of the future character."

The careful study of child nature reveals a fact which we as parents seldom appreciate, namely, that in the natural order of development the emotions are developed first—a child's *sympathies* may be attracted by a person, object, or line of conduct before he can grasp the reason for the same—in other words, a child can love before it can reason.

Love lies at the foundation of all true obedience. And this fact, if thoroughly understood and taken advantage of by parents, furnishes a powerful agency by which the habit of obedience, that priceless gem in the structure of builded character, may be secured for the child.

The first expression of love on the part of the child is that physical love manifested in the sweet caresses of baby fingers and the tremulous hug of the tiny arms. This is indeed beautiful in itself, but is only the open door to that higher, all-purifying spiritual love which blooms in loving deeds and self-sacrifice for others. It is through the former that entrance may be made to the latter in the life of every child. While

the emotions are called out in expressions of love to the parent, let some request be made, some little service be asked as proof of that love.

Let your desires be expressed in the form of request as far as possible, but when a command is necessary, as it sometimes is, let it be given with firmness and decision, yet with gentleness and an expression of love, not anger, on the face.

The tone of voice in which a command is given has much to do with its influence upon the heart of the child. If fretful and undecided, it will most likely not be obeyed. It would be well for parents always to cultivate low, gentle tones. It were better that a command be given in a tone lower than the usual, but always with the *falling* inflection. Attention to this last point often makes all the difference of obedience or disobedience in the child. Above all things, should the command be given in love. It is disastrous to the attainment of our object that it should ever be otherwise.

"O'er wayward childhood wouldst thou hold firm
rule

And sun thee in the light of happy faces,
Love, Hope and Patience, these must be thy graces,
And in thine own heart let them first keep school."

Elizabeth Harrison says: "Of all the essentials of true character building, there is perhaps none more important than this, that the child should learn, *through love*, to give up his own will to others; for the sake of others should learn from the very beginning of life to submit to things which are unpleasant to him." And, prompted by the observation afforded by her remarkable experience in the training of children, she adds: "It would not be difficult to make children obey, if this thought had been carried out from the beginning, before egotism, self-will, and selfishness had gotten fast hold upon the young heart." Obedience to parents should be placed upon the same foundation where God placed it—"because it is right." It is right from the very nature of the relation, and if a reason should ever be given a child, let it be given after the command has been complied with and not before.

But here we stand face to face with another danger lurking in the human heart of the parent, namely, love of dominion. A noble mother whose sons were such models of obedience that she was often asked how she trained them, once

made the reply, "I never once even in their childhood days took the ground that I had the right to require anything of them simply because I was their mother." It is of great importance that we ask only *just* things of our children.

Another cardinal point in the relation of parent and child especially conducive to obedience is a spirit of appreciation on the part of the parent. We would not recommend undue praise of children for simple duties done, but a word or look of recognition often brings to the heart of the child a mighty impetus for right doing. There is something in human nature that will strive harder to maintain a good reputation than to clear up a tarnished one, and the child who has been made to feel he can do nothing to please father or mother, finds little in his heart to stimulate him to try. It is a habit most pernicious in its influence upon the child to repeat in his presence accounts of struggles or failures in his management.

Finally, in this, as in every other God-given duty, if we lack wisdom, we have the precious promise that we shall have it in abundant measure if we seek it from the Source of all true wisdom; and with it, O comforting thought, shall be given grace and strength to perform. H. S. M.

LEARNING TO WALK.

A WRITER in the *Popular Science Monthly* judiciously teaches that the baby must not be made to sit until he has spontaneously sat up in his bed and has been able to hold his seat. This sometimes happens in the sixth or seventh month, sometimes later. The sitting position is not without danger, even when he takes it himself. Imposed prematurely upon him, it tires the backbone, and may interfere with the growth.

So the child should never be taught to stand or to walk. That is his affair, not ours. Place him on a carpet in a healthy room or in the open air, and let him play in freedom, roll, try to go ahead on feet, or go backward, which he will do more successfully at first; it all gradually strengthens and hardens him. Some day he will manage to get upon his feet and then to raise himself up against the chairs. He thus learns to do all he can as fast as he can, and no more. And he will not get the deformed bandy legs that most of us acquired in infancy from the senseless haste of parents or nurses to force the walking.—*Sanitary Era*.

WANTED—A LITTLE GIRL.

WHERE have they gone to—the little girls,
With natural manners and natural curls,
Who love their dollies and like their toys,
And talk of something beside the boys?

Little old women in plenty I find,
Mature in manners and old in mind;
Little old flirts who talk of their "beaux"—
And vie with each other in stylish clothes.

Little old belles, who at nine and ten
Are sick of pleasure and tired of men,
Weary of travel, of balls, of fun—
And find no new thing under the sun.

Once, in the beautiful long ago,
Some dear little children I used to know,
Girls, who were merry as lambs at play,
And laughed and rollicked the livelong day.

They thought not at all of the "style" of their clothes,
They never imagined that boys were "beaux"—
"Other girls' brothers" and "mates" were they,
Splendid fellows to help them play.

Where have they gone to? If you see
One of them, anywhere, send her to me.
I would give a medal of purest gold
To one of those dear little girls of old,
With an innocent heart and open smile,
Who knows not the meaning of "flirt" or "style."
—Ella Wheeler Wilcox.

DISEASE AMONG POOR CHILDREN.

DR. ANNA DANIELS, one of the most experienced and wisest of workers among the poor, at one time made, during a period of eighteen months, a detailed examination of five hundred and thirty-five poor children, but sixty of whom were healthy. Twin girls, of four and a half years old, were found sewing on buttons from six in the morning till ten at night. At three years of age one child had infantile paralysis, easily curable, but the mother had no time to attend to it; at five it was taught to sew buttons on trousers, and now, at thirteen, it is a helpless cripple, finishing a dozen pairs of trousers a day, and making the family thus twenty cents the richer.—From "Child Life in the Slums of New York, in Demorest Family Magazine for July.

A WORD OF CAUTION.

MANY people suffer all their lives great inconvenience from a weakened wrist or shoulder joint, never being able to obtain permanent relief and

never able to discover the cause of their affliction. In most cases perhaps all the trouble has resulted from some strain upon the ligaments of the afflicted joint. More often than otherwise the injury has been inflicted in childhood, when the ligaments are soft and very elastic and have not the ability to resist strain that they have in later years. Most often the trouble results from the pernicious habit of lifting a child by one or both hands or arms. Very serious harm may be done in this way that may not be manifested at all during childhood, but which is painfully unpleasant when the demands of manual labor are put upon them.

H. S. M.

BIBLE READING.

OBEDIENCE.

1. WHAT is the first commandment with promise? Ex. 20:12; Eph. 6:2.
2. Why are children exhorted to obey their parents? Eph. 6:1.
3. On what basis may parents demand obedience? Col. 3:20.
4. What does the apostle seem to indicate as the duty of the parent in teaching obedience in the family? Col. 3:21.
5. What act on the part of parents may thwart their most anxious desires for the welfare of their children? Eph. 6:4.
6. What is stated as one of the signs of the last days, in 2 Tim. 3:2?
7. Among what other sins is disobedience classed? Rom. 1:29-31.
8. How does obedience to parents grace the character of the child? Prov. 1:8, 9.
9. What benefits shall be realized by obedient children all through life? Prov. 6:20-23.
10. How does God regard obedience? 1 Sam. 15:22.
11. Why does he ask obedience? Isa. 48:18; John 15:10.
12. How great, then, is the duty of parents to instill in the hearts of children the *spirit* of obedience in *infancy*, when they stand to them in the place of God?

PROGRAM FOR MOTHERS' MEETINGS.

SCRIPTURE reading.*

Prayer.

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

Discussion of the subject.

Poem.

Question box.

Subject for January meeting, "How Shall We Teach Our Children to Be Truthful?"

* We suggest as Scripture reading the Bible lesson given above, the members present reading the texts in turn as far as practicable.

† We would suggest as appropriate selection for reading or study the chapter on "Character Building," in the "Care and Culture of Children," by Mary Allen West, if any are so fortunate as to have access to that excellent work. A leaflet entitled "Obedience" can be obtained for two cents by addressing the W. C. T. U. Publishing Association in San Francisco.



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

THE RIGHTS OF WOMAN.

BY REV. M. LOWRY.

THE rights of woman! What are they?
The right to labor, love, and pray,
The right to weep with those who weep,
The right to wake when others sleep.

The right to dry the falling tear,
The right to quell the rising fear,
The right to smooth the brow of care,
And whisper comfort in despair.

The right to watch the parting breath,
To soothe and cheer the bed of death;
The right when earthly hopes all fail,
To point to that within the veil.

The right the wanderer to reclaim,
And win the lost from paths of shame;
The right to comfort and to bless
The widow and the fatherless.

The right the little ones to guide
In simple faith to Him who died;
With earnest love and gentle praise,
To bless and cheer their youthful days.

The right the intellect to train,
And guide the soul to noble aim,
Teach it to rise above earth's toys,
And wing its flight for heavenly joys.

The right to live for those we love,
The right to die that love to prove;
The right to brighten earthly homes
With pleasant smiles and gentle tones.

Are these thy rights? Then use them well;
Thy silent influence none can tell;
If these are thine, why ask for more?
Thou hast enough to answer for.

Are these thy rights? Then murmur not
That woman's mission is thy lot;
Improve the talents God has given—
Life's duty done, thy rest is heaven.

—*The Housekeeper.*

CONDIMENTS.

By condiments are commonly meant such substances as are added to season food, to give it "a relish," or to stimulate appetite, but which in themselves possess no real food value. To this category belong mustard, ginger, pepper, pepper sauce, Worcestershire sauce, cloves, spices, and other similar substances. That anything is needed to disguise or improve the natural flavor of food would seem to imply either that the article used was not a proper alimentary substance, or that it did not answer the purpose for which the Creator designed it. True condiments, such as pepper, pepper sauce, ginger, spice, mustard, cinnamon, cloves, etc., are all strong irritants. This may be readily demonstrated by their application to a raw surface. The intense smarting and burning occasioned are ample evidence of their irritating character. Pepper and mustard are capable of producing powerfully irritating effects, even when applied to the healthy skin where wholly intact.

It is surprising that it does not occur to the mother who applies a mustard plaster to the feet of her child, to relieve congestion of the brain, that an article which is capable of producing a blister upon the external covering of the body, is quite as capable of producing similar effects when applied to the more sensitive tissues within the body. The irritating effects of these substances upon the stomach are not readily recognized, simply because the stomach is supplied with very few nerves of sensation.

That condiments induce an intense degree of irritation of the mucous membrane of the stomach, was abundantly demonstrated by the experiments of Dr. Beaumont upon the unfortunate Alexis St. Martin. Dr. Beaumont records that when St. Martin took mustard, pepper, and similar

condiments with his food, the mucous membrane of his stomach became intensely red and congested, appearing very much like an inflamed eye. It is this irritating effect of condiments which gives occasion for their extended use. They create an artificial appetite, similar to the incessant craving of the chronic dyspeptic, whose irritable stomach is seldom satisfied. This fact with regard to condiments is a sufficient argument against their use, being one of the greatest causes of gluttony, since they remove the sense of satiety by which nature says, "Enough."

To a thoroughly normal and unperverted taste, irritating condiments of all sorts are very obnoxious. It is true that nature accommodates herself to their use with food to such a degree that they may be employed for years without apparently producing very grave results; but this very condition is a source of injury, since it is nothing more nor less than the going to sleep of the sentinels which nature has posted at the portal of the body, for the purpose of giving warning of danger. The nerves of sensibility have become benumbed to such a degree that they no longer offer remonstrance against irritating substances, and allow the enemy to enter into the citadel of life. The mischievous work is thus insidiously carried on year after year, until by and by the individual breaks down with some chronic disorder of the liver, kidneys, or some other important internal organ.

Physicians have long observed that in tropical countries where curry powder and other condiments are very extensively used, diseases of the liver, especially acute congestion and inflammation, are exceedingly common, much more so than in countries and among nations where condiments are less freely used. A traveler in Mexico, some time ago, described a favorite Mexican dish as composed of layers of the following ingredients: "Pepper, mustard, ginger, pepper, potato, ginger; mustard, pepper, potato, mustard, ginger, pepper." The common use of such a dish is sufficient cause for the great frequency of diseases of the liver among the Mexicans, noted by physicians traveling in that country.

That the use of condiments is wholly a matter of habit is evident from the fact that different nations employ as condiments articles which would be in the highest degree obnoxious to people of other countries. For example, the garlic, so freely

used in Russian cookery, would be considered by Americans no addition to the natural flavors of food; and still more distasteful would be the asa-fetida frequently used as a seasoning in the cuisine of Persia and other Asiatic countries.

The use of condiments is unquestionably a strong auxiliary to the formation of a habit of using intoxicating drinks. Persons addicted to the use of intoxicating liquors are, as a rule, fond of stimulating and highly seasoned foods; and although the converse is not always true, yet it is apparent to every thoughtful person that the use of a diet composed of highly seasoned and irritating food, institutes the conditions necessary for the acquirement of a taste for intoxicating liquors. The false appetite aroused by the use of food that "burns and stings," craves something less insipid than pure cold water to keep up the fever the food has excited. Again, condiments, like all other stimulants, must be continually increased in quantity, or their effect becomes diminished; and this leads directly to a demand for stronger stimulants, both in eating and drinking, until the probable tendency is toward the dramshop.

A more serious reason why high seasonings lead to intemperance, is in the perversion of the use of the sense of taste. Certain senses are given us to add to our pleasure as well as for the practical, almost indispensable, use they are to us. For instance, the sense of sight is not only useful, but enables us to drink in beauty, if among beautiful surroundings, without doing us any harm. The same of music and other harmonies which may come to us through the sense of hearing. But the sense of taste was given us to distinguish between wholesome and unwholesome foods, and cannot be used for merely sensuous gratification, without debasing and making of it a gross thing. An education which demands special enjoyment or pleasure through the sense of taste, is wholly artificial; it is coming down to the animal plane, or below it rather; for the instinct of the brute creation teaches it merely to eat to live.

Yet how widespread is this habit of sensuous gratification through the sense of taste! If one calls upon a neighbor, he is at once offered refreshments of some kind, as though the greatest blessing of life came from indulging the appetite. This evil is largely due to wrong education, which begins with childhood. When Johnnie sits down to the table, the mother says, "Johnnie, what would

you like?" instead of putting plain, wholesome food before the child, and taking it as a matter of course that he will eat it and be satisfied. The child grows to think that he must have what he likes, whether it is good for him or not. It is not strange that an appetite thus pampered in childhood becomes uncontrollable at maturity; for the step from gormandizing to intoxication is much shorter than most people imagine. The natural, unperverted taste of a child will lead him to eat that which is good for him. But how can we expect the children to reform when the parents continually set them bad examples in the matter of eating and drinking?

The cultivation of a taste for spices is a degradation of the sense of taste. Nature never designed that pleasure should be divorced from use. The effects of gratifying the sense of taste differ materially from those of gratifying the higher senses of sight and hearing. What we see is gone; nothing remains but the memory, and the same is true of the sweetest sounds which may reach us through the ears. But what we taste is taken into the stomach, and what has thus given us brief pleasure through the gratification of the palate, must make work in the alimentary canal for fourteen hours before it is disposed of.—*Science in the Kitchen.*

NUTMEG POISONING.

CASES are not infrequently reported, says *Good Health*, in which children, and sometimes grown persons, are poisoned by the free use of nutmegs, it not being generally known that this article of common household use is really a deadly poison.

This is true, in fact, of most common condiments, but the misuse of these articles, such as pepper, capsicum, etc., are so obnoxious to the taste, except when taken in very minute quantities, that the consumer is warned in a very positive manner before he has had an opportunity to do himself serious injury. This is not the case, however, with nutmeg. This nut, which contains a poisonous principal of a very deadly character, may be consumed without inconvenience, in quantities sufficient to produce fatal consequences; and it is surprising, not that death occasionally occurs from its use, but that deaths are not more frequent. A fatal case has been recently reported, in which a boy of eight

years fell into a comatose condition after eating two nutmegs, and died within twelve hours.—*The Household.*

VINEGAR AND DIGESTION.

MODERN laboratory investigations are bringing into question the propriety of using as food numerous articles which have almost universally been accepted as harmless or useful articles of food.

Dr. Roberts showed, long ago, that tea and coffee hindered digestion. Condiments have been interdicted in consequence of the irritating effect upon the stomach and kidneys.

The microscopists have discovered that the eels of vinegar sometimes take up their abode in the alimentary canal as parasites, and become a source of irritation and disturbance to the digestive organs, and now, according to Virchow's archives, John has been investigating the influence of acids upon salivary digestion, or the conversion of starch into sugar, and the fact has appeared that ascetic acid, connected with tartaric and oxalic acids, very materially hinders this portion of the digestive process.

It is worthy of note, as being in the line of scientific progress, that many of the most skillful *chefs* are substituting, in their culinary processes, lemon juice for vinegar, thus avoiding at once both the wriggling eels and the mischief-making acid.—*J. H. K., in Bacteriological World and Modern Medicine.*

THE IDEAL FLOOR.

As far as convenience and healthfulness are concerned, the ideal arrangement for the floors of halls, dining rooms, and bedrooms, is hard-wood floor partly covered with rugs; and this happens now to have the additional advantage of being fashionable. A handsome hard-wood floor is at first more expensive than an ordinary carpet; but, once laid, it will never wear out, and good rugs will last a lifetime; so if one is settled in her own home and expects to remain there, the hard-wood floors are cheapest in the end.

In this, as in most other things, the best is always the cheapest; but, if economy is an object, it is not at all essential, either to beauty or appropriateness, that the floors should be laid in fancy patterns. There is nothing prettier than

a plain oak floor laid simply in long, narrow boards. The beauty of such floors depends mainly upon how they are kept. For bedrooms and halls when there is not hard use, even yellow pine makes a very handsome floor; but, being softer than oak, cherry, or walnut,—the woods most used for floors,—it is not quite so durable under hard wear, or when heavy pieces of furniture are dragged across it.—*Demorest's Family Magazine for September.*

CLEANING WHITE RUGS.

MANY inquiries come to me as to how to clean white goatskin rugs. They can be cleaned by washing, or with naphtha.

Wet a small part of the rug with naphtha, and rub with a soft cloth until that space is clean; then clean another place, continuing until the entire rug has been treated in this way. Hang in the air until the odor has disappeared. Take care that no gas is lit in the room while the naphtha is being used.

To wash the rug, put into a tub about four gallons of tepid water and half a pint of household ammonia. Let the rug soak in this for about half an hour, sopping it up and down in the water frequently. Rinse in several tepid waters and hang on the line to dry, if possible, in a shady place. Select a windy day for this work. Even with the greatest care the skin will become hard when washed. Rubbing it between the hands tends to soften it; or, it may be folded lengthwise, the fur side in, and then passed through the clothes wringer several times. This, of course, should be done only when the rug is dry.—*Ladies' Home Journal.*

HOW TO GET RID OF RED AND BLACK ANTS.

HAVING had years of torment with ants, both black and red, we lighted upon the following remedy, which with us has worked like magic: One spoonful tartar emetic, one spoonful of sugar mixed into a thin sirup. As it evaporates or is carried off, add ingredients as needed. A sicker lot of pests would be hard to find. Whether they impart the results to the home firm or whether all are killed, I trow not. Certain it is they do not pay us a second visit. For ants on the lawn, a spoonful of Paris green cut with alcohol and made into sirup with sugar

and water can be placed on pieces of glass or crockery—cover from domestic pets—and the slaughter will be satisfactory.—*N. Y. Observer.*

THE FOUR GRACES.

BY CHARLES A. MYERS.

WHO is it comes when you are sick,
And holds your pulse awhile,
Then makes a diagnosis quick,
And, with a pleasant smile,
Proceeds to write, in foreign hand,
An order which announces
The tinctures, sirups, extracts, and
The scruples, drachms, and ounces?
The doctor.

Who puts up the prescription quick,
And sizes up your wealth,—
For well he knows you cannot kick,
You're struggling for your health,—
Who, with an educated hand,
Compounds the drachms and grains,
And relieves you like a magic wand
Of all—except your pains?
The druggist.

Who is it comes with solemn tread,
And face devoid of smile,
And measures you from feet to head
In a peculiar style,
And then departs to come once more,
And bring an odd-shaped box,
And when a few feet from the door
Smiles way down to his socks?
The undertaker.

Who is that well-bronzed son of toil,
With shovel, pick, and spade,
Who, while at work beneath the soil,
Of death seems not afraid—
Who serves you last under the sun,
And asks a smaller fee,
For harder work and better done,
Than all the other three?
The grave digger.
—Selected.

HINTS FOR THE BATH.

PUT to a cup of sea salt a half ounce of camphor, a half ounce of ammonia, in a quart bottle; fill the bottle with hot water and let it stand twenty-four hours; then, when prepared to bathe with a sponge, put a teaspoonful of this mixture, well shaken, into your basin. A surprising quantity of dirt will come from the cleanest skin. The ammonia cleanses, and the camphor and the sea salt impart a beneficial effect which cannot be exaggerated.



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

A TIRADE FOR DRESS REFORM.

BY JOSEPHINE VERMILEY.

'TWERE better by far
 To be as you *are*
 Than to pull yourself in at the waist.
 To look as tho' laced,
 Your organs misplaced,
 Is a libel on civilized taste.
 Just look at the "Japs,"
 With their series of wraps,
 For that's all their garments consist in—
 What freedom and grace
 In each motion you trace;
 And yet awkward stays you persist in.
 Behold the result!
 (Not very occult)
 When you put on your shoes in the morning,
 You must sit on the floor.
 To push in a drawer,
 Your knees you must use, spite of warning.
 In time comes old age;
 With impotent rage,
 Your shoulders all bent you're beholding;
 Your knees filled with water,
 In plaster supporter—
 But, there! of what use is my scolding?
 —*Jessie Miller's Illustrated Monthly.*

HEALTH AND WOMAN'S DRESS.

BY MRS. MARY A. LIVERMORE.

GOOD health is a great prerequisite of successful or happy living. To live worthily, or to accomplish much for one's self or others when suffering from pain or disease, is attended with difficulty. Dr. Johnson used to say that "every man is a rascal when he is sick;" and very much of the peevishness, irritability, capriciousness, and impatience of men and women has its root in bodily illness. The very morals suffer from disease of the body.

By and by we shall come to recognize the

right of every child to be well born, sound in body, with inherited tendencies toward mental and moral health. We have learned that it is possible to direct the operations of nature so as to have finer breeds of horses, cattle, and fowls; to improve our fruits and flowers and grains. Science searches for the parental laws of being, and comes to the aid of all who wish to improve the lower creation. When will an enlightened public sentiment demand that those who seek of God the gift of little children shall make themselves worthy of parentage by healthful and noble living, practical and obedient acquaintance with the prenatal laws of being, and all that relates to the hereditary transmission of qualities?

There has been great improvement in the physical habits of women and girls within my memory. In my girlhood, girls wore low-necked dresses and short sleeves almost universally, except in winter; and many were thus dangerously clad in the severest weather. Flannel underwear was unknown, as were rubber boots and shoes and waterproof cloaks. Slippers and thin-soled shoes were worn on the streets in inclement seasons. Very little attention was given to regular bathing, ventilation, or the preparation of healthful food. Instead of mattresses, we slept on feathers, and lived in rooms warmed with huge open fires only, which roasted you on one side while you froze on the other.

I have long maintained that the young women of the present day are not behind the men of their age in bodily vigor. For while young women damage their health by unhygienic dress and bad habits of life, young men deteriorate physically very early through the use of tobacco and alcoholic drinks and other pernicious

scious practices. Experience and extensive observation long since convinced me that many of our girls are made victims of disease and weakness for life through the evils of the dress they wear from birth; and I have, therefore, regarded it as a most hopeful sign of the times that the *Jenness Miller Illustrated* has so speedily won the regards of women,—a magazine whose speciality is physical culture and hygienic dress, which is made as artistic as it is healthful. The invalidism of young girls is usually attributed to every cause but the right one; to hard study, co-education, which, it is said, compels overwork, that the girl student may keep up with the young men of her class; too much exercise, or lack of rest and quiet at certain periods when nature demands it. All the while the physician is silent concerning the glove-fitting, steel-clasped corset, the heavy dragging skirts, the bands engirthing the body, the pinching, deforming boot, and the ruinous social dissipation of fashionable society. These account for much of the feebleness of young women and girls; for they exhaust nerve force, make freedom of movement a painful impossibility, and frequently shipwreck the young girl before she is out of port.

We have a theory generally accepted in civilized society, which we never formulate in speech, but to which we are very loyal in practical life. This theory, put in plain language, is as follows: God knows how to make boys; and when he sends a boy into the world, it is safe to allow him to grow to manhood as God made him. He may be too tall or too short for our notions, too stout or too thin, too light or too dark; nevertheless, it is right, for God knows how to make boys. But when God sends a girl into the world, it is not safe to allow her to grow to womanhood as he has made her. Someone must take her, and improve her figure, and give her the shape in which it is proper for her to grow.

Accordingly, the young girl comes some day from the dressmaker with this demand: "Mme. — [the dressmaker] says I am getting into horrid shape, and must have a pair of corsets immediately." The corsets are bought and worn, and the physical deterioration begins.

"It does not require the foresight of a seer," says Dr. Mary Safford, "to diagnose a chronic

case of tight lacing and of heavy skirts. When the abdominal muscular walls become inert, almost wasted, one of the most important daily functions of the body is rarely, if ever, normally carried on. We might enumerate the ills that follow. But these are only links in the long chain of disorders that have won the disgraceful appellation of 'women's diseases,' when they should be termed 'women's follies.'"

Medical students have learned to call the livers of the female subjects that go to the dissecting room the "corset liver," says Dr. Mary Studley. It is the rule rather than the exception for these livers to be so deeply indented where the ribs have been crowded against them by improperly worn clothing, that the wrist may be easily laid in the groove. And this is an organ which is a mass of blood vessels, through which every particle of blood ought to circulate freely on its way to the heart. Of course, it cannot go through the squeezed portions; and the inevitable result of the half-done work of the liver is an unclean condition of the blood, which utters its cries by means of aching nerves. No young growing girl should be allowed to wear corsets. The educated medical women, who are gaining in influence, in numbers, and in practice, denounce them unqualifiedly, lay to their charge no small amount of the dire diseases on which gynæcologists grow rich, and declare that they enhance the perils of maternity, and inflict on the world inferior children. The modern corset presses in upon the body, the muscular walls, the floating ribs, the stomach, the hips, and the abdomen, compelling them to take the form the corset maker has devised, in lieu of that God has given. Stiff whalebones behind, and finely tempered steel fronts pressing into the stomach and curving over the abdomen, keep the figure of the girl erect and unbending, while nature has made the spine supple with joints.

The American girl is usually lithe and slender, and requires no artificial intensifying of her slightness. The corset gives her only stiffness of appearance, and interferes with that glance of motion which is one of the charms of young girls; while the stout woman who wears a corset to diminish her proportions, only distorts her figure. Her pinched waist causes her broad shoulders and hips to look broader by contrast, while the pressure upon the heart and blood vessels gives to her face that permanent blowzy flush that suggests apoplexy. "Who can forgive the unhealthy complexion and the red nose induced by such a practice?" asks Mrs. Haweis in her "Art of Beauty." And who can forgive the disease that has come or is coming?—*A Modern Hygeian*.

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RETREAT NOTES.

—Elder F. M. Wilcox and wife have returned from a short visit in Oakland.

—Mr. R. G. Lawson, of Woodland, made us a hasty visit the early part of October.

—Miss Alice Crawford, of Napa, returned to her home the early part of October.

—A little sister of Mrs. J. A. Burden's arrived from Eureka the evening of the 11th.

—Mr. W. W. Thompson and daughter Hattie, of Napa, made the Retreat a visit November 12.

—Pitcairn coconuts sold at quite a premium with our friends. Some sixteen sacks were disposed of.

—Mrs. N. L. Edwards, of Oakland, arrived the evening of October 15, to pay us another extended visit.

—Candidates for various offices attempted to charm, just before election, the voting element of the Retreat.

—Dr. L. C. Cox, of San Francisco, home physician of our guests, Mr. G. P. Gillis and family, paid them a professional visit.

—Lawyer F. E. Johnson made us another pleasant call the 12th ult., and reports a very pleasant time hunting and fishing in the mountains.

—Among the arrivals of Sunday, October 16, were Miss Emmons, of San Francisco, and O. Elliott and Mrs. J. E. Conant, of Stockton.

—Mr. Shakespear and Hon. Gosford, of Napa, both old patrons of the Retreat, renewed old acquaintances, and formed new ones, in time for election day.

—Mr. Patterson, of San Francisco, returned to his home September 26. During his stay Mr. Patterson made some warm friends. He feels greatly improved by the treatments.

—Mr. H. M. Barstow, of Napa, an old patron of the Retreat, made us a short call the fore part of October. Mr. Barstow proved a successful nominee for district attorney.

—E. G. Fulton and brother Ira, of Oakland, nephews of our former superintendent, made their friends a pleasant call on wheels, October 14, returning by cars the following Monday.

—Our editor, Elder M. C. Wilcox, of Oakland, accompanied by his family, made us a visit of a month. Mrs. Wilcox, we understand, will return to continue her treatment.

—Among our recent visitors were Ex-governor James R. McCoy, of the Pitcairn Island, and Elder W. D. Curtis, of New Zealand. Mr. McCoy outlined to our friends the movements of the missionary schooner *Pitcairn* for the past two years, giving a brief account of laborers. Elder Curtis dwelt more fully on the work in the islands, and showed the difficulties a true missionary meets.

LITERARY NOTES.

Tennessee (Nashville) State Board of Health Bulletin of October 20 contains report of quarterly meeting of the State Board. Principal article is "On Quarantine."

"The Effect of Diseases of the Ear upon the General Condition," by William Cheatham, M. D., reprinted from the *Medical and Surgical Reporter*. Penfield Brothers, Tenth and Filbert Streets, Philadelphia.

Godey's Lady's Book is now known as *Godey's America's First Magazine*. It gives promise of taking high rank among the magazines. P. M. Richards, publisher, 21 Park Row, New York.

"The Sanitary Side of the Drink Problem," by T. D. Crothers, M. D., of Hartford, Connecticut, editor of *Journal of Inebriety*, reprinted from the journal of the American Medical Association, Oct. 8, 1892.

The *Breeder and Turfman*, published at Nashville, Tenn., is one of the best journals we have seen devoted to the interests of the horse. Well gotten up, illustrated, and price (weekly) \$2.00 a year.

Printers' Ink, No. 10 Spruce Street, New York, is hoping to get recognition next year under second-class rates. It ought to; it certainly is as deserving of it as thousands of other journals published. Why it is shut out is more than we can see.

The *American Agriculturist*, the old standard journal in its line in this country, grows more and more interesting each year. The November number is fully up to the standard. Address, Orange Judd Company, 52 and 54 Lafayette Place, New York.

"Annual Lectures Delivered before the Alumni Association of the College of Physicians and Surgeons of Baltimore," April 11, 12, 1892, by Dr. W. E. B. Davis. The subject of this is "Local and General Peritonitis." Friedenwald Co., Baltimore, Md.

Mothers' Nursery Guide (Babyhood) for November is fully up to the standard. Its departments, Nursery Helps and Novelties, Nursery Problems, and The Mother's Parliament, besides the general articles, seem, from a hasty glance, to be especially good. Price, \$2.00 a year. Babyhood Publishing Co., 5 Buckman St., New York.

We have received from Lee & Shepard, Boston, Mass., another of their dainty little calendars, "All Around the Year." The design this year is in colors, by J. Pauline Sunter. Like its predecessors, it is printed on heavy cardboard, gilt edged, with chain, tassels, and ring, and is of

convenient size. The designs are fresh and delightful, quaint and picturesque. Done in several colors, one can scarcely imagine anything more graceful than the twelve cards, each bearing the dainty design which includes the month's calendar as a part of the picture. Size $4\frac{1}{4} \times 5\frac{1}{2}$ inches. Boxed, price, 50 cents.

Mr. Albert A. Pope, the great bicycle manufacturer, post office box B, Boston, Mass., is sending out to college and railroad presidents, postmasters, and others, blank petitions to obtain signers asking that a "road department, an institute of road engineering, and a permanent road exhibit," be established in the city of Washington. He is also asking, and wants everybody else to ask, that "a comprehensive exhibit of road construction and maintenance at the World's Columbian Exposition would accomplish much in the way of practical results." The roads of our country are generally detestable. We believe such an exhibit would be a good thing, and right in the line of what such a fair ought to be.

"Mother and Babe" is a new book, by Mrs. Jenness Miller, in which she says she has "considered all of the questions which naturally arise in the minds of inexperienced women who anticipate maternity, and many others which ought to be considered and are not because of ignorance. If my readers who wish information upon the subject of motherhood and the happy coming of baby will remember that I have in 'Mother and Babe' given it all in condensed form, and with patterns and diagrams for mother's adjustable dress and for baby's wardrobe, they will no longer inquire, 'Where can we get information upon these subjects?'" The cover of the book contains pockets for patterns of garments for mother and child. Price, \$2.00. Jenness Miller Company, 114th Fifth Avenue, New York.

We have received from F. W. Brewer, M. D., circular No. 9 of the Department of Liberal Arts at the World's Fair. This circular is in the interests of the Bureau of Hygiene and Sanitation. This Bureau will seek to set before the visitors at the Exposition such a representation of sanitary work and sanitary aids as will help to lift the public mind to a higher plane in its estimate of the work of sanitation. There is great need of it, and we wish Dr. Brewer and his collaborators success. The work of this Bureau will cover sanitation in all its phases, such as athletics, alimentation, dwellings and their conditions, hotels, etc., public baths and lavatories, clothing, hygiene of workshops and factories, etc., etc. Cooperation of sanitary organizations in exhibits, etc., is solicited. Address Dr. F. W. Brewer, Department of Liberal Arts, Columbian Exposition, Chicago, Ill.

"The Hygienic Treatment of Consumption," by M. L. Holbrook, M. D., professor of hygiene in the New York Medical College and Hospital for Women. This book is in three parts. Part one discusses the disease, its nature, and indirect and immediate causes. Part two takes up the prevention and treatment of consumption in its earlier stages. In this numerous suggestions and instructions are given in preventing colds, enlarging the chest, various exercises, muscular and vocal, clothing, climate, baths, food, drink, and the influence of the mind. Part three discusses the treatment of more advanced cases, under four headings: (1) Open Air, Rest, and Light Cure; (2) Enlarging the Chest; (3) Self-Help; (4) Difficulties in the Way—Cautions. We believe, from our brief examination of Dr. Holbrook's book, that it will do great good in piloting many with weak lungs, and even consumptives, to the high road of health. Price, \$2.00, postpaid. Dr. M. L. Holbrook, 46 East Twenty-first Street, New York.

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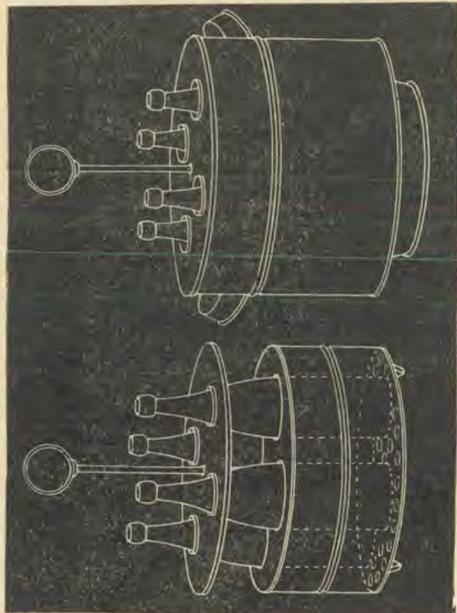
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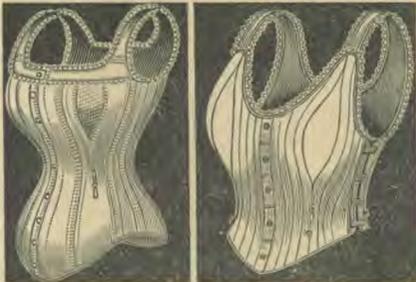
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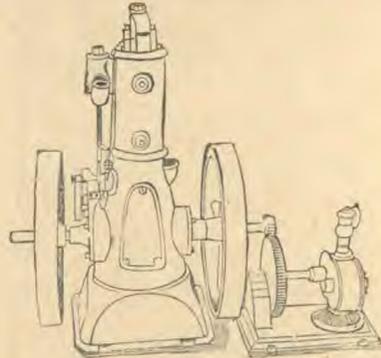
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