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GENERAL ARTICLES.

PAINFUL OR ACID DYSPEPSIA.

BY A. J. SANDERSON, M. D.

THE symptom which is most prominent in the classes of acid dyspepsia is pain, which is manifest locally or in some reflex locality. But while this is a rule, there are some cases of this kind which do not have severe pain, and there are also cases of non-acid dyspepsia in which the pain is quite severe, as was mentioned in our last month's article.

In speaking of this form of dyspepsia we refer to those cases where the contents of the stomach are unnaturally acid. Either there are organic acids present, or the hydrochloric acid may be abnormally increased at various periods of digestion, or it may be continually present, as it is found in some exaggerated cases. The result of this accumulation of acid is an increased amount of irritation upon the stomach wall, which becomes very sensitive, and has a tendency toward severe catarrhal and inflammatory conditions, and very frequently passes on to ulceration. The pain is due to this irritated condition of the mucous membrane, which is sometimes felt when the stomach is empty, by the coming together of the walls, but as a rule comes on after the taking of food. The pain arises at various lengths of time after meals, according to the time of the maximum development of the acid that is present.

For convenience we might speak of three classes. First, where the acid arises mostly from fermenta-

tion, and there is present either lactic, buteric, acetic, or other organic acids. This may come on within an hour or two after meals, or it may appear later. It gives rise to severe burning sensations in the stomach, accompanied by acid regurgitation of the food, which gives a bitter, sour taste in the throat. This class of cases is very much aggravated by the taking of sugar or starchy foods, especially the vegetable starches, and may be determined by the presence of this symptom. A patient suffering from this condition will have usually very much enfeebled nutrition, and will be anæmic, suffering from headache and dizziness, loss of strength, coated tongue, and probably constipation, though if the fermentation extends to the bowel, there may be diarrhea, which would most probably be accompanied with a great deal of gripping pain.

In the second class, where there is an excessive amount of free hydrochloric acid, coming in the early part of the digestive process, there will be quite a severe pain in the stomach, especially if any coarse food is taken, which will last through the period of digestion, or until the acidity is reduced. There is likely to be regurgitation, with a sharp acid taste, and the tongue usually has a red, raw appearance.

The third class of cases has acid of the same nature, and is by some authorities considered to be an advance stage of the same trouble, where the gastric glands have become so abnormally irritated that they secrete a continuous supply of free acid, and because of this, the stomach wall is con-

tinually irritated. These cases, when of long-standing, usually suffer from dilatation of the stomach, as a result of the loss of tone of the muscular walls. They then become very serious, as the irritating food lies in the stomach for a long time, not being able to pass out because of the deficiency of muscular movement, and usually ends in vomiting, which comes on from seven to ten hours after the heaviest meals of the day.

These patients, as a rule, become very nervous, and the relation between what is modernly known as neurasthenia and this form of dyspepsia is very close; and it is sometimes very hard to tell which is the original trouble, as the acid dyspepsia in which there is an excess of hydrochloric acid, very often ends in this condition of the nervous system, while neurasthenic patients often have a tendency to develop this form of dyspepsia. This latter class of cases will have to be considered under nervous dyspepsia, and would be curable by very different means from those that are brought on by wrong habits of diet.

The nervous element comes on by irritation of the stomach nerves, which become very tender, and by their close association with the large ganglia of the sympathetic nerves, which are near by, and are sometimes called the abdominal brain, cause them to become very tender and irritable, so that the slightest pressure upon the pit of the stomach will give great pain. Likewise very frequently pains arise by light pressure upon the central portion of the abdomen, because the nerves in this region also become sensitive.

A further condition which is usually developed in these cases is a fullness of the blood-vessels in the region, and there will usually be a strong pulsation over the stomach, which can be felt if the hand be placed upon it with slight pressure. The nervous symptoms, besides those we have mentioned, arising from this condition, will usually be a marked interference with the circulation, the limbs being cold most of the time, through reflex contraction of the blood-vessels; and there are quite often, persistent pains in the back of the head and upper part of the spine. If the case goes on to ulceration, there will likely be a severe localized pain over some portion of the stomach, usually near the pylorus, coming on at a fixed time after meals, and which goes through to the spine opposite, and is quite intense at the latter point.

The causes of these cases of dyspepsia that do not belong to the nervous order, lie in slow diges-

tion and the taking of fermentable food, as in the first class mentioned. The other cases come from overstimulation of the stomach glands, which is brought about by the use of stimulating or rich foods, condiments, alcoholic liquors, or the hasty eating of the food. Most of our cases are referable to these causes. We might add to this a worried digestion. By this we mean a stomach that has to digest its food while the mind is in a constant state of active questioning in regard to the effect of the food that has been taken. We have noticed this effect upon digestion in many cases, and the only remedy for such is absolute forgetfulness of the question of the effects of the food after it is taken.

The treatment for these cases is plainly indicated, but as a rule has to be continued for a very long time, which many of the patients fail to do. In the first class mentioned, caused by organic fermentation, there must be a total abstinence from sugar and the coarser vegetables, and the vegetable starches, pastries and butter, and with this, of course, a removal of all the influences that have acted as previous causes of the slow digestion. Many at once place these patients upon a diet containing quite a porportion of meat, and it is probable that if the meat diet is essential to any class of cases, these are the ones that would be benefited most by it. However, in the majority of cases, a simple diet, made up of well-cooked grains, and strained gruels cooked a long time, soups, and purees made from dried legumes, and unfermented breads, together with the drinking of hot water several hours before meals, so as to remove the contents of the previous meal from the stomach before another meal is taken, will usually act efficiently in bringing about an aseptic condition of the stomach.

Concerning the diet for the other classes of cases we have mentioned, there are various suggestions made by different authorities. It is essential to avoid all condiments and stimulants, and coarse food. Many cases have been placed upon a milk diet to advantage, although there is a tendency for the hyperacidity to coagulate the milk, and some cases will not do well on it. In these cases it is not so necessary to exclude all forms of starch, as in those previously mentioned. We have given farinaceous gruels and unfermented bread-stuffs with advantage. The stomach needs rest, so the diet should be restricted to the minimum that is consistent with the condition of the patient.

Nutritive enemata will temporarily help to support the nutrition in these very bad cases, when the stomach cannot furnish sufficient nourishment. Meat for these cases is contra-indicated, as it has been plainly pointed out by Dujardin-Beaumetz, Bardet, Hayem, Kellogg and others, that meat products are too great a stimulus to the gastric mucous membrane.

One essential in the line of treatment is to increase the mouth digestion as much as possible, as it is often observed that where it is poor, the stomach work is very greatly hindered. Thorough mastication is essential, and dry foods are an advantage in many cases. Hot foods and drinks should be avoided.

The general lines of treatment which have been very beneficial are those which act upon the nervous system, as general tonic baths, massage, and we have used hot and cold to the spine with marked beneficial results.

As to stomach medication, it is very essential not to take anything that irritates; however, it may be necessary to neutralize the increased acidity of the gastric juice temporarily until general remedial agents and dieting can bring about a change. For this purpose, bicarbonate of soda is generally used, though it is somewhat irritating, and should be taken only when acidity is highest, and the stomach contains food. Precipitated chalk, calcined magnesia and subnitrate of bismuth are remedies which are beneficial. Very little or no exercise should be taken during the digestive process in very bad cases, and it is also essential to generalize the circulation as much as possible and get the blood to other regions of the body. For this, appropriate exercise, heat applied to the legs, and massage to the limbs, will often greatly aid in recovery.

PHYSICAL LAWS.

BY DAVID PAULSON, M. D.

THE mysterious forces that are operating in all nature, work in a certain systematic and orderly way, which we call law. Certain conditions must be supplied, or else that power is either hampered or ceases to act altogether. Take for an example, a plant; put it in a cellar, thus shutting it away from the sunlight, and it gradually grows pale, because it is thus made to violate one of the requirements

for its healthy development. Deprive it of water, and it gradually withers, for a law is implanted in its very constitution that it must have a certain amount of moisture to grow.

Plant the average flower in a bed of gravel, and it dies, because it requires certain elements from the soil in order to live, which it cannot draw from the gravel bed. Again, put it under a bell-jar and shut it away from heaven's pure air, and it dies, though it may obey the other laws. We call all these requirements laws of nature, as applied to the plant world. They were established by the Divine Creator, and the plant must be allowed to obey them, or else suffer the penalty of their violation, which is death to it. As we look upon the human body, we see that similar laws have been established in it. Absolutely deprive it of air for a few moments, and it dies. Shut a child away from sunlight, as many of the children are in the tenement districts of our large cities, and we observe upon their countenances precisely the same effect as that of a plant shut away in the cellar. Deprive a human being of food, and he dies for the same reason that a plant dies when deprived of earth. So, we see that man is subject to the same laws of nature in the same way that the plant is.

Some of these laws, if they are broken to the fullest extent, bring death in a very short time, and then we say of the person who violated them that "he committed suicide." However, if an individual only partially breaks them, it requires a longer length of time in bringing sickness and death; it is then often attributed to the mysterious dispensation of Providence. For example: If a man in a fit of despondency hangs himself, thus shutting off the supply of air to his lungs, and dies in a few moments, it is a clear case of suicide. If he accomplishes the same result by shutting himself in a poorly-ventilated, foul-smelling room for a number of months, or even years, it is very often looked upon as something which could not have been prevented. Sickness and premature death do not come without a cause; and when we see them occur in the plant world we at once attribute it to the right cause, but when the same occurs in man, who is subject to exactly the same laws, instead of exerting himself to the utmost to find out where he is out of harmony with nature's laws, he perhaps calmly swallows a few drops of some unknown mixture and then folds his hands as though his duty were done.

Many of the simple ailments which afflict the

human family are only so many danger signals which nature hangs out as a warning to us that we are transgressing her laws, and it is our duty to become intelligent upon the general principles that underlie disease in order that we may correct them, and do the proper thing at the proper time, and thus save a permanent loss of health.

THE MARKINGS OF AGE.

BY MISS IDA POCH.

"WHEN the wrinkles begin to come, and the little silver threads shine here and there, then we are getting old." Is that all? Is it true? Is that really "growing old"? Suppose fifty, sixty, seventy winters have whitened the locks, and added little lines here about the eyes and about the mouth; what of that? Are we therefore necessarily ugly or less pleasing? How came those white hairs and those wrinkles? Ah! that is the *real* question.

I remember years ago, when I was a little school-girl, on coming home from school one day I met an old lady; her hair was white, her face was wrinkled. She was a stranger to me, but I turned and followed her involuntarily, that I might have one more glimpse. Her face was beautiful, and I remember it still as though I had seen it yesterday. I have seen bright, handsome young faces, but I have forgotten them. Among all the faces that memory cherishes, that one has its own place.

To look young—why should we? What does it mean? To act young—that is something. But to *be* young, that is all! That sort of youth that comes from within, with which gray hairs and wrinkles, even the decrepitude of age, have nothing to do. When the heart is pure and young, the world, even through spectacles, looks bright and fresh and green, as in the spring time.

See that gnarled old oak. Through many years it has withstood heat and cold and the fierce battle of the elements. Each successive winter has robbed it of every vestige of beauty, but each succeeding spring it renews its youth. The life current may be a little slower, but ere long it is decked in all its old-time glory, even though it is old and gnarled and seared by the fury of many storms. Its heart is young. Is it not just so with the marks of human age? If we have lived and learned in the school of experience, we carry with us the marks of many conflicts and many strifes, but these are more than wrinkles and gray hairs.

They mark our joys as well as our griefs, for if we are capable of real sorrow, we have before had real joy. Look over your past, and see how true that is. You were happy, and when the scenes were shifted you were sad. It may have left wrinkles and gray hairs, but would you be willing to give up all memory of the dear old sorrow to be rid of these mementoes? Ah, no!

The smooth, bright face of youth mirrors no such conflicts, and it is beautiful in its way, but carry in your mind this picture, and look again after victories have been gained and some losses bravely borne. There are lines, and perhaps a little shadow of sadness; but these very lines and shadow are the markings of the real, true beauty within. Who would choose to be without these lines of expression, "which are the carvings of thought and emotion; and the soft white hair that is like a halo of purity about the face?" Is such a face old? Ah, no—tho the allotted threescore and ten years be nearly run.

Think of the dear old grandmother face; imagine the disappointment it would be to find all the tracings blotted out. Ah, the incongruity! It is bad to look old when one is young, but to put a sixteen-year-old face on a sixty years' experience would be something pitiful. It would make us feel sorry and sad. Why?—Because the strength and the beauty, the helpfulness, are all gone.

Yes, I hear someone say, "That is all very well, but"—yes, but—. That is it exactly. "Hurry and worry are two of the most potent manufacturers of wrinkles." These two are also physical sins—more—moral sins; because we only hurry and worry when we imagine we, our puny selves, must do it all in one short lifetime; when we undertake to swallow the whole sixty years at one gulp; when we clutch at something as substantial as the air, perhaps, for fear the Almighty will let us fall off; when we keep our eyes on the muck rake, and lose sight of the crown waiting for us. Then we strain our eyes, and our muscles grow tense, and we grow old, and those miserable little wrinkles come. Now let go; cultivate (physical faith I call it) relaxation. Become physically as well as morally "as a little child," and then, yes, then "a peace that passeth understanding" takes possession of us, and we are able to be patient and content, and we grow young and strong and full of hope and purpose. That is the secret.

Have you ever noticed that those women who lead broad lives, who are interested in something

more than their own little trials—those who forget self, whose sympathies reach out after others, are young and in the world's work long after their narrow sisters have become too old? Why? Watch such a woman. Do you suppose that she wastes much time groaning over the fact that the years do accumulate? Oh, no. See her in a social gathering. She is so busy making others happy and comfortable that self is quite forgotten, and she is perfectly easy and comfortable. Others bless her and say she has helped them; but through every avenue through which we reach out to others, rich returns of joy and happiness find their way back to us. See, she laughs with those school-girls as happily as though she were one of them. Now some sorrowing soul comes to her for sympathy, and does she fail here? Ah, no. Laughing, they say, makes wrinkles too, but in the ordinary life there is only enough laughter to counterbalance the crying, and there is that much if we allow ourselves to enjoy everything as thoroughly as we do our griefs. Plenty of laughing at good honest fun, and crying with honest sorrow (yours or some one's else), keep you young and fresh, and the sympathies pliable and elastic enough so that you will be able to "laugh with those that laugh, and weep with those that weep." Wrinkles? Why of course there will be lots of them, but no one will see them; they will only see a face that has known joy and sorrow, both of which have left their traces.

I almost hear some one say: "But when your muscles and joints are stiff, as mine are, what are you going to do? You may feel as young as you please, but you are still old and stiff. It's no use anyway; when one is sixty, one must not expect to be as spry as at twenty." Why not? To be sure, one can not always be only twenty years old, nor avoid reaching sixty by and by; but there certainly is a possibility of lessening the marked difference in the physical condition between those two ages. Let the years roll on without any regard for the individual, but the individual may determine what effect those years shall have upon himself.

Now to begin with, there is no such thing as a stiff muscle in health. By stiff muscles we mean one of two conditions—tension or weakness. If the first, the remedy is to be found in exercise that will bring about relaxation. The weakness is to be overcome by exercise to strengthen. If the joints are stiff—do you know what you would do with a door hinge that refused to work? Oil it and work it, certainly. That is just what must be done with

a stiff, creaky joint. You work it, and nature will attend to the oiling. But now suppose you do not let the hinges get stiff and rusty; suppose you work them right along, all those years between twenty and sixty, seventy, eighty, as Bancroft, Gladstone, Bryant, and many others have done, and still do—and do you see any good reason why you should not keep a good degree of the elasticity of twenty? Certainly "it is possible to be seventy years young instead of forty years old," as Oliver W. Holmes expresses it.

Let me whisper a word, my dear sisters. Everything depends upon exercising the trunk, which gives poise and motion, and whenever you can substitute a more deliberate motion or rhythm of work and speech, you are substituting a healthy for a morbid nervous diathesis. Muscles in daily use retain shape, firmness and strength. In women the waist muscles soonest degenerate from disease, "and a woman is twenty years older or younger in looks according to the condition and use of these muscles." So lay aside the corsets and stiff clothing, and go to work. Never mind the wrinkles, the gray hairs, the stiffness, you may grow young again.

Remember the fountain of youth is fed by human sympathies. Take Paul's advice to the Philippians: "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things." Thoughts of hope, joy, charity, peace, write themselves in our faces and in our bodies, and we become truly "living epistles."

THE TUBERCULIN CATTLE TEST.

A St. Louis physician says that "if anything has been demonstrated to a mathematical certainty in experimental pathological medicine and anatomy, it is the fact that tuberculin is a sure test of masked or unrecognized tuberculosis in cattle."

This is the dogmatic, assertive side of the question. Practically, we find that the British Royal Commission on Tuberculosis reported, after a lengthy, careful and painstaking investigation, that the tuberculin test on cattle was untrustworthy.

There are some people in this world who would continue to assert that night was day if they stumbled at every step for want of light.—*The Medical Brief.*

BANDAGING.

BY E. G. WOOD.

(Concluded.)

To secure a light dressing to the palm or back of the hand, in common injuries of those parts, the demi-gauntlet bandage is used. A roll one inch wide and four yards in length is required. In its application we first secure the initial end around the wrist by two circular turns, passing from the ulna to the radial side; then carry the roller obliquely across the back of the hand to the base of the index finger; pass the bandage around this and carry the roller back to the wrist, making one circular turn. It should then be carried across the back of the hand to the base of the next finger, and so successively, until the base of each remaining finger and the thumb have been included. The bandage is then completed by a circular turn around the wrist, and secured with a pin.

To secure dressing to an injured thumb, a spica bandage will prove of the most value. A roll for this purpose should be one inch wide and three yards in length. First secure the bandage by two circular turns around the wrist, then carry the roller obliquely over the ridge of the thumb to its extremity, then make one circular turn around the end of the thumb, and carry it upward over the back of the thumb to the wrist, around which a circular turn is made. The roller is next carried around the thumb and wrist, making a figure of eight turn, each turn overlapping the previous one two-thirds, and each figure of eight turn alternating with a circular turn around the wrist. This is repeated until the thumb is entirely covered in with spica turns, and the bandage is finished by a circular turn around the wrist, and fastened the usual way.

To bandage an injured shoulder, what is called a spica bandage of the shoulder is used. A roller two and one-half inches wide and seven yards in length is required. The initial end of the bandage is secured by two circular turns high up on the arm, next to the axilla. If the right shoulder is to be covered, the bandage is next carried across the chest to the armpit of the opposite side, then around the back of the chest to the point of starting. Then conduct the roll around the arm of this side, up over the shoulder, and across the front of the chest to the opposite armpit, and across the back of the chest to the point of start-

ing. Repeat these turns, each turn overlapping the preceding one about two-thirds, until the shoulder is covered. To make it comfortable for the patient, it is quite necessary that a piece of cotton be placed in the axilla, also that each turn should exactly overlap the previous one; also, that your bandage should present a bandage, the spica turns should be crossed on the center of the shoulder. When this bandage is applied to the left shoulder, after fixing the initial end by circular turns around the arm, the roller should be carried across the back of the chest to opposite armpit, and then brought back in front, to point of starting, and each successive turn applied in the same way as the spica of the right shoulder. Spica of the groin may be applied in the same way as spica of the shoulder.

To secure a dressing to the base of the neck or armpit, a figure of eight of the neck and armpit would be necessary. A roll two inches wide and five yards long is required. The initial end of the bandage is fixed around the neck by two circular turns. If applied to the right armpit, carry the bandage from left to right, over the right shoulder, to the posterior part of the armpit, under which it passes, to ascend in front, over the same shoulder, to the back of the neck. These figure of eight turns around the neck and armpit are repeated, until the desired space is covered, and the bandage is completed by a circular turn around the neck, and fastened.

To bandage an injured foot, a bandage seven yards long and two and one-half inches in width is required. The initial end is placed just above the ankle joint, and secured by two circular turns around the leg. The bandage is then carried obliquely across the top of the instep to the last joint of the toes, at which point a circular turn is made; then about three spiral and reverse spiral turns are made ascending the foot. The roller is next carried directly over the point of the heel, and continued back to the instep, and thence beneath the instep around one side of the heel, and over the instep. From this point it is carried beneath the instep, around the other side of the heel, and up in front, over the ankle, from which point it may be carried up the leg. There are many ways of applying the bandage to the foot, but we think this is the most generally used.

We will now give instruction in applying some of the simpler head bandages. The oblique bandage of the angle of the jaw will be found to

be one of the most useful of the head bandages. It will answer for the purpose of securing dressings to the lower part of the chin, the top of the head, side of the head, and the angle of the jaw. Also may be used in retaining compresses to fracture of the lower jaw. A roller two inches wide and six yards long is required. The initial end is placed in front of and above the left ear, and if the left angle of the jaw is to be covered, the bandage should be carried from left to right, making two complete turns around the head, from the back to the forehead. If the right angle of the jaw is to be covered, the bandage should be carried in the opposite direction. After making two circular turns around the head, the bandage is allowed to drop upon the neck, and is carried forward under the ear and chin to the angle of the jaw. It is then carried upward, close to the edge of the orbit, obliquely over the top of the head, then down behind the right ear, continuing the oblique turn under the chin to the angle of the left jaw. Then it ascends the same as the previous turn. Three or four of these oblique turns are made, each turn overlapping the preceding one, and passing from the edge of the orbit toward the ear, until the space is covered. The bandage is then carried to a point just above the ear on the opposite side, is reversed and finished with one or two circular turns around the head, from the back to the forehead, the extremity being secured by a pin.

The cross bandage of the eye will also be found very useful in retaining dressing to the eye. It may be applied either to one or both eyes. It would be more comfortable to the patient if a flannel roller were used for its application. The roller should be two inches in width and four yards in length. The initial end is placed upon the forehead, and secured by two circular turns around the head from the back to the forehead. The roller is then carried to the back of the head, and left to pass around this low down, and is brought forward below the ear, and passing over the outer portion of the cheek, is carried upward over the base of the nose. It is then conducted over the opposite side of the head, under the crown, and up over the cheek and nose in the same way as the previous turn, until the eye is completely covered. The bandage is then completed by making a circular turn around the head from back to forehead and pinned. If the bandage is to be applied to both eyes, it should be applied to each eye in

turn, with an alternate circle around the head from back to forehead.

The subject thus treated covers the necessary dressings to common injuries. And while it is the province of the physician and surgeon to apply the more difficult ones, with careful study and practice with the bandages previously mentioned, the reader may find them of invaluable service in giving aid to the injured one.

NATURE'S TEACHING.

BY ANNIE PAYSON CALL.

(Concluded.)

THE greatest act, the only act, which we know to be power in itself, is the act of creation. Behind that action there lies a great repose. We are part of creation, we should be moved by its laws. Let us shun everything we see to be in the way of our own best power of action in muscle, nerve, senses, mind, and heart. Who knows the new perception and strength, the increased power for use, that is open to us if we will but cease to be an obstruction.

Freedom within the limits of nature's laws, and, indeed, there is no freedom without those limits, is best studied and realized in the growth of all plants—in the openness of the branch of a vine to receive the sap from the main stem, in the free circulation of the sap in a tree, and in all vegetable organisms.

Imagine the branch of a vine endowed with the power to grow according to the laws which govern it, or to ignore and disobey those laws. Imagine the same branch, having made up its vegetable mind that it could live its own life apart from the vine, twisting its various fibers into all kinds of knots and snarls, according to its own idea of living, so that the sap from the main stem could only reach it in a minimum quantity. What a dearth of flower, leaf, and fruit would appear in the branch! Yet the figure is perfectly illustrative of the way in which most of us are interfering with the best use of the life that is ours.

Freedom is obedience to law. A bridge can be built to stand only in obedience to the laws of mechanics. Electricity can be made a useful power only in exact obedience to the laws that govern it; otherwise it is most destructive. Has man the privilege of disobeying natural laws, only in the use of his own individual powers?—Clearly

not. And why is it that, while recognizing and endeavoring to obey the laws of physics, of mechanics, and all other laws of nature in his work in the world, he so generally defies the same laws in their application to his own being?

The freedom of an animal's body in obeying the animal instincts is beautiful to watch. The grace and power expressed in the freedom of a tiger are wonderful. The freedom in the body of a baby to respond to every motion and expression is exquisite to study. But before most children have been in the world three years, their inherited personal contractions begin, and, unless the little bodies can be watched and trained out of such unnecessary contraction as it appears, and so kept in their own freedom, there comes a time later when, to live to the greatest power for use, they must spend hours in learning to be babies all over again, and then gain a new freedom and natural movement.

The law which perhaps appeals to us most strongly when trying to identify ourselves with nature is the law of rhythm,—action, re-action; action, re-action; action, re-action,—and the two must balance, so that equilibrium is always the result. There is no similar thought that can give us keener pleasure than when we arouse all our imagination, and realize all our power of indentifying ourselves with the workings of a great law, and follow this rhythmic movement until we find rhythm within rhythm—from the rhythmic motion of the planets to the delicate vibrations of heat and light. It is most helpful to make a list of rhythms, and not allow the suggestion of a new rhythm to pass without identifying ourselves with it as fully as our imagination will allow.

We have the rhythm of the seasons, of day and night, of the tides, and of vegetable and animal life, as the various rhythmic motions in the flying of birds. The list will be endless, of course; for the great law rules everything in nature, and our appreciation of it grows as we identify ourselves with its various modes of action.

One hair's variation in the rhythm of the universe would bring destruction; and yet we little individual microcosms are knocking ourselves into chronic states of chaos because we feel that we can be gods and direct our own lives so much better than the God who made us. We are left in freedom, to go according to his laws or against them, and we are generally so convinced that our stupid, short-sighted way is the best, that it is only because

nature tenderly holds to some parts of us and keeps them in rhythm, that we do not hurl ourselves to pieces. *This law of rhythm or of equilibrium in motion and in rest, is the end, aim, and effect of all true physical training for the development and guidance of the body.* Its ruling power is proved in the very construction of the body—the two sides; the circulation of the blood, veins and arteries; the muscles, extensor and flexor; the nerves, sensory and motor.

When the long rest of a body balances the long activity, in day and night; when the shorter rests balance the shorter activity, as in the various opportunities offered through the day for entire rest, if only a minute at a time; when the sensory and motor nerves are clear for impression and expression; when the muscles in parts of the body not needed are entirely quiet, allowing those needed for a certain action to do their perfect work; when the coördination of the muscles in use is so established that the force for a movement is evenly divided; when the flexor rests while its antagonizing muscle works, and *vice versa*—when all this, which is merely *natural power for action and rest*, is automatically established, then the body is ready to obey, and will obey the lightest touch of its owner, going in whatever direction it may be sent, artistic, scientific, or domestic. As this exquisite sense of ease in a natural movement grows upon us, no one can describe the feeling of new power or of positive comfort which comes with it; and yet it is no miracle, it is only natural. The beasts have the same freedom; but they have not the mind to put it to higher uses, or the sense to enjoy its exquisite power.

Often it seems that the care and trouble to get back into nature's ways are more than compensated for in the new appreciation of her laws and their uses. But the body, after all, is merely a servant; and however perfect its training may have been, if the man, the master, puts his natural power to mean or low uses, sooner or later the power will be lost. Self-conscious pride will establish its own contractions. The use of a natural power for evil ends will limit itself sooner or later. The love for unwholesome surroundings will eventually put a check upon a perfectly free body, although sometimes the wonder is that the check is so long in coming. If we have once trained ourselves into natural ways, so akin are the laws of nature and spirit, both must be obeyed; and to rise to our greatest power means always to rise to our

greatest power for use. "A man's life is God's love for the use for which he was made;" and a man's power lies in the best direction of that use. This is a truth as practical as the necessity for walking on the feet with the head up.—*Power through Repose.*

SOME FACTS ABOUT NICOTINE.

THE evil influence of nicotine upon individuals and upon society has been recognized for many years, yet the use of tobacco has steadily increased, until, a few years since, it was hard to find a young man who had strength to refuse the proffered cigar. It was the general introduction of cigarette smoking, and its too manifest destructive influence upon old and young, that seemed to call forth the alarm. To-day, men whose ability in scientific research is known to the world, are giving their attention to this subject. "Facts are stubborn things," and are bound to have their influence on thinking minds. Already we see the small cloud, which we believe bespeaks a storm of sentiment against this evil, such as shall place it beyond the reach of the schoolboy, and place the stigma of addiction to bad habits upon any young man who uses it. The following, taken from the chapter, "A Deceitful Friend," in the "Marvels of Our Bodily Dwelling," by Dr. Mary Wood-Allen, is so full of pertinent truth that we can not refrain from giving our readers the benefit of it:—

"The effect of nicotine on the blood is to make it watery and change the red corpuscles so that they rapidly go to pieces, and the ratio of degenerated corpuscles may go as high as one to ten healthy ones. This condition of the blood is shown by the microscope. A man who had been selecting a microscope, left on the slide a drop of his own blood, which he had used as a test. A professor of microscopy saw the slide and said to the dealer: 'Tell that gentleman, if you can without impertinence, that unless he stops smoking at once, he has not many months to live.' A few weeks later he died, and the doctors called his disease a 'general breaking up.' A Cincinnati paper tells us that at one time the sister-in-law of General Sherman was ill, and it was thought that transfusion of blood might save her life. Blood was therefore conveyed to her arm from that of her son, an apparently vigorous young man, but a great smoker. In a few moments, she exclaimed,

'Who is smoking? I taste tobacco.' No one was smoking, but the small amount of blood drawn from the veins of the young man was so saturated with tobacco that it had been recognized by her sense of taste. She died shortly after with heart failure. This gives an idea of the effects of tobacco in poisoning the blood, and explains how it interferes with the growth of the young. Children grow only by having good blood carried to all parts of the body. If one-tenth of the blood is made of broken down blood-cells, it can not build up strong nerves, muscles, and bone, and so the smoking boy may not grow to full size. This lack of growth does not result alone from a poor quality of blood, but from the debility and irregularity of the heart's action, caused by nicotine. Brodie says: 'It powerfully affects the action of the heart and arteries, producing invariably a weak, tremulous pulse, with all the apparent symptoms of approaching death.'

"Another physician says: 'If we wish at any time to prostrate the powers of life in the most sudden and awful manner, we have but to administer a dose of tobacco, and our object is accomplished. The effect on the heart is not caused by direct action, but by paralyzing the minute vessels which form the batteries of the nervous system. The heart, freed from their control, increases the rapidity of its strokes, with an apparent accession, but with a real waste of force.'

"Under its influence the heart beats more rapidly, but not with the same force, so it does not send a constant stream of blood to all the organs, while at the same time it is exhausted by its own increased labors. If we go back, and read the chapters on the force-pump, and see that the heart must get its rest between beats, and then are told that one doctor who counted his pulse every five minutes during an hour's smoking, calculated that it beat a thousand times too often, we can begin to realize the danger to the heart in the use of tobacco, and will not be surprised to learn that 'the tobacco heart,' as it is called, is on the increase, and many young men are finding untimely graves through making a friend of tobacco.

"Dr. Magruder, medical examiner of the United States Navy, says that one out of every one hundred applicants for enlistment is rejected because of irritable heart from the use of tobacco. Major Houston, of our naval schools, asserts that one-fifth of the boys who apply for admission are rejected on account of heart disease, and that

ninety per cent of those thus rejected have induced the heart disease in themselves by the use of tobacco.

"The deteriorated blood caused by its use has its effects upon the nutrition of all structures, but it has also a direct effect upon the nerves, paralyzing those of sensation and volition. Dr. Newell, of Boston, says: 'Tobacco has eleven special centers of action in the human system, the chief of which are the heart, eyes, spinal cord, genitalia, lungs and the circulation. I have seen nicotine lower the circulation and lessen respiratory power, wither and paralyze the motor column of the spinal cord, produce atrophy and blindness. It produces mental aberration, low spirits, irresolution, the most dismal hypochondria, insomnia, and sometimes, after the victim has retired, frightful shocks, like a discharge of electricity. What do you think of such a friend as that?'

"Do you know that athletics, oarsmen, and pugilists are not allowed to use tobacco, and can you guess why?—It is because they have learned that they can not do their best work when they smoke. Mr. O'Flaherty says: 'I have known men who, previous to their using tobacco, could send a bullet through a target at eight hundred yards, but after they became smokers were so nervous that they could scarcely send one into a haystack at one hundred yards.'

"Physicians are even beginning to ascribe delirium tremens to the exasperating agency of tobacco upon the human nerves and organism; but the evil effects of tobacco are not confined to the physical powers, but are also felt in the intellectual capacity. Presidents of colleges, superintendents of schools, educators everywhere are giving their unqualified testimony upon this point. In 1863, the Emperor Louis Napoleon, learning that paralysis and insanity had increased with the increase of tobacco revenue, ordered an examination of schools and colleges; and this brought to light the fact that the average standing, both as to scholarship and character, was lower among the users of tobacco than among the non-users, and he therefore issued an edict forbidding its use in all the national institutions.

"French medical scientific men made very thorough investigation in regard to the effects of tobacco in the public schools of France, extending from 1876 to 1880, and the result was that the minister of public instruction issued a circular to teachers in all schools of every grade, forbidding

tobacco, as injurious not only to the physical, but to the intellectual development.

(To be continued.)

DIRECTION OF THE BODY IN LOCOMOTION.

BY ANNIE PAYSON CALL.

LIFTING brings us to the use of the entire body, which is considered simply in the most common of all its movements—that of walking.

The rhythm of a perfect walk is not only delightful, but restful; so that having once gained a natural walk, there is no pleasanter way to rest from brain fatigue than by means of this muscle fatigue. And yet we are constantly contradicting and interfering with nature in walking. Women—perhaps partly owing to their unfortunate style of dress—seem to hold themselves together, as if fearing that having once given their muscles free play, they would fall to pieces entirely. Rather than move easily forward, and for fear they might tumble to pieces, they shake their shoulders and hips from side to side, hold their arms perfectly rigid from the shoulders down, and instead of the easy, natural swing that the motion of walking would give to the arms, they go forward and back with no regularity, but are in a chronic state of jerk. The very force used in holding an arm as stiff as the ordinary woman holds it, would be enough to give her an extra mile in every five mile walk. Then again, the muscles of the throat must help, and more than anywhere else is force unnecessarily expended in the waist muscles. They can be very soon felt, pushing with all their might—and it is not a small might—officiously trying to assist in the action of the legs; whereas, if they would only let go, mind their own business, and let the legs swing easily, as if from the shoulders, they might reflect the rhythmic motion, and gain in a true freedom and power. Of course all this waste of force comes from nervous strain, and is nervous strain, and a long walk in the open air, when so much of the new life gained is wrongly expended, does not begin to do the good work that might be accomplished. To walk with your muscles and not use superfluous nervous force is the first thing to be learned, and after or at the same time direct your muscles as nature meant they should be directed,—indeed we might almost say, let nature direct them herself, without our interference.

Hurry with your muscles, and not with your nerves. This tells especially in hurrying for a train, where the nervous anxiety in the fear of losing it wakes all possible unnecessary tension and often impedes the motion instead of assisting it.

So in all hurrying (and the warning can hardly be given too many times) we must use our nerves only as transmitters—calm, well-balanced transmitters—that our muscles may be more efficient and more able servants. The same mistakes of unnecessary tension will be found in running, and, indeed, in all bodily motion, where the machine is not trained to do its work with only the nerves and muscles needed for the purpose.

GOOD PURE AIR.

DON'T be afraid to go out-of-doors because it is a little colder than usual. The cold air will not hurt you if you are properly protected and take exercise enough to keep the circulation active. On the contrary, it will do you good. It will purify your blood, it will strengthen your lungs, it will improve your digestion, it will afford a healthy, natural stimulus to your torpid circulation, and strengthen and energize your whole system. The injury which often results from going into a cold atmosphere is occasioned by a lack of protection to some part of the body, exposure to strong draughts, or from breathing through the mouth. Avoid these, and you are safe. Don't be afraid to sleep in a cold room at night with the window a little open. Cold air, if pure, will not hurt you at night any more than in the day, if you are protected by sufficient clothing, and by breathing through the nostrils. If you do not breathe thus, acquire the habit as soon as possible. If you wish to be subject to colds, coughs, and fevers, shut yourself in close, hot rooms day and night. If you wish to be free from their companionship, always have plenty of pure air to breathe night and day, take daily out-door exercise, regardless of the weather, except as to clothing protection.—*Selected.*

THE portion of the body which most requires protection against cold and wind, is that between the shoulder-blades behind, as it is at this point the lungs are attached to the body, and the blood is easily chilled.—*Hall.*

"SLEEPING ALONE."

GIVE the baby and each child a bed to himself. Have the sleeping room cool and clean, and as bare of furniture as a cell. See that the clothing of the little sleeper is loose at the neck, waist and arms, and keep his head uncovered. If there is anything young animals can not do without it is fresh air, and babies get less than any other class. Through the pores of the skin the body is continually throwing off poisonous vapors. If the head is covered with the bed clothing the unfortunate infant will be breathing bad air. Fashion or no fashion, it is a cruel shame to trim or starch baby's clothing. The average child suffers from overfeeding and overdressing. Let him learn to be a trifle hungry. Don't take him for an oyster or a clam and keep him in a stew all the time. Half the time the child cries he wants fresh air or fresh water. Wiping the lips of a crying baby with cool water will often soothe and refresh him.

BE KIND, BE TRUE.

BE kind, little maiden, be kind;
 In life's busy way you will find
 There is always room for a girl who smiles,
 And with loving service the hour beguiles;
 A lass who is thoughtful as she is fair,
 And for others' wishes has a care;
 Who is quick to see when the heart is sad,
 And is loving and tender to make it glad;
 Who loves her mother and lightens her cares,
 And many a household duty shares;
 Who is kind to the aged and kind to the young,
 And laughing and merry and full of fun;
 There is always love for a girl who is sweet,
 Always a smile her smile to greet;
 Then be kind, little maiden, be kind.

Be true, little laddie, be true,
 From your cap to the sole of your shoe.
 Oh, we love a lad with an honest eye,
 Who scorns deceit, and who hates a lie,
 Whose spirit is brave, and whose heart is pure,
 Whose smile is open, whose promise sure;
 Who makes his mother a friend so near
 He'll listen to nothing she may not hear;
 Who's his father's pride and his sister's joy—
 A hearty, thorough, and manly boy;
 Who loves on the playground a bat and ball,
 But will leave fun bravely at duty's call;
 Who's as pleasant at work as he is at play,
 And takes a step upward with each new day;
 Then be true, little laddie, be true.

—*Selected.*

Mother's Helper

TO A CHILD.

HENRY W. LONGFELLOW.

O CHILD! O new-born denizen
Of life's great city! on thy head
The glory of the morn is shed,
Like a celestial benison!
Here at the portal thou dost stand,
And with thy little hand
Thou openest the mysterious gate
Into the future's undiscovered land.
I see its valves expand,
As at the touch of fate!
Into those realms of love and hate,
Into that darkness blank and drear,
By some prophetic feeling taught,
I launch the bold, adventurous thought,
Freighted with hope and fear;
As upon subterranean streams,
In caverns unexplored and dark,
Men sometimes launch a fragile bark,
Laden with flickering fire,
And watch its swift-receding beams,
Until at length they disappear,
And in the distant dark expire.
By what astrology of fear or hope
Dare I to cast thy horoscope?
Like the new moon thy life appears;
A little strip of silver light,
And winding outward into night
The shadowy disk of future years;
And yet upon its outer rim,
A luminous circle, faint and dim,
And scarcely visible to us here,
Rounds and completes the perfect sphere;
A prophecy and intimation,
A pale and feeble adumbration,
Of the great world of light, that lies
Behind all human destinies.

Ah! If thy fate, with anguish fraught,
Should be to wet the dusty soil
With hot tears and sweat of toil,—
To struggle with imperious thought
Until the overburdened brain,

Weary with labor, faint with pain,
Like a jarred pendulum, retain
Only its motion, not its power,—
Remember, in that perilous hour,
When most afflicted and oppressed,
From labor there shall come forth rest.
And if a more auspicious fate
On thy advancing steps await,
Still let it ever be thy pride
To linger by the laborer's side;
With words of sympathy or song,
To cheer the dreary march along
Of the great army of the poor,
O'er desert sand, o'er dangerous moor.
Nor to thyself the task shall be
Without reward; for thou shalt learn
The wisdom early to discern
True beauty in utility;
As great Pythagoras of yore,
Standing beside the blacksmith's door,
And hearing the hammers, as they smote
The anvils with a different note,
Stole from the varying tones, that hung
Vibrant on every iron tongue,
The secret of the sounding wire,
And formed the seven-chorded lyre.

Enough! I will not play the seer;
I will no longer strive to ope
The mystic volume, where appear
The herald Hope, forerunning Fear,
And Fear the pursuivant of Hope.
Thy destiny remains untold,
For, like Acestes' shaft of old,
The swift thought kindles as it flies,
And burns to ashes in the skies.

DR. TROFTSKI publishes the results of a number of observations made by him to ascertain the effects produced on the temperature and pulse by smoking. He has found that in every case, varying according to the condition of the individual, there is an exhilaration of the pulse rate and a slight elevating of temperature.

THE SICK BABY.

(Continued.)

By far the most common malady of infancy and childhood is indigestion, either of the stomach or bowels, or both. Indeed, upon this a great many other diseases, and we might almost say, most other diseases, depend.

Indigestion in children may be only occasional, or it may be persistent, or chronic. The causes are the same, in the one case only occasionally existing, in the others, continuous. The most frequent cause of this trouble, either in infants, or children past the period of dentition, is improper feeding. Even those babies who are favored with the rare privilege of being nursed from their own mothers' breasts do not altogether escape this cause of indigestion. Breast milk is greatly influenced by various causes, particularly by the food of the mother. Violent and even fatal attacks of indigestion have been experienced by the nursing of the infant following a meal of rich viands, consisting principally of fruit and vegetables. Not all infants are affected in this way, but some most certainly are, and when this is the case, a continual simple diet on the part of the nurse is the price of a healthy digestion in her child, not only for the time being, but to a certain extent, at least, through the whole life; for health in subsequent years depends in large measure upon the foundation laid in infancy.

The state of the stomach in nursing infants is also greatly affected by the moods and morals of the nurse, as well as by her physical conditions. Nursing when very weary, or when the blood and milk are overheated, is apt to be followed by stomach sickness in the child. Even more manifest is the influence of grief or fretfulness or anger. Sudden death of the infant has been known to follow the indulgence of a violent fit of rage on the part of the nurse. General causes serve to weaken the digestive powers, so that for a time very little, if anything, can be taken with safety. This is true during the onset, and, indeed, during the entire course of acute disease.

The process of dentition, in many cases, has the same influence. A hot day, or too great weariness from exercise in walking, or too long abstinence from sleep, has the same influence. At such times the amount of food allowed the child should be more limited than usual, and of the simplest character. The most mischief, however, is wrought in the process of artificial feeding, so much in vogue at the pres-

ent time. Few children, if any, thus brought up, escape frequent attacks of indigestion. Uncleanliness in caring for the utensils used in feeding is often the cause of this trouble.

An unwise choice in the selection of foods is, perhaps, the more frequent cause. Starchy foods invariably produce indigestion. Milk, properly preserved and prepared, certainly furnishes the best nourishment for the growing infant. The same causes hold in the case of children of more advanced age. No child can with perfect safety to its own digestion, partake of the general diet served in most families until at least eight or nine years of age.

The symptoms of indigestion are an aversion to food, very often attended by fever and nausea. When these symptoms only appear, the case is a simple one, and can be controlled by simple means, chief of which is abstinence from food for a short time. When feeding is resumed, it should be done with the greatest care, only the simplest food being allowed.

In some cases, however, the attacks of indigestion are attended with severe nervous symptoms, manifested by the twitching of certain sets of muscles, great restlessness, twitching of the eyelids, rolling up of the eyes, etc. These symptoms bespeak a tendency to convulsions, and demand most prompt and careful attention. It is always a great misfortune for a child to have a convulsion, as the effect upon the nervous system is most pernicious. It is always easier to take on this condition the second time, and the habit being established (which is easily done), it is most difficult to break it, and it may even terminate in that most dreaded affliction, epilepsy. If vomiting does not quickly follow as a result of the trouble, it should be induced. A very good way of doing this in young children is to give a teaspoonful of pulverized alum in simple syrup. Enemas may be administered at the same time, and fomentations applied to the stomach and bowels. If the little one is not relieved, it is probably due to the fact that a portion of the undigested material has passed into the bowel, and is there creating a disturbance. It is doubtless located above the reach of injections, and can best be reached by a laxative potion. Castor-oil is the cheapest and safest remedy. One to two teaspoonfuls, mixed with from two to eight drops of paragogic to prevent griping, should be given. The spiced syrup of rhubarb, the elixir of cascara, or Castoria may take the place of this in cases that

are not so urgent, and where castor-oil is not so readily received.

If the child has fever, it should be placed in a wet-sheet pack, or, at least, a wet towel should be placed about its body, and it should be kept very quiet. These measures, so long as it remains an acute attack of simple indigestion, will be sufficient.

If the symptoms persist, the trouble has taken on a more serious form, and will require more skilled treatment. If the condition has become chronic, various systemic influences will be manifested, as an unhealthy color, usually sallow or pale, a lack of development, nervousness, manifested generally by sleeplessness and grinding of the teeth at night, twitching of the muscles, and various other nervous symptoms often attributed to other causes, most often to the presence of worms, but which are nearly always the result of chronic indigestion. In these cases the most watchful attention should be given to the child's habits, great care being taken that sufficient sleep is secured, and that the food is taken only at regular times, and is of a character best suited to the digestion of the child.

H. S. M.

THE NECESSITY OF TRAINING THE LOWER SENSES.

BY ELIZABETH HARRISON.

THE *moral* value of the complete control of the senses has not been so universally recognized. Bain, and other authorities in mental science, divide the senses into two groups: First, the lower—taste, smell, and touch—as related to organic life, namely, hunger, thirst, repletion, suffocation, warmth, and other sensations whose office relates to the upbuilding of the body; and second, the higher—touch proper, hearing and sight, or those which relate to the outside world. The former are called the *lower* senses, from the fact that they aid less directly the mental growth, by producing less vivid pictures in the mind. For instance, the remembrance called forth by the words, "sweet apple," or "odor of violets," is not so distinct as that given by the words, "a large apple," "blue violets." To a limited extent the world at large has acknowledged this distinction, intellectually, between the lower and the higher senses; has directed the training of the eye and ear, and is now struggling to place in the school curriculum a systematized teaching of the sense of touch.

But the overwhelming *moral* need of mankind lies in the world of the lower senses. The non-training of these is extremely dangerous, because they have direct effect upon the will. Any child turns more quickly from a bad *odor* than from a bad *picture*, comes with more alacrity to get a *sweetmeat* than to hear some *pleasing sound*. Is it not the same with most adults? Are not the invitations to dinner more frequently accepted than those to hear fine music? Are not our sympathies aroused more readily by a tale of physical suffering than by one of demoralizing surroundings? Notwithstanding these facts, the two lower senses of taste and smell have been left almost entirely to the haphazard education of circumstances. Sad indeed have been the results.

As we look abroad over the world, what do we perceive to be the chief cause of the wrecks and ruins? of the wretchedness and misery which lie about us? Why have we on every hand such dwarfed and stunted characters? For what reason do crimes, too polluting to be mentioned save where remedy is sought, poison our moral atmosphere until our great cities become fatal to half the young men and women who come to them? Why do our clergy and other reformers have to labor so hard to attract the hearts of men to what is in itself glorious and beautiful?

Is it not, in a majority of cases, *because mankind has not learned to subordinate the gratification of physical appetite to rational ends?* It is to be seen in every phase of society; from the rich and favored dame, so enervated by soft chairs and tempered lights and luxurious surroundings that she is blind to the sight of misery and deaf to the cry of despair, down through the grades where we find the luxuries of the table the only luxuries indulged in, and "plain living and high thinking" the exception, still farther down from these respectable phases of self-indulgence to the poor drunkard, who sacrifices all comforts of the home, all peace of family life, for the gratification of his insatiable thirst, down to the pitiable wretch who sells her soul that her body may live.

Do not their lives, all of them, contradict those significant questions of the Son of God: "Is not the body more than raiment?" "Is not the life more than meat?"

Let us turn from these distressing pictures to seek such remedy as the scientific investigation of the senses may offer.

The sense of taste has two offices: Relish and

power to discriminate; the first, for the producing of certain pleasant sensations in the mouth or stomach, and the second, for the judging between wholesomeness and unwholesomeness of food, the latter being *taste proper*.

The *former* is the gratification of the sense for the sake of the sensation, and leads through over-indulgence directly into gluttony, which, in its turn, leads to sensuality. In history, not until a nation begins to send far and wide for delicacies and condiments for its markets and tables does it become voluptuous and sensual. When we speak of the "degenerate days of Rome," do not pictures of their overloaded tables rise before the mind's eye?

We need not have turned to other times for illustrations of this truth. Who are the "high livers" of to-day? Are they not too often sensualists as well?

The *latter* use of this organ of sensation leads to discrimination, which discrimination produces wholesome restraint upon undue eating; this restraint engenders self-control, making the *moral will-power over the bodily appetite* man's greatest safeguard in the hour of temptation. In the physical world, we know that rank vegetation needs to be pruned and checked if it is to give man its best fruits; thus nature teaches us *her* lesson.

In the intellectual world, the prophets and seers have always seen the close connection between the right feeding of the body and the control of the sensual appetites. Long ago Plato, in "The Republic," would have all books banished which contained descriptions of the mere pleasures of food, drink and love, classing the three under one head. What an enormous amount of so-called literature would have to be swept out of the libraries to-day, were that mandate sent forth! Dante, with that marvelous vision of his which seemed to see through all disguises and all forms of sin, back to the causes of the same, places gluttony and sensuality in the same circle of the Inferno.

To me, the story of Daniel derives its significance, not so much from the fearless courage which that "Great Heart" dared death in a lion's den, as from the fact that as a child he had moral control enough to turn from the king's sumptuous table and eat simple pulse and drink pure water. Such self-control must produce the courage and the manhood which will die for principle. So, in telling this story, ever loved by childhood, we

always emphasize the earlier struggle and victory rather than the later.

The perfect character is the character with the perfectly controlled will; therefore, the heroes of the kindergarten stories are mightier than they who have taken a city, for they have conquered themselves. The greatest battles of the world are the battles which are fought within the human breast; and, alas, the greatest defeats are here also!

A gifted writer of our own nation, Horace Bushnell, in a book called "Christian Nurture," utters these impressive words: "The child is taken when his training begins, in a state of naturalness as respects all the bodily tastes and tempers, and the endeavor should be to keep him in that key, to let no stimulation of excess or delicacy disturb the simplicity of nature, and no sensual pleasure in the name of food become a want or expectation of the appetite. Any artificial appetite begun is the beginning of distemper, disease and a general disturbance of natural proportion. Intemperance! The woes of intemperate drink, how dismal the story when it is told! how dreadful the picture when we look upon it. From what do the father and mother recoil with a greater and more total horror of feeling than the possibility that their child is to be a drunkard? Little do they remember that he can be, even before he has so much as tasted the cup; and that they themselves can make him so virtually, without meaning it, even before he has gotten his language. Nine-tenths of the intemperate drinking begins, not in grief and destitution, as we often hear, but in vicious *feeding*. Here the scale and order of simplicity is first broken, and then what shall a distempered or distemperate life run to, more certainly than what is intemperate? False feeding engenders false appetite, and when the soul is burning all through in the fires of false appetite, what is that but a universal uneasiness? And what will this uneasiness more naturally do than partake itself to the pleasure and excitement of drink? Much more that is suggestive and helpful to the mother is given in his chapter entitled "Physical Nurture to Be a Means of Grace."

Froebel, from whose eagle eye nothing which related to the child seemed to escape, saw this danger, and in his "Education of Man" says: "In the early years the child's food is a matter of very great importance; not only may the child by this means be made indolent or active, sluggish or mobile, dull or bright, inert or vigorous, but, in-

deed, for his entire life. Impressions, inclinations, appetites, which the child may have derived from his food, the turn it may have given to his senses, and even to his life as a whole, can only with difficulty be set aside, even when the age of self-dependence has been reached; they are one with his whole physical life, and therefore intimately connected with his spiritual life. And again, parents and nurses should ever remember, as underlying every precept in this direction, the following general principle: That simplicity and frugality in food and in other physical needs during the years of childhood, enhance man's power of attaining happiness and vigor—true creativeness in every respect. Who has not noticed in children, overstimulated by spices and excesses of food, appetites of a very low order, from which they can never again be freed—appetites which, even when they seem to have been suppressed, only slumber, and in times of opportunity return with greater power, threatening to rob man of all his dignity and to force him away from his duty?"

Then comes, with an almost audible sigh, these words: "It is by far easier than we think to promote and establish the welfare of mankind. All the means are simple and at hand, yet we see them not. You see them, perhaps, but do not notice them. In their simplicity, availability, and nearness, they seem too insignificant, and we despise them. We seek help from afar, although help is only in and through ourselves. Hence, at a later period half or all our accumulated wealth can not procure for our children what greater insight and keener vision discern as their greatest good. This they must miss, or enjoy but partially or scantily. It might have been theirs in full measure had we expended very much less for their physical comfort." Then he exclaims, in ringing tones, as the enormous significance of the subject grows upon him: "Would that to each young newly-married couple there could be shown, in all its vividness, only one of the sad experiences and observations in its small and seemingly insignificant beginnings, and in its incalculable consequences, that tend utterly to destroy all the good of after education!"

EATING graham bread not only makes the teeth stronger and more healthy, but by its use the teeth are easily kept clean. Greasy food makes it very difficult to keep the teeth in good order.

LESSONS IN NATURE FOR LITTLE ONES.

THERE is much more that we might study about flowers and seeds, but we will leave these for the present and talk about other parts of plants.

Have you ever thought why the good Father made so many leaves on the plants and trees? Do you think it was all to make them more beautiful? It is true the green leaves add much to the beauty of the flowers, but I suspect this was not the only reason. The leaves serve a very important office in the growth of the plant, and for this purpose are made to cover as much surface as possible. You would be surprised to know how much surface is covered by the leaves of an ordinary tree. In the case of one tree, where the surface was estimated, it was found that about five and one-half acres were covered by the foliage of a single tree of ordinary size.

The leaves were made so numerous to produce the shade which is so refreshing in the hot summer season through which we have just passed. But this is not their most important office. However, before we study about the use of the foliage to the plants themselves, we will consider some of the different shapes of leaves. We are now about to enter upon the autumn time, when many of the leaves will be falling, and many will be taking a beautiful coloring. The colors are not so brilliant in this country as in the far east, where Jack Frost nips them suddenly when they are in their prime. But here we have the beautiful shades of brown, which dress the leaves put on as evidence that they have nearly completed their work for the trees that bore them, and will soon take up other duties equally as important to the general good of all, and about which we will study at some future time. But ere this takes place, let us study something of the shapes of leaves, while we have them with us this year.

Have you ever thought how many different shapes of leaves there are, and about the different parts of the leaves, or that they had different parts at all? Let us examine a simple leaf. We can take one from the peach tree or from the apple tree and examine it. We find that it is made up of a large surface, which we will call the *blade*, and at the end of this is a little stem, and down where this stem is attached to the branch, are two tiny leaflets. If we will examine closely we will find that nearly all leaves have these two little leaflets at their base, yet not all. A few do not have the

stem spoken of, but the blade grows directly out from the branch. Now let us examine the blade a little more carefully. Do you see running through it little lines? All leaves have these, and they are arranged in two principal ways in all leaves. Either there are several lines, commencing at the stem or the lower part of the leaf as it grows out from the branch, and running parallel through the leaf, as is the case with the lily of the valley leaf and in the leaves of grasses; or they are netted-veined—a single line running through the center of the leaf, and other lines branching out from these, and many very fine lines branching out from these again, which form the framework of the leaf. These lines which we see through the leaf are called veins. We must remember this name, for we shall use it many times, and we shall use it too in our study of the human body by and by.

These veins serve, not only to form the framework of the leaf, but they are hollow, and furnish a passage for the flow of sap through the leaf. In and about this framework is placed the green pulp of the leaf, which is filled with minute cells, and contains the coloring which gives the beautiful shades of green to our landscapes.

Have you ever noticed how very many different shapes there were? Look at the thin blades of grass; let us examine the leaf of the pine tree, and see how long and narrow it is. This is called a linear, or line-shaped leaf. Others are lance-shaped, when they taper off at the end and have a sharp point like a lance. Others again are oblong, when they are round at both ends, which are nearly alike, and much longer than they are wide. Did you ever see a leaf shaped like a heart? There are such; and others again that have much the shape of a kidney. Let us see how many different shapes of leaves we can find during the next month.

Then there is such a difference in the outline of leaves. Some are scalloped evenly, others have an edge like the teeth of a saw, while others are quite smooth. Some are lobed, like the leaf of the maple and oak, still others are cleft, or divided, being parted nearly down to the point where the leaf joins the stem. There are simple leaves, and there are compound leaves. The leaves of the butternut and locust trees are compound; that is, there are many little leaves on a single stem, which constitute what is called a single leaf. There is another kind of leaf, which encircles the stem entirely. We will find this on the honey-

suckle vines. Other leaves are round, and borne on the top of the stem, as is the case with water lilies.

Would it not be a good plan for our class of little nature students to gather as many leaves of different shapes as they can possibly find, and press them, and make a little book of them for a Christmas present for mama? And we can draw them on our slates, or on blackboards, or on paper, and so learn the different forms. H. S. M.

PICKED UP.

I WANT to say a word about nervous children. Never scold or make fun of them. They suffer enough without your threats or sarcasm. Don't let them know you see their awkwardness when in company, nor their grimaces when alone. A case was reported by the *Boston Globe*, of a boy ten years old who, on being vexed, and often without any apparent provocation, will clench his hands and make the most frightful contortions of the muscles of his face and head, till his poor mother fears he is idiotic. By no means. He is the brightest boy in his class at school, fond of reading and of natural history, but he is of a highly nervous temperament, and has not been taught to control the little wires, so to speak, on which he is strung. This is no single case. There are thousands of children who give way to their nerves in similar fashion. Never whip them, but talk to them about these curious little strings that should be made their servants, not their masters.

A prominent physician in this city says the man or woman who whips a nervous child should for every blow given, receive five, and is on a level with brutes that have no reason. It is our duty to encourage and help them. Be patient with them. They are the making of our future successful men and women, for they will work hard at whatever they undertake. Brace up your own nerves first, and then be indulgent toward the capers of your overnervous children.—*Selected.*

WEAK EYES.—And for sore eyes as well. Bathe in hot water, never using cold. In a severe attack of inflammation of the eyes which we suffered years ago, cold water was used for some time to our injury. When we changed from cold to hot, we obtained speedy relief. Very cold water should not be applied to the eyes at any time.

SUMMER HYGIENE FOR SCHOOL CHILDREN.

At the season of the year when school children have their vacation they should be permitted to develop physically. To this end they need to live out-of-doors, where they can breathe abundant air and have abundant opportunity to use their muscles and all their senses. We have in the past delegated too much influence to food as the chief factor in the growth of the young, but food is of little account unless air and exercise is also provided. We may fatten children, as well as adults, on food, but fat is no important part of brain and muscle, or other protoplasmic structure. The importance of size must not be forgotten. It has been demonstrated that children who have more than ordinary power of mental work, as measured by their progress in their studies, are heavier, taller and larger in girth of chest and in width of head than their less gifted companions of the same age; and this holds whether the general mass of children are taken or those of the same social condition and surroundings; but size depending upon fatty tissues alone is of no value. It must be size dependent upon *living tissues, on muscle, on brain substance, and on size of lungs and digestive organs.*

It is also true that the consequences of long-continued overstrain in a growing boy or girl are most unhappy, and leave a mark which can never be effaced. While overstrain may be recognized by many symptoms, a constant, easily demonstrated, objective symptom is of great value, and such a one is found in the ability to gain weight of good flesh, blood and bone at the normal rate. Persistent loss of weight in an adult is regarded as a matter of grave concern; persistent failure of a child to make the normal growth is not less grave.

To this end, then, during the vacation time, do not forget to give the children a chance to grow larger in frame, broader in chest, keener in sight and hearing, more sensitive in touch and smell, more supple in limb and more capable in anything they undertake to do.—*Journal of Hygiene.*

SELF HELP FOR CHILDREN.

THE best thing that a father can do for his boys or a mother for her girls is to allow them, under wise guidance, to carve their own fortunes. They

should be made to feel that the old home has always for them wide-open doors in case of illness or accident, but, barring these, the child should stand or fall according to his or her own energy and industry. This is by no means the usual course. Parental affection, which is so often full of injudicious weakness, coaxes, persuades, holds up the hands, encourages the lagging feet, and smooths out the wrinkles of existence. The *misfortunes* of life are almost absolutely guaranteed to the young man or woman who has somebody always at hand to brush the obstruction out of the way. It takes but a little while to learn to depend upon somebody else, and wait for the helping hand that seems always ready when most needed. Indifferent success, or, what is much more common, failure, is the legitimate result of this course. It seems very hard to turn the children out to shift for themselves, and few parents have the strength or determination to do it. This is a misfortune, for there would be more strong characters, more brilliant successes, and fewer weak, babyish careers were this plan more generally adopted. As soon as the boys or girls reach a suitable age a special plan of action should be marked out for them. Absolutely imperative demands should be made upon them, and no delinquency in their duties should be excused. It is the passing over of trifles that spoils the average youth. Instead of this, let young people understand that they must come up to a standard of excellence in all of their relations, and their pleasures and privileges must depend upon duty properly performed. The great difficulty with the average career is that the child is taught during its first years by precept and example that all of its shortcomings will be overlooked and all of its follies excused. Being rooted and grounded in this idea, it is not difficult to understand that when the grave responsibilities of life come, the spirit to meet them is lacking, and the discipline that should have been a part of the child's first lessons must be applied in many cases after it has reached maturity.—*Journal of Hygiene.*

A DOCTOR who has had much experience in treating laborers in gas-works says that persons who have become insensible from breathing illuminating gas will usually revive after the administration of a few drops of acetic ether in water.

QUERIES.

1. DEAR EDITOR: Will you kindly tell us through the columns of the JOURNAL the simplest way to break up fever in children when teething?

The period of dentition is one fraught with peculiar danger to the child, not alone or principally because it is the period of dentition, but because it is also the time when the child is first beginning to receive food. It is true in many cases, that the process of teething is attended by a nervous irritability which affects the digestive organs, rendering them less able to digest food which, under other circumstances, would be perfectly proper and easily taken care of. But by far the greater number of cases of illness occurring during dentition are the result of ignorance or carelessness in the matter of feeding. There is now and then a case found where fever is the result purely of nervous irritability, resulting from the advancing teeth, but these cases are few. In such cases the child should be kept quiet, and soothed in every way possible, and measures taken simply to reduce the fever, the most simple and effectual of which are the tepid bath, or the wet-towel pack, as described in an article devoted to the subject in last month's issue. It behooves the mother, however, to look farther for a cause of a fever occurring at this time, and generally it will be found in some trouble of the stomach and bowels. In this case the food should receive the most careful attention. Probably it would be best to withhold nearly all food for a few hours, or a day at least, thus giving the stomach and bowels an opportunity to rest. Accompanying this treatment, measures should be taken to unload the bowels of any irritating or offending matter which may be retained. For this purpose enemas should be given, but usually it will be necessary to administer also a simple laxative in order to clear the upper bowel. For this purpose a little castor-oil, containing four or five drops of paregoric, may be given, or Castoria, syrup of figs, or any other mild laxative. With these measures also, should be combined the measures above referred to in the line of treatment for reducing temperature. We would suggest that when the child shows signs of physical depression during the period of dentition, the food should be very carefully watched, and only the simplest, most easily digested, kinds given, at regular intervals, and in small quantities.

2. Will you please tell us the simplest way to break up a cold in a young child?
H. K.

A cold in a child, as in an adult, is usually easily broken if taken during the period of invasion. In the case of a young child it will be well to limit the quantity of food given, and administer a warm bath. Place the child first in water of the temperature of the regular daily bath, and gradually raise the temperature by slowly adding hot water, which should be stirred well as it is put into the tub. In this way the temperature can be raised to 100 degrees, then by covering the top of the tub with a blanket, perspiration can usually be induced. When this has been accomplished, after remaining in the bath some eight or ten minutes, the child should be removed with the blanket, which has been pinned about its neck and covering the top of the tub, still surrounding it, to avoid exposure, and wrapped in the blanket, it should be allowed to sweat for a short time. A cold cloth should be kept on the head during the treatment. A young infant will usually fall asleep in this condition, and the covering can be removed gradually after a half hour, and the child will cool off while sleeping. Then rub with a dry towel, and afterward rub vigorously with warm sweet oil. The child should be kept warm, but not perspiring, for a few hours.

If the cold affects the nasal passages, so as to produce difficulty in breathing, it can be helped by oiling the nose thoroughly and placing a little oil on a small cotton swab, on the inside of the nose. If the child is hoarse, it may be well to apply fomentations about the throat, following with tepid compresses well covered with flannel. It is not necessary to keep the child from its usual exposure; indeed, when this is done, the duration of the cold is usually prolonged. Very often a cold results from lack of ventilation rather than exposure to low temperature, as is usually supposed. It is well to take the child, well protected, into the fresh air frequently, indeed keeping it in the sunshine as much as possible, of course properly protected, but not so wrapped up as to induce discomfort and perspiration. The practice of rubbing a little vaseline about the shoulders and on the bottoms of the feet is a protection against taking cold, and also aids in the process of recovery after a cold has been contracted.

A VIGOROUS application of the flesh-brush just before going to bed tends to keep the skin in a healthy condition and is also conducive to sleep.

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NATURALIZING VERSUS HUMANIZING.

ALL nature stands with the giant forces of the universe ready and willing to work out her powers in the myriad of forms that clothe the earth in vegetation, and people it with all the varieties of animal life. This ever-pervading force is an expression of Omnipotent Power, quietly working out the destiny of life, quietly unfolding the relation of mind to matter. This force is so often called Mother Nature, because, although omnipotent, yet, motherlike, it broods and fosters that which springs forth into life, with true motherly interest, and guards her operations so jealously that no third party ever gets a patent on her processes.

The ever-changing foliage, with its beautiful tints, the flowering acres of her domain, the labyrinth of shell productions beneath the waves, and the softest tints displayed in the gorgeous Alpine sunset, all declare one and the same power. The perfectness of all her operations is beyond expression. Her all-pervading presence and imponderable forces are so silently at work that it is designated the "still, small voice" of the Spirit, for its workings are indeed noiseless throughout the wide domain wherever its operations are frictionless. Where they are not frictionless, her voice is heard in the mutterings of thunder, the lashing of the waves against a rock-bound coast, or the torrents of Niagara.

So in all animal life, the wonderful powers in operation are quietly weaving the web and woof of

material existence; and with never-failing precision, her touches are silently adding bone to bone, muscle to muscle and nerve-cell to nerve-cell, until the body stands developed, symmetrical and unique, in the universe of created beings, as indeed the masterpiece of her hand. Inside of this body, as well as outside of it, Mother Nature's forces are largely frictionless, and again the silent workings of the still small voice. When not frictionless, inside the body as well as outside, the manifestations of Mother Nature are expressive of turmoil, dissension, until it might veritably be said, under pathological surroundings and increased friction, the roughness of the sea, tidal waves and cyclones, as it were, pass through the body, manifest in functional disturbance and often organic disease of some part of the body. As in the one case, so in the other—the confusion, disturbance, in the diseases of the body, is manifested because of the friction in the bodily domain. As long as the various organs of the body run frictionless, nature is ordering her forces in a still, quiet way, which always results in peace and happiness.

But through the inadvertent doings of man, from the present to the remotest generations of ancestry, irregular habits of life have been putting blocking and clogs in the way of the frictionless running of the body, with the result that the race is weakened, and human wreckage is strewn all along life's pathway. This process we would term humanizing the forces of nature.

Hence all art is an effort on the part of the human being to imitate the operations of nature, and the more perfect the imitation the higher the art. Men take advantage of the tides and winds of the earth, of the altitudes and distances, as well as the occult forces, such as electricity, gravitation, etc., thus appropriating what nature has lavishly provided for the use of man. And indeed he may be much the wiser and stronger for thus appropriating or humanizing natural resources. But unfortunately, the art of appropriating these resources is carried to that extent within the bodily domain that it interferes with the frictionless working of the laws of nature within the body.

Thus artificial heat takes the place of natural heat that the body would supply if her processes

were not interfered with; consequently sitting about the stove in closely built houses and cumbersome clothing, etc., is the result; this interferes very much with nature's production of heat for the body. With the use of the mechanical appliances of the age, vehicles of conveyance, elevators and labor saving machines, man can maintain only a portion of the genuine muscular force and endurance that the laws of nature would otherwise give him.

Artificial digestants, that comprise the larger portion of the pharmaceutical products of hundreds of extensive manufactories, both in this country and Europe, prepare the way for predigested foods, with a view to giving the digestive apparatus of man a rest. This has already contributed much to the weakening of the digestive powers of man, softened the teeth, as well as otherwise infringed upon the legitimate processes of nature.

This kind of humanizing of the processes of Mother Nature makes the life, to a greater or less extent, an artificial one; and the outward appearances of many an individual go a long way toward proving it destructive to the best interests of man, although such an one, with artificial windows before his eyes, plugs of gold in his teeth, weakened digestion, softened muscles, borrowed hair, and sometimes a form that lays very little claim to natural outlines, might not recognize the fact. Such an individual may not be the "new woman," but seems to be the "coming individual."

While most of the above might be necessary in any given case, it is nevertheless a lamentable fact that artificial or unnatural ways of living have made it necessary for art to mitigate their evil results. May we not, then, infer that artificial appropriations from the resources of nature are too often the blocking that hinders the full scope of the natural processes within the body, thus producing the frictional disturbances, and the functional diseases which are the habitual teasers of those who are indisposed?

The humanizing process is as manifest and clearly defined in the various spheres outside, as well as within, the body. An example of this is the diseased condition of cattle which are kept housed and fed according to the convenience of man. It is well-known that cattle with free range, having plenty of food and water, are almost always free from disease, while considerable portions of some herds that have been kept stabled, usually in

dark, underground stables, and fed largely on slops, have contracted various diseases, conspicuous among which is the tubercular disease. The same is noticeable in other domestic animals and household pets, to the extent that they become dangerous to the well-being of those around them. The fact is equally apparent in the vegetable kingdom, and domesticated vegetable products share the same fate.

While very much has been written and said concerning diseased animals, comparatively little has been said about diseased vegetables and fruits, which are equally diseased, if not more so, than the animal kingdom. The humanizing process in this sphere, through various manipulations, crossings, and the like, produces weakened trees, and, with the exception perhaps of the apple tree, especially in colder countries, the cultivated fruit-trees have far less vitality than the uncultivated trees of the forest. As a consequence there is scarcely a fruit-tree that has not its foe in germ life, to which it succumbs, as a rule, in four or five years, if it is not specially treated. This is equally true of grape-vines, with perhaps the exception of a few varieties of the so-called resistive stock. The fruit from such is always more or less diseased, and is capable of producing many of the prevalent acute digestive disorders. What is true of the fruit is equally true of most vegetables. The potato is especially subject to disease.

Thus we find in every sphere the disease-producing elements; and the encouraging feature of the situation lies in the fact that there is implanted in every individual resistive capabilities, so that the system resists, under ordinary circumstances, all diseases that come to it in this way, and the individual is comparatively safe, if he will take ordinary care in the selection of his food.

This resistive force is sustained and developed by living a natural life, or, in other words, living so close to the heart of nature that one will have good muscle, good blood, and good common sense.

No organ of the body should be strained to its utmost. There should be always kept on hand some "reserve force" for every power. This is true especially of the vocal organs. A good voice has been utterly ruined by one effort to reach the extreme limit of its capacity. Many a man has ruined a good physical constitution by a desperate effort to outdo everybody else.

PLEURISY.

PLEURISY is a disease of the pleura, which is the serous lining membrane that surrounds the lung, sack-like. One portion of the pleura is attached to the chest wall, the other portion to the lung, and secretes a viscid kind of fluid, that lubricates the surface of the pleura, to render it frictionless in the movements of the lungs, which occur in the act of breathing.

Pleurisy is an inflammation of a portion, more or less, of this pleura, the first stages of which dry up the secretion of the pleura and inflame it somewhat, making the surface dry and irritable, consequently every breath causes pain in that region. This primary action of the pleurisy goes on until there is a copious supply of fluid produced, which separates the pleura, and makes the act of breathing less painful. But on account of the inflammatory action, the fluid continues to increase until it fills a portion of this sack, which compresses the lungs, this process going on until a large share of the lung may be so compressed into the apex of either the right or the left thoracic cavity that the lung becomes useless. After the fluid has relieved the pleura of the dryness and irritation, there is, if the individual is in a fair degree of health, an inclination for the inflammation in the pleura to subside, and in most cases, as it subsides, if the compression has not been kept up too long, the lung will expand, and usually become as active and normal as before. However, if the inflammation is slow to reduce, and the fluid produced as fast as it is absorbed, until the lung becomes more or less fixed, it is quite often disabled permanently, for after having been kept compressed for so long a time, with some degree of irritation, the lung becomes fixed, after which no measure will succeed in expanding it. Many people in this way are deprived of the use of the whole or a portion of the lung, which materially lessens the vital force of the individual.

Such is the common run of a simple pleurisy. The premonitory symptoms are usually a sharp pain in the side in the right or left lower chest, with more or less chills and fever, or, if it is an old chronic pleurisy, the occasional attacks may come without noticeable chills and fever. The treatment, however, is the same.

These attacks can usually be broken up if the individual be put to bed and have perfect rest, poulticing the diseased portions of the chest until the symptoms subside. If there are any febrile

symptoms, correct them with sponge baths, compresses, etc. The poultice should be made of flaxseed meal, about the consistency of mush that will spread, and should be a half inch in thickness, and large enough to cover a good share of the lower pleural surface. It should be put on as hot as can be borne, and changed when cool. The chest should be kept rubbed and oiled thoroughly with coconut oil. Give a bland diet, and keep the patient at rest until all the symptoms subside. This procedure should break up all cases of pleurisy, and thus avoid the critical conditions that often follow pleurisy that is allowed to take its regular course. The feet should be kept warm and the bowels free. Surround the patient with the necessary conditions for perfect rest of mind and body.

VACATION.

DURING the hot season every one who can should take a vacation—make a change of environment—break up the monotony of the everyday life and seek new faces and places.

Thousands of people go away from the great cities into the country; the mountains and valleys hear voices which are strange to them, and the farmhouses and country hotels are merry with the pleasure-seekers. But there is another side to this matter of vacation. We go away for a change and rest. We get the change, but do we rest? City men and women who go away for a vacation are of a varied class. Some go for social reasons and a mere continuation at an other places of the dissipation incident to high-pressure society life in the city, while others go for a change from work to play and rest, and it is to these our message is especially addressed.

Any person who is earnestly engaged at work for any part of the year is under a constant strain of mental emotions, and nervous and muscular tissue have been wrought upon until the wear and tear are quite as observable as in any other machine, for the human body is in many respects like a great locomotive, which draws its train of human lives over the distances between cities and towns. Mechanical skill has combined in a self-contained machine a wonderful detail of mechanism, which, when put in motion by heat—artificial life—moves and has a being which performs wonderful feats of strength and accomplishes marvelous results. And all this comes from the utilization of three of the

principal elements of food, the carbon of coal, the oxygen of air, and the gas of water. Here we have in duplicate a mechanical form of the human body, which also, like the machine, is dependent for life, being, and power on carbon, oxygen, and water.

The gas of water moves, through the steam-chest of the locomotive, the machinery which enables it to draw a train of cars and three to five hundred persons daily between New York and Buffalo, or enables a person to leave New York in the morning and be in Chicago the next day, a thousand miles away.

It is the blood coursing through the steam-chest, the heart of man, which gives him his power to do the many acts of mind and body which form the routine of daily life. The similarity between the action of the natural and mechanical machines is remarkable.

I once asked a locomotive driver if his engine ever became tired? He answered: "Well, I don't know if you can call it tired; but this I know, that an engine will run just so long and do good work, and then she will gradually run behind and lose time. We can't account for it. And when this does come on, why we just run her into the shop and loosen up the bolts and let her stand. You might say she was tired and wanted rest, for after she has been in the shop for a couple of weeks we take her out, and she will do her work again just as well as ever."

That's it, you see; it's a law of nature affecting animate or inanimate life, that from labor we must turn to rest. This is what vacation time should be to the thousands who seek change. It should be a time of rest. Not a tramping over hill and dale, shooting beautiful birds, or cruelly hooking the graceful fish in streams, or forcing tired nature to make many miles on foot or cycle. This is not what vacation means. Rest should be of the first importance, real relaxation of mind and muscles. Indeed, the rest should extend to the organs of the body specifically. We speak of "brain rest," but we should have heart rest, stomach rest, kidney rest, lung rest, etc. It's no fancy of the mind of a faddist which asserts this; it's absolutely true, naturally and scientifically, that health is promoted and life prolonged by frequently granting to the human body organic rest, more than mere, natural, ordinary every-night slumber. It is most important when we go off, in summer for rest that we really get it, and if we do, then

indeed we will appreciate the true meaning of the word "vacation."—*Sel.*

QUERIES.

31. DEAR EDITOR: Will you please tell me what is the best remedy for wind on the stomach and constipation?

E. M. S.

Wind on the stomach and constipation are simply phases of the same trouble, viz., slow digestion. Poor elimination always goes with slow digestion. Torpid bowels often allow an accumulation of gas which is distressing. The gas is formed by putrefactive changes taking the place of digestive changes. The food being placed in the alimentary canal with a temperature that is natural to that canal, if not promptly acted upon by the juices, and digested, will undergo a process of deterioration, which produces the same elements within the body that putrefactive changes would produce outside of the body, viz., which among other things is gas. Consequently, in slow digestion there is always present more or less gas. With the sluggish elimination of the bowels, gas accumulates and becomes very distressing.

There are two things to be taken into consideration in the treatment of flatulency: First, better elimination, and second, less gas production, which means, first, that the bowel action should be stimulated, and second, the digestive process should be increased. There are many things that can be used with a view of aiding the elimination that are not harmful, but helpful to this condition. Manual manipulations of the bowels, eating an orange on an empty stomach on arising, sometimes a glass of cold water, partaking of prunes, some coarse vegetables and fruits, a bandage wet in salt water wrapped around the bowels at night, olive oil taken in small doses three times a day, and various other measures which might be mentioned, are all good, and some of them will usually help to increase the activity of the bowels. Regularity of habits, the avoidance of eating between meals, and eating too concentrated food, or partaking of pastries, etc., should be observed. Outdoor exercise is one of the very best methods of increasing the digestive processes. Simple living, regular habits, with plenty of sleep, are necessary. Sometimes a half glass of hot water a half hour before eating will be beneficial. In order to get relief from pain in flatulency, we would recommend drinking a glass of hot water, fomentations to the stomach and bowels, and, if necessary, a hot enema.



WHAT WILL YOU TAKE FOR YOUR BOYS?

BY R. FISHER, G. C. T.

A BLOATED rumseller, all barbered and drest
In fashion's late pattern, of broadcloth the best,
With jewels and diamonds, most brilliant and rare,
And rich costly perfumes on kerchief and hair,
Approached the wise fathers of city and state,
In council assembled, the laws to debate,
With the air of a lord or rich potentate,
Said, "What will you take for your boys?"

"My patrons are numbered by hundreds, or more,
And men of all classes, and women a score,
The proud and the humble, the rich and the poor,
Each one is thrice welcome who enters my door.
No bond is required, and no recommend,
If the gold in their purses they're willing to spend
I'll treat them most kindly, you may sure depend.
Say, what will you take for your boys?"

"My cellar is stored with a very fine line
Of whisky and brandy, ale, beer, gin and wine,
So rich and delicious, just fresh from the still,
Best cocktails and toddies, and workingman's swill,
All mixed and compounded in latest fashion,
To suit the strong cravings of lust and passion,
I'll pledge my honor to give satisfaction.
Now what will you take for your boys?"

"My business is proper as proper can be,
And so to continue you all must agree
I must have your sanction to fill up the ranks
So quickly demolished by death's cruel pranks.
The giddy young boyhood, all blooming and bright,
Will make just the fellow for chivalrous knight
For rummie's vast army to ruin and blight.
How much will you take for your boys?"

The council included good deacons and sires,
And lords of creation, whose ardent desires

Were to get glory, and yet to control
The question of temperance in politic role.
"Of course our fair country, so grand and so free,
Must not be encumbered by such coterie
Of temperance fanatics, so loyal we'll be,
But what will we take for our boys?"

"Our city's indebted for service you know,
And we must have money to pay as we go.
The boys are securely protected from harm.
Their mothers have taught them to shun every charm
That comes from the traffic in whisky and rum,
For wretched old drunkards they'd surely become,
And on to destruction would be their sure doom.
Then what will we take for our boys?"

"Then if we don't license this traffic in rum
The druggist will sell it to gentry or bum,
Our town will be bankrupt, with nothing to meet
The city's expenses for marshal and street.
So who could object to this innocent way
Of raising the money, expenses to pay,
By placing our boys in the rumseller's way?
Then this will we take for our boys.
Three hundred, five hundred, one thousand we'll take;
Yes, this will we take for our boys."

A SMALL DEPOSITOR.

BY LOUISE ALSON.

THE bank president walking down the street in the morning sunshine was portly in figure and leisurely in bearing. He was kindly in face and manner. He was a self-made man, and a particularly successful one, but he had not forgotten hard knocks, cold shoulders, and other forlorn conditions belonging to self-making. He did a regular

cash business on the street appreciated only by himself and certain youthful venders of papers. He never made change with small newsboys. He had a soft-principled belief in easing up business matters for youngsters who get up at five in the morning, rain or shine, heat or cold, to sell papers. It had been said—though the bank president had never confessed to such unbusinesslike methods—that he made unremunerative loans of quarters when "luck was down," and the streets particularly cold and icy, and boys' faces blue and pinched. He had a theory that hot meals helped lads endure the cold. He remembered his own enjoyment on winter days of baked beans and coffee.

The bank president was deep in thought this morning over business matters involving thousands.

Down the street, on the alert for something or some one, stood a newsboy, not even the average in size and vigor. His clothes were poor, his face thin, yet a plucky little air of prosperity sat on him. He looked cheerful—he was cheerful—for he whistled, not as one does to keep up his spirits, but from lightness of heart. Occasionally he jingled some coins in his pocket and smiled. Espying the bank president, he rushed toward him.

"Morning paper?" and the boy handed one out with the sure confidence of acceptance. The bank president was a regular customer. The transfer of nickel and paper made, the little fellow—a mere baby to be working for his living—said, "You keep money fer folks, don't ye?"

"Yes, my little man, why?"

"Will ye keep some fer me?"—this said very eagerly.

"Want to open a bank account?" queried the man, looking quizzically into the child's expectant face.

"If that's what ye call it. Will ye keep it fer me?" questioned the boy.

"You're rather a small customer, but I guess you'll do," remarked the banker; for a certain softness under the left side of his overcoat front made havoc with his sense of the unfitness of this child depositor.

So, down the street newsboy and banker walked, the latter oddly interested in this small waif, who thought him a safe keeper of a newsboy's capital.

The teller's window separating them, business affairs began.

"Your name?" and the bank president looked over his gold-rimmed eye-glasses with an air of

formality quite depressing to the boy, standing on tiptoe to see and to be seen.

"James Hanna," answered very timidly.

"The amount you wish to deposit?" the voice very businesslike.

The youngster suddenly felt the magnitude of his request, and the insufficiency of his finances. Falteringly, with the weight of his audacity upon him, he replied, "Seventeen cents." Not a flicker of a smile came to the bank president's face. The lad felt reassured. Gravely the certificate of deposit was made out, and the little fellow handed over two nickels and seven pennies.

"By the way," said the bank president, looking down from his good height upon the tiny bright-faced boy searching for an undilapidated pocket in which to put the precious document that guaranteed his worldly wealth, "we pay people for the use of their money. Call again in a week, and I'll increase your deposit by a five."

The child's face beamed. "If I have luck I'll bring some other money, too," he proudly said.

"Hope you will," answered the big man heartily.

"Interesting depositor, that," he remarked as the child trudged out. "May be a bother to encourage him, but couldn't spoil his pleasure."

Then the bank president began on weighty matters. But more than once that day he smiled and thought: "A boyish prank for two. But bless me! how could I refuse—two nickels, seven pennies, and his confidence in me. I'll make his bank deposit grow. Bless the little chap! the smallest, pluckiest depositor I ever had."

The bank president took his constitutional in the forenoon. He entered his coupé when banking hours were over. Where a broad avenue curved abruptly around a little park, the carriage stopped. A jam of people, cars and vehicles blocked the way. The bank president let down his carriage window to get, if possible, some knowledge of the trouble. He heard it presently from a rough man, who spoke with an unsteady voice: "A little newsboy fell under the the cable-car. It makes a feller weak to see his pluck."

The bank president felt a shock. His mind had dwelt on newsboys some that day.

"Wait here," he said to his black coachman, and, plunging through the crowd, forced his way on until he reached the limit which policemen's power maintained. There he caught a glimpse of a small form. He could not see the face. But soon he heard a voice, shrill and determined, say:

"I tell yer don't yer try to drag me out. You raise that car up."

The bank president feared he knew that voice. He tried again to see the face.

"Get jack-screws; hurry, for God's sake!" the people cried, and men, who boasted of their strength, had faces white as the child's face, whose little body lay pinned down by that great cable-car.

The little fellow piped out clear and strong again: "My name's James Hanna. I want my ma. She lives at"—the bank president lost the rest. He caught the eye of a policeman.

"Just let me get to him. I know the boy."

The grim policeman cleared a path. The next moment the bank president was kneeling by the child, a pity and a tenderness upon his face that made the plucky small voice break and say: "I'm awful glad it's you. I want my ma."

"And you shall have her too, my boy. I'll fetch her. Keep up your grit. Here come the jack-screws."

He wrote down the address and half arose to go, but the child's hand pulled at him. He knelt close by the little form again.

"Be sure to tell ma I ain't hurt much," quite pluckily he said.

"You little hero!" thought the man.

The ambulance stood waiting for the mangled little body. The bank president noted it.

"There'll be no time to lose," he said under his breath. "The child will die from the mere shock."

He gave his orders quickly, clearly. The black face under the tall hat responded with a smile and with the hearty words: "I'll fotch you, sah."

The bank president never had felt joy before in his fleet horses, nor in the dexterous driving of black Abe, but now! that trust in him of one small child could be repaid.

He found the mother, and told the accident as gently as he could. She was too used to sorrow to cry out. She looked so young to be the mother of the boy—so young to have so sad a face. The man's heart felt a sudden wrath that she must suffer yet again.

When they arrived at the great hospital the little fellow lay quite still in his white bed. He gave a cry of joy when they came in. The mother gave one smothered sob. Was *this* her boy? This pitiful, white, death-pinned face? He put his arms around his mother's neck, kissed lovingly the tears away, saying with a brave show of cheer: "Now, ma, don't cry. I ain't hurt much. I don't

feel hardly any pain. I wasn't careless. I tried to get out of the way of one car and the other coming round the corner knocked me down."

The bank president groaned before he thought. Newspapers had denounced a gross neglect right at that spot. And now, this plucky small depositor of his must be the victim. Shame on the cowardly criminal neglect of city and of cable company!

The mother sat beside the bed, her boy's hand close in hers. The little fellow spoke quite strongly:—

"It was a boss day for papers. I'd sold 'em almost all. I say, ma, you don't know how swell I be." He glanced at the bank president with a wan smile. "Just wait till I get well again. I'm going to take care of you because pa—"

A sense of horror checked him. This trouble, that sent him, a little fellow, out upon the street to earn his pennies if he could—that made the mother feel her only hope was in her son—was something to bear silently. Keep down sad comment on your honor, little dying boy. Bear bravely your hard loss of shielding and of happiness. Make no complaint. There may be other things than cable-cars that mangle a child's life, but these, O child, are your own, not a great city's care!

The voice was not so strong but just as brave, when, after a short silence it went on:—

"I want my coat, ma. Where's my coat?"

The nurse laid it across the mother's lap.

The child tried to sit up, but failed. The voice said eagerly:—

"I want to show you something—in the pocket, ma. The banker there, he knows."

The little fingers, now so blue and chill, after some effort, found it—a little folded paper, so white, so utterly unharmed, that its completeness made more terrible the fact of the dear child's body, now so torn.

"Read it, ma, read it."

The tears were blinding her. She could not read.

"Now, ma, don't cry. I ain't hurt much. You ask the doctor there."

The voice was growing weaker.

"I've got some money in the bank. I'm a depositor. I'm saving it for you."

That eager, loving face slipped from the bank president's sight. He wiped his eyes. He turned aside, wrote for a moment upon a slip of paper, then laid it with the other upon the mother's lap.

It bore the same small number—seventeen—increased a thousand fold.

The white face on the pillow did not understand the act. The eyes turned with a wistful look to the strong man. The little voice was quite weak now, but quite courageous.

"I ain't hurt much, but if I don't show up next week—to get that five. I wish—you'd give it to my ma."

"I'll do it, my dear boy."

The wan face brightened. The voice said laboredly, as if in explanation, "I'm trying to look out—for ma—you know."

Brave little heart! to work, to love—to die.

So short, so sad a life! So pitiful a death! Yet neither were quite unavailing. It touched the fatherhood of a great city to have a little newsboy trampled down. It quickened with remorse a railway corporation to know the plucky little lad had died. And always, from that fateful day, two "specials," strong of brawn and strong in law, guarded the dangerous curve.

But who looked out for that first wrong that sent the little fellow out to work upon the street? the wrong that sometimes made him shiver at his father's step? the wrong that made him have poor clothes and poorer home? the wrong that made him—little man!—try, oh, so bravely, to "take care of ma."

It was this wrong that touched the noble indignation of the man who gave to newsboys brighter times; that turned the power of his voice and aid against the wrong of the saloon. Sometimes, when questioned for his zeal, he made reply: "I'm doing it for a depositor—the smallest, pluckiest, most powerful depositor I ever had. He tried in his small way to right the wrong, but—well—he died."

THE SIN OF ANXIETY AND WORRY.

MANY people seem to feel that they are not showing due regard and devotion to their family and friends if they are not in a constant state of anxiety or worry about them. They may think that they have reason for anxiety, but they ought to know that there is no reason *in* anxiety, and that it unfit them to meet the duties of the hour with the serenity and peace which alone can accomplish the best results. Moreover, the persons or things worried over are not benefited, and are sometimes harmed. There are mothers who are in a con-

stant state of unrest when their children are out of sight. They do not know how to fold them around with the safety of trust, and so they wear themselves out and make the children unhappy by indulging day after day in this unseemly state of mind. Sometimes it is the means of terrible disaster, as the following true incident illustrates:—

During the winter of 1888, a storm almost equalling a western blizzard, swept over New England. A young man who had been quite an invalid, but who had recovered sufficiently to be about his work again, was on his way home at the close of the day when this storm was at its height. It was in the city of Hartford, and his way lay through one of the public parks. Midway he came upon a young lady, a stranger to him, who was almost overcome by the snow and wind. He stopped to assist her, and by going ahead to break a path, she was enabled to follow. As they came out onto the public street among the residences, the young man begged the girl either to go home with him to his mother for the night, or else to ask shelter from some other of the residents near. But she absolutely refused to do either, for she said her mother would be crazy if she did not come home that night, and go she must, at any cost. Reluctantly he yielded to her wishes, and undertook to pilot her to her home in a remote part of the city. He succeeded in restoring her to the arms of her mother, but it proved to be at the cost of the laying down of his own earth-life. The mental strain of the undertaking, together with the fatigue and exposure, induced a return of his former malady, from which he never rallied. Thus was a useful career cut short, and grief and loss entailed upon the young man's friends, all because this young lady had been brought up in an atmosphere of unreasoning anxiety.

Certainly when children are of an age to be able to take care of themselves, a common-sense view should teach parents that they will do it. Some unforeseen accident or emergency may be a detaining cause under which properly trained children will govern themselves wisely, and they would be much better fitted to act with composure and judgment in any exigency, if they had the satisfaction of knowing that their parents trusted them, instead of being harassed with thoughts of parental anxiety.

There is still another side to this question which should appeal strongly to all who call themselves Christians. Since God is Omnipotent and Omni-

present Goodness and Love, what is there for us to do but to trust ourselves and all whom we hold dear implicitly to his keeping? To worry and borrow trouble and be anxious, is the blackness of unbelief, and may it not be truly regarded as one thing which is meant by grieving the Spirit? It is our privilege to know the perfect love which casts out fear. "Why are ye fearful?" "Wherefore didst thou doubt?" might be asked with the gentle reproach of the Nazarene of most of his followers.

Under certain sad circumstances, some seem to think it a duty to be anxious. Hannah Whitall Smith tells of a poor mother who felt this way because her son was in prison. But one day the Holy Spirit brought vividly to her remembrance the command, "Be careful [anxious] for nothing," with great emphasis upon the word "nothing." It impressed itself so forcibly upon her mind that she dared no longer be anxious, even about her dear boy. The word "nothing" must cover the prison, and so she committed her son utterly to the Lord in the following prayer: "Lord, my boy is thine. I hand him over to thee. I can not take care of him myself; thou only canst do it, and I leave him with thee. I will not be anxious any more."

The mother kept her word, and from that time forth allowed no anxious thought to lodge in her heart. And God did as he always does—kept that which was committed to him. Prison walls were no barrier to the entrance of the Spirit, and by its silent ministry it cleansed the dear boy's mind and heart from all desires which had formerly polluted him, and when his release finally came, he went out into the world to a life of usefulness and honor.

Oh, let us be satisfied with nothing less than that perfect trust which no circumstance or condition can shake, and so abide continually in the sweet peace of a heart stayed upon the ever-living and ever-loving God! So may we abide securely under the shadow of the Almighty.—*Helen L. Manning.*

A WESTERN paper condenses a whole discourse on the absurdities and inconsistencies of communism in the following item: "At the last Sunday socialistic picnic in Chicago, a banner was displayed with the legend, 'Our children cry for bread.' Three hundred kegs of beer are reported to have been consumed during the festivities. No wonder the children cry for bread!"

"BY BEHOLDING WE BECOME CHANGED."

BY H. CLAY TRUMBULL.

OUR realest selves are our innermost selves. Not our bodies, but our spirits, are our true personality. There is wisdom in the suggestion that we ought not to say that we *have* souls, but rather that we *are* souls, and that we have bodies. Our souls are dependent upon our bodies for the means of knowledge, and for helps to the attainment of character. It is through our bodily senses that we communicate with the world about us, and it is through our bodily senses that all influences for good or for ill come in upon our innermost being, and aid in shaping its very structure and destiny.

What we eat and drink has its part in refining or in debasing both the outer and the inner man, because through the outer man it reaches and affects the man within. Grossness of diet tends to grossness of nature. The stupefying or the exciting of the brain by means of narcotics or stimulants, deadens or destroys the finer qualities of one's being, or arouses and inflames its worst qualities.

What we hear, or what we read, or what we see, that is elevating in tone, is an incitement and a help to the elevation of our natures; while there is a shaping power for evil over our natures in those teachings and promptings of evil which reach us day by day through the avenues of our ears and eyes. But peculiarly is it true that that on which we deliberate, or with consent fix our visual or mental gaze, becomes a shaping and transforming power over our innermost being; so that, as it is true in one sense that what we see shows what we are, in another sense it is true that what we gaze at decides what we shall be.

He who deliberately fixes his gaze on things foul and loathsome, delighting himself in their attractions, will be found to lower himself steadily toward the level of the foul and loathsome; while he whose gaze is constantly fixed on things lovely and admirable, is thereby helped toward the standard of the lovely and admirable. The street scavenger's tastes, trained through his persistent looking for refuse, must be more and more away from the tastes of the purposeful student of the beautiful and elevating in art. And he who seeks his delight in the grosser appeals of art and literature to the natural eye and ear, will become so conformed to that which he thus makes his ideal, that he will no

longer aspire to a higher attainment than that which is found in his present enjoyment.

He whose gaze is fastened on wealth, or station, or popularity, or the pleasures of appetite or passion, as the delight of the eyes, is likely to become conformed in his inner man to the image which through his gaze has come to be the delight of his mind. The admiring gaze attracts and centers and gradually shapes the longings and endeavors of the gazer's entire being, until he lives for that which has held him in thrall, and which is, in fact, the embodiment of his supremest aspirations.

In classic fable, he who looked into the face of the frightful Gorgon became thereby transformed into stone; and because of this transforming power of that face, the face itself was set into the shield of Minerva, the goddess of wisdom, as a means of petrifying every enemy of the goddess who has turned his gaze toward her. In sacred story it is declared that no mere mortal, while still in the flesh, can abide the effulgence of the Divine Presence, or resist the effect of a gaze at Divine Glory. "Thou canst not see my face," says the Lord to Moses; "for man shall not see me and live." And thus is it that both fact and fable illustrate and emphasize the truth that there is a transforming power in a gaze, whether that gaze be toward the good or the evil.

The face or the personal character which holds our gaze fixedly, is likely to be a transforming power in our lives. We gradually come to be like those whom we like, the traits and characteristics which we most admire in them being developed in ourselves through our very delight in those indications and exhibits of character. A child's expression of face, and his modes of speech and conduct, are shaped more by the person on whom his young gaze is fixed with loving admiration, than by any inherited tendencies.

All the way along in life, the admiring gaze is a large factor in the character-shaping of the gazer; and one of God's choicest gifts to any man is the exhibit before him of a winsome, noble character, that shall fix and hold his gaze, as an object of his affectionate interest.

When two persons of widely different grades of character are brought into a union, the question whether they shall finally be one on the higher plane or on the lower, is largely dependent on the relative fixedness of gaze of the one party or of the other. If the gaze of the superior is fixed with greater admiration on the inferior, the tendency of that gaz-

ing will be toward the lower plane; but if the more earnest gaze be of the inferior toward the superior, it will be a means of bringing the two together on the higher plane. It is as though the attraction which held the gaze drew toward the object of attraction all the inner life of the gazer, until that gazer's very being was transformed into the likeness of that at which he gazed.

Peculiarly is it true that he whose gaze is fixed on things beyond the realm of sense is transformed into the likeness of the spiritual realm. He who is always looking above the stars is sure to have that "far-away look" that tells of his communings with the Infinite. Moses, it is said, gave up the pleasures of a royal palace, and made his home in the desert without complaining or reluctance; "for he endured as seeing Him who is invisible." And after Moses had been gazing, his own face shone with the preternatural light that came of his added likeness to the object of his gazing.

The inspired writer, urging the Christian to lay aside every hindrance to success in the race of his earthly life-course, enjoins it upon him to be looking unto Jesus, the Author and Perfecter of our faith; and the beloved disciple assures us that if we will but keep our loving gaze on Him who is invisible, then if He shall be manifested, "we shall be like Him; for we shall see Him even as He is;" or, in other words, to see Him as He is, is equivalent to being in His likeness, transformed through our loving looking toward Him.

And now, as a practical question, the inquiry comes home to us, "At what are we gazing with loving admiration?" Is it the things of the lower nature, or the things of the higher? Is it the things of sense, or the things of spirit? Are we looking intently at the things which give pleasure for a moment, and will then pass away, or at the things which shall endure eternally? Is our gaze toward Jesus with a simple purpose of coming nearer to him, and becoming more like him? or do our eyes turn hither and thither listlessly, or with momentary longings after enjoyments and occupations that would hinder our onward and upward progress? According as our gaze is fixed, so our characters will become. If our gaze is earthward, our likeness shall be of the earth, earthy. If our gaze is on the Lord, then "we all, with unveiled face, reflecting as a mirror the glory of the Lord, are transformed into the same image, from glory to glory, even as from the Lord, the Spirit.—*Seeing and Being.*"

RETREAT NOTES

—Mrs. and Miss Bowen, of San Francisco, have returned for a course of treatment.

—W. F. Grim, of Santa Ana, has come to the Sanitarium for a few weeks' rest and treatment.

—The members of our family were pleased with the recent short visit of Dr. Elise M. Detrick, of San Francisco.

—Dr. J. H. Parker, of Louisiana, who came to California for his health, is now enjoying the benefits of the institution, and deriving much help therefrom.

—Mrs. W. W. Nelson, of Woodland, with her two daughters, are at the Sanitarium, also Mr. and Mrs. J. M. Patton, of San Francisco. They are finding their stay here very profitable.

—Professor and Mrs. Fryer, of Oakland, have again returned to us for treatment, she having suffered from overwork and prostration. Her friends will be glad to know that she is making steady recovery.

—Mr. A. O. Perkins and wife, of Santa Barbara, are with us, she seeking to obtain relief from asthma, from which she has suffered for many years. We are glad to note some improvement in the short time she has been here, and it is hoped that she will obtain perfect relief.

—Mr. Henry Van Clief, of the Veteran's Home, has been with us a few weeks, suffering from conditions which began to trouble him as the effect of wounds received in the war.

It is hoped that he will obtain great relief from the constant suffering to which he has been subjected for the past few years.

—Among those who have come to the Sanitarium to receive help during the past few weeks may be mentioned, Capt. Remmis, of San Francisco, Mrs. G. W. Alexander, of Alameda, Mrs. and Miss Lewis, of Oakland, Mrs. W. C. Culbert, of Alameda, and Miss Alice Schwartz, of Sacramento.

—We have been pleased with the recent visit of Mrs. Hughes and her daughter Mabel, also Miss Schellhorn, of San Francisco. Many of our readers will remember Miss Mabel Hughes as a faithful worker in the institution in years past, and will be glad to know that she is now about to complete a successful course in Cooper Medical College. The faithfulness of her life in the past speaks for her successful career in future practice.

—Nearly all the friends who have visited the Sanitarium during the past few years, will remember Miss S. N. Jewett, and will learn with sadness of her death, which occurred in the early part of September. Her life for the last two months previous to her death was filled with suffering, from the progress of her disease, so that no one can wish her back from the quiet rest which has followed her life of earnestness and patient suffering. The memory of all who knew her will be filled with pleasant thoughts of her interest in and thoughtfulness for others.

BOOK REVIEW.

"THE Marvels of Our Bodily Dwelling" is the title of a novel work on anatomy and physiology which has recently been given to the American public. The book is written in the form of an allegory, the human body being represented as "a house created by the Divine Architect, fitted up with every convenience, divided into many rooms, each with its own appropriate furniture, and adapted to its own special use."

If a man builds a house of brick or stone, he is interested in keeping it in order. If the roof leaks, or a window is broken, he does not think it an evidence of good sense to be indifferent, but he soon attends to it that repairs are made. Yet he can at any time pull down this house and rebuild it, or he could sell it or move out and build another; but he can never have but one bodily dwelling. This he can not sell or give away; he can tear it down, but he can not rebuild it; and when it is once torn down he is obliged to leave it, and at the same time he leaves his earthly life. It is, therefore, very important that he should study this house and its needs, and keep it in good repair, in order that he may enjoy many years of happy and useful occupancy.

The author very artfully describes the bones as the framework of this wonderful dwelling. In this chapter she ex-

plains fully all the bones of the body and their uses, also the joints and ligaments. The muscles constitute the walls of the house, and under this heading is very much that is profitable and suggestive to the young in the way of maintaining good positions and avoiding harmful habits of dress and exercise.

The chapter on the plumbing of this wonderful house gives a description of the minute tubes which ramify the walls, and gives some practical rules about bathing, which are most helpful.

In the cupola, or upper story, is contained the wonderful machinery which controls all the other departments of the house. Under this is given a description of the brain and its connections with the body. The stomach represents the kitchen, in the walls of which are little depressions, "which may be called cupboards, where Gastric Juice [personified as the cook] finds the materials for his work. All the material for the nourishment and repair of the house passes through this room. It is quite important that we understand the laws governing every part of the house, which are given by the Divine Architect. One of those laws is that all food must be at blood-heat to be uninjurious, and drinking large quantities of cold water while eating will put out the kitchen fires and hinder the work of the cook. We interfere with the work of the stomach by eating too much, for when the walls are greatly distended

they cannot easily contract, and so the stomach digestion is hindered. . . . To eat between meals gives the cook extra labor, and then he can do nothing well. You can imagine how cross you would be if you had a cake in the oven half baked and some one should open the oven door and stir in a quantity of raw material, even if it were the same material as that of which the cake is made; and how much more angry you would be if apples, nuts or candy were stirred in. You ought therefore to be as thoughtful of your bodily cook as you would like others to be if you were cooking."

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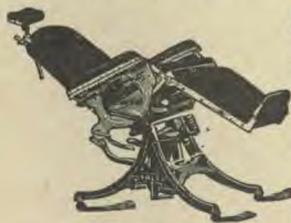


Fig. V—Semi-Reclining.

- 1st. Raised by foot and lowered by automatic device.—Fig. I.
- 2nd. Raising and lowering without revolving the upper part of the chair.—Fig. VII.
- 3rd. Obtaining height of 39½ inches.—Fig. VII.
- 4th. As strong in the highest, as when in the lowest position.—Fig. VII.
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Fig. XVII—Dorsal Position.

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