

GOOD HEALTH



May, 1904.

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CHAUTAQUA SCHOOL OF
HEALTH: Grace and Beauty
Exercises (*Illustrated*); Food
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The Cooling Pack.
Hundred Year Club.
Editorial.

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" The grass is ours, and sweeter sounds than these,
As down we couch us by the babbling spring,
And overhead we hear the whisper of the branching trees.

" Ah, sweet is this, and sweeter in the spring,
When the sun goes through all the balmy hours,
And all the green earth's lap is filled with flowers "

—*Lucretius.*

GOOD HEALTH

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BEAUTY BY HEALTH CULTURE

BY J. H. KELLOGG, M. D.

THE person who would become beautiful must recognize every law of health. Most people, especially women, desire a beautiful complexion. Too often, however, their interest in the subject of complexion is confined wholly to that portion of the skin which is ordinarily visible, particularly the face and hands. This solicitude for a clear, transparent skin is perfectly proper, but it should extend to the whole body; for such a condition of the skin is one of the signs of health.

A course of life which will produce health and activity of the whole skin will necessarily result in a beautiful facial complexion. There is, in fact, no way by which the skin of the face can be made so certainly and permanently beautiful as by adopting such a regimen as shall bring about health to the whole skin. For this the daily bath, followed by adequate rubbing, is one of the most essential measures. A warm bath taken at night two or three times a week and a cold sponge, plunge, spray, or shower bath every morning, is a practice which has wonderful power as a beautifier. The cold morning bath, followed by a vigorous walk in the cool fresh morning air for fifteen or thirty minutes, will bring color to the cheeks and brightness to the eyes more rapidly than any medicinal tonic known to the materia medica.

Thin features, pale lips, yellow teeth, dull eyes, sallow skin, betokening premature decay, are not by any means, as is generally supposed, the result of overwork or overstudy, but rather neglect to cultivate health by correct habits of eating, drinking, and life in general.

"As a man eateth, so is he," runs an old German proverb. Eating is a divine ministration by which the Creator puts into our bodies his own energy. This energy is passed down in the sunbeam, and by the incessant activity of Omnipotence is woven into the life, strength, and beauty of fruits, nuts, and grains—that portion of nature's great storehouse of energy, the vegetable kingdom, which God has especially appropriated for the use of man as food.

It is entirely within our power to choose whether we will supply the daily needs of the body for life and energy from sources which are pure, sweet, good, and beautiful, with bread of heaven direct from the Divine laboratory in which it is especially compounded for man's use; or whether we will build our bodies of such rubbish as pickles, chow-chow, blistering condiments, dyspepsia-producing pastry, painted confectionery, ices, brandied fruits, putrefying stuffs like cheese and sauerkraut, the disease-contaminated corpses of animals, with their livers,

lungs, kidneys, brains, and other entrails and offal of various sorts.

The things God made for man to eat are in themselves beautiful, and impart beauty to the eater. The apple, the peach, the plum, the cherry, are beautiful everywhere. An ox, a sheep, a bird, is beautiful as it stands in life, trembling with throbbing impulses, eyes flashing with intelligence; but lying pulseless, flayed, blood-stained, eviscerated, it is a thing hideous, repulsive, and loathsome. Only when it has been dressed and garnished and disguised by those "layers out of corpses," as Plutarch calls them,—the "butchers and cooks"—are we able to endure the sight of it.

What awful depravity of taste permits us to turn away from the delectable things which heaven hands down to us from the trees, in nuts and fruits of infinite variety in form, flavor, color, inviting alike to all the senses, and to plunge down beneath the scum of a stagnant pool to seize a sprawling frog and devour it like a hawk or a turkey-buzzard, or to descend still deeper into the slime and ooze of the ocean bottom to fish out a germ-infected oyster.

The juices of fruits, and especially the acids which most of them contain, are exceedingly valuable for blood purifying. Used freely, fruit stimulates the action of the liver, the kidneys, and the bowels. In this way the body is freed from impurities, the skin cleared, and all the bodily functions quickened.

Other foods besides the fruits are as excellent as essential. Nuts and

grains in various forms afford the necessary food elements. Many a woman whose face was disfigured by ugly blotches and pimples has acquired a skin as fair as an infant's by adopting a diet consisting of granose, nuts or nut products, and fruits. It must be added, however, that it is easy to spoil the most wholesome and effective beautifying diet by the use of tea or coffee.

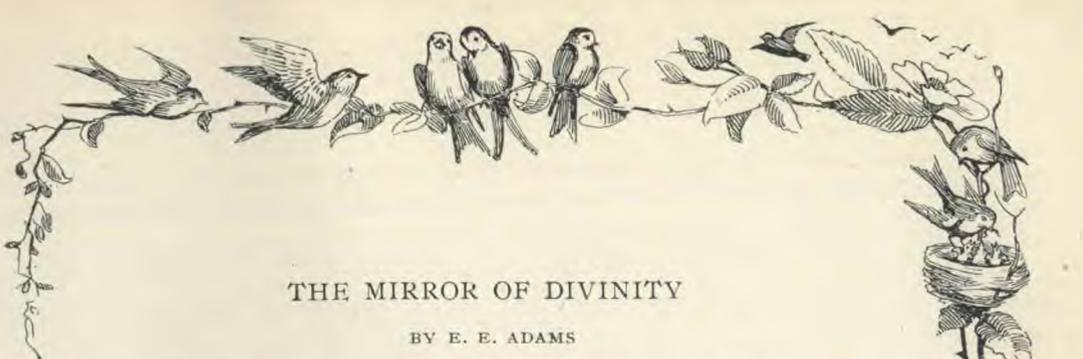
If one would become beautiful, every habit of life must be carefully scrutinized. Adequate sleep, as well as abundant exercise, proper diet, and the daily bath, must be recognized as essential, for sleep is nature's great restorer and healer. An abundance of fresh air in the dwelling night and day; proper clothing, especially the avoidance of overheating the body with excessive clothing, and the selection of the right materials to suit the varying atmospheric conditions, are all matters worthy of consideration by one whose ideal is beauty.

Real beauty is more than skin deep. To be handsome is one thing; to be beautiful is quite another. A handsome face may be so marred by unbeautiful signs hung out upon it as to be positively repulsive; while a less regularly formed countenance may be fairly luminous with the beauty of character behind it. Goodness, health, grace, beauty, are one and the same. Goodness is the perfection or beauty of character; health, the perfection or beauty of body; and grace, the beauty of activity.

OUT OF DOORS

In the urgent solitudes
Lies the spur to larger needs
In the friendship of the trees
Dwell all sweet serenities.

—*Ethelwyn Wetherald.*



THE MIRROR OF DIVINITY

BY E. E. ADAMS

BESIDE the throne the burning seraphim sings ceaselessly the everlasting hymn:
"Thrice Holy is the Lord of Hosts, and all the spacious earth is of his glory full!"
And from the sky, the mountains, seas, and sod, the mighty chorus swells: "Behold
your God!"

HIS GLORY

The glorious sun and radiant silver moon are servants at His gates, reflecting down
Upon the waiting earth the faintest gleams of the transcendent, uncreated beams
Of righteousness that from his being spring, and healing splendor shed on everything.

HIS BEAUTY

When thus the light of His sweet face is shed o'er all the earth, the things that He has
made,
Beholding and adoring, each must take something of his fair image; earth to make
Like unto Paradise, where all things fair the beauty of his holiness declare.

HIS LIFE

The thrill of life in each created thing is the pulsation from his heart—the Spring,
The secret center, and the soul of all;—from insect mote, to mighty, flaming ball,
"All are but parts of one stupendous whole whose body nature is, and God the soul."

HIS LAW

One law the boundless universe controls: the lily grows, bird flies, and planet rolls,
All governed by the same great law of love—the Spirit of His life that bids them move
Guides each to its appointed destiny, keeps all in everlasting harmony.

HIS LOVE

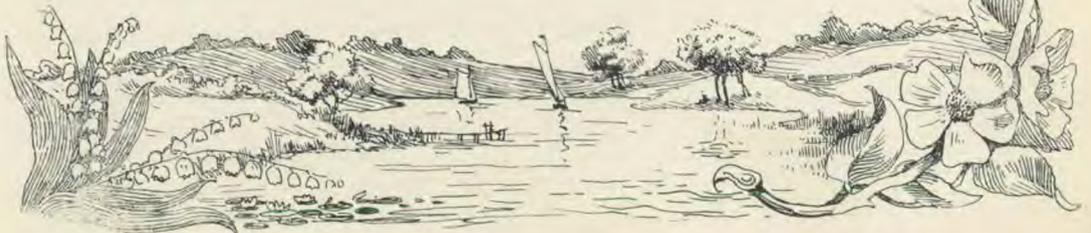
The love of mother for her offspring dear is but a spark of the celestial fire,
The Light of life that glows in every breast; *He* rocks each cradle, broods o'er every
nest,
And, the fierce savage and wild beast among, yields milk of loving-kindness to their young.

HIS POWER

Girded with strength, He sets the mountains fast; controls the raging seas; sends forth the
blast
Out of his treasures; speaks in the peals of mighty, rolling thunder; but reveals
Not less his power in the growing blade that silently through earth its way has made.

HIS FULNESS

The fulness dwelling in him He outpours in life's glad river, that o'erflows and stores
The earth with plenty; clothes the fields with corn; sends springs into the valleys, rush-
ing on
To mighty rivers, that refresh the land and spread a common feast on every hand.



THE QUEST FOR BEAUTY

BY CARRIE L. GROUT

HUMAN life ought to be beautiful and joyous, in harmony with the beautiful world, filled with joyous life, which it was created to inhabit.

Nature and Revelation alike teach that "Wisdom's ways are pleasantness;" and yet, in spite of a persistent, intense, and ineradicable desire for beauty and happiness, humanity is apt to be unsightly and unhappy.

What is the cause of this incongruity? It may be partly due to the medieval notion that God is not pleased with our happiness, and that pain and sorrow must be borne with patience and resignation, since they are to prepare us for a hereafter that shall be more to our liking. A truer conception is that pain and suffering are results of the transgression of God's law of life, and are permitted as a warning,—the whips to drive us back into the right way,—and that we should make all haste to be rid of them, by coming into harmony with the principles of life.

In my girlhood it was considered almost disgraceful for a girl to wish to be beautiful. She was gravely admonished that "Handsome is that handsome does," a proverb invented by the ugliest of men; and later on she was duly instructed that to inform her mind and cultivate her heart was the best way to win admiration—and a husband, who was indispensable as a provider in those days.

It is not true that pretty manners make pretty women; many a smart, capable woman is an offense to the eye. Neither is there any truth in that other proverb, that "beauty is only skin deep."

To faint easily was considered be-

coming in the girl of the past generation, and to eat lightly was ladylike. Cosmetics were secretly used for the complexion, and corsets were put on, the sooner the better, to mold the form into the wasp-like proportions supposed to be the height of elegance.

The reign of beauty, such as it was, was brief; for a woman was apt to be faded, bent, and worn at thirty-five, almost ready to retire to the refuge of the chimney-corner and the knitting-needles.

A change has come over the spirit of our lives, and a thoroughly beautiful man or woman is now occasionally seen, though still the exception rather than the rule; but an exception which indicates the possibilities of the future.

Old age, too, has lost its terrors for women as well as for men, and is not only charming in its way, but eminently active and useful.

The phrase, "radiant life," has crept into our literature, and no up-to-date periodical is quite complete without its "beauty hints," which are openly and gratefully accepted by the women, and secretly used by many men, to their great advantage.

Carefully analyzed, these beauty hints reveal themselves as health hints made attractive,—sugar-coated pills, as it were; for the desire for beauty is really stronger than the desire for health.

Beauty is the expression of well-being. A clear, shining complexion signifies good food, good digestion, proper exercise, and thorough cleanliness. It can be secured in no other way.

Bright eyes and soft, abundant, silky hair are also a direct result of well-nourished, actively circulating blood.

And last, but by no means least, a sound, sane, practically useful brain can be had on no other terms. It must be supplied by rich, abundant, actively circulating blood.

A good form is one that is symmetrically developed. It is the supreme prerogative of the human animal to stand upright, up-looking. No form can be beautiful that is rigid, inflexible, or bent out of proportion; and no form need be that way. At forty one has the form one has chosen; habit has fixed one into rigidity, or has kept the bones and muscles so supple and free that grace is the result.

Anger, discouragement, and discontent are ugly imps which put their marks on many faces; and what is more, they hinder the healthful activity of vital processes. They generally result from bad physical conditions, and then they perpetuate the very conditions which caused them.

Who has not, when feeling discouraged and grumpy, found after a brisk walk in the open air that the mind was in a happier frame?

Weariness is often the real cause of bad temper, and a quiet hour, or day, or week, as the case may be, in bed would in many cases restore amiability and cheerfulness, and make life a song instead of a burden.

Over-eating is the parent of a brood of bad humors which medicine strives in vain to dispel; and also of that weight of flesh that so many of our well-to-do, overfed, and lazy people groan under, and pay doctors and masseurs and charlatans to rid them of. Anything, everything, they will try, except the one easy and certain cure of fasting and exercise.

The man or the woman, well-fed, well-groomed, well-dressed, too, if you please, and worked to the measure of the strength, is seldom a pessimist. The world is a pleasant place to such, and they make it pleasanter to others.

"Let me have men about me that are fat,
Sleek-headed men, and such as sleep o'
nights.

Yond' Cassius has a lean and hungry look;
He thinks too much,—such men are dan-
gerous."

A GLIMPSE OF JAPANESE LIFE

BY JOHN A. BRUNSON

THE Japanese are a highly civilized and cultured people. True, they are called heathen by those who live in Christian countries, and heathen they are, because they know not God. But many in our own favored land, reared beneath the sound of the gospel, are heathen also; for they are not personally acquainted with God, neither do they understand his ways and his wisdom. Christianity and civilization are by no means synonymous terms, though seemingly confounded by many. Civilization apart from a personal knowledge of

God and a humble reliance upon him for guidance and support, is superficial. It is only a thin veneer that conceals the tutored but untamed savagery of the natural man.

The civilization of Japan differs very much, of course, from our own. The Japanese habits of thought, their religious and social customs, their methods of entertainment, their amusements, style of dress, architectural designs, are all Oriental, and the newcomer finds himself embarrassed with a sense of strangeness and awkwardness. But the



THE FAMILY AT DINNER.

cordial greeting extended to him by the people and the courtesy with which he is uniformly treated, give him the comforting assurance that, though a stranger, yet he is entirely welcome, for a more genuinely hospitable and kind-hearted people than the Japanese cannot be found.

Many of their customs strike us at first as being odd, but when we reflect a moment we discover that they are based on common sense. For example, on entering a Japanese home one is requested to remove his shoes and leave them at the door. To understand the reason for this requirement we must remember two things:—

First, the floors are all covered with *ta-ta-mi* instead of carpets or rugs. A *ta-ta-mi* is a mat about two inches thick, six feet long, and three feet broad, made of straw tightly compressed and covered with matting. These *ta-ta-mi* are placed side by side upon the board floor

until the entire space of the floor is covered. Every room or hall is made to accommodate a given number, and the size of a room is computed by the number of *ta-ta-mi* it contains. Thus, instead of speaking of a room twelve by fifteen, the Japanese would say, a room of ten *ta-ta-mi*. These *ta-ta-mi* form for the floor a covering that is neat, comfortable, and durable, provided shoes are not worn in the house. Hence the custom of leaving the shoes at the door.

Secondly, we must remember that the Japanese sit upon the floor, which, in order to prevent soiling their clothes, must be kept as clean as we keep our chairs and settees. This is accomplished quite effectually by requiring all to leave their shoes, with their accumulation of dust and dirt, at the door, and enter the house barefooted or in socks only. Frequently the host provides for his guest straw sandals for indoor use.

Perhaps the question will arise in some minds, Why do the Japanese sit on the floor instead of chairs? The simple answer is, Because they prefer it. They are trained from infancy to sit upon the floor with their feet beneath them. Mothers in teaching their children to sit alone teach them to sit with their limbs beneath them, and not outstretched as in Western countries. Consequently when the state of adulthood is reached, chairs and seats are uncomfortable. I remember once visiting a large church in Kobé, built according to Western style and equipped with pulpit and pews. During the services, which were somewhat prolonged, many of the worshipers grew tired of their seats, and in order to rest themselves, drew up their feet and sat through the remainder of the worship with their feet on top of the pew, adjusted beneath

them in true Japanese fashion. One often sees a similar sight in a railway train.

In a Japanese home there are no chairs or seats of any kind; and outside of the kitchen even tables are rare. They have no dining-table around which all the members of the family sit, and from which a common meal is eaten. But, instead, each is served from a small tray placed before him on the floor by the waiter. In eating, they use neither spoon, knife, nor fork. The food is conveyed to the mouth by means of "chop-sticks," in the use of which manual dexterity is easily acquired.

The staple article of diet is rice, which is produced in large quantities throughout the Empire, and is sold at a moderate price, so that many of the poor can afford it. In cooking the rice it is first boiled until the grains are soft, and



THE VEGETABLE VENDER

then it is steamed till it is comparatively dry. It is cooked in clear water without even the addition of salt, and is served in little bowls without milk, sugar, gravy, or butter. The Japanese relish the taste of rice, and do not require the addition of anything else in order to render it palatable.

Peas and beans are also freely eaten. *Tofu*, or "bean curd," as the foreigners call it, is a favorite dish. The beans are first ground fine in hand-mills. These mills consist of two stone discs about eighteen inches in diameter, and perhaps six or eight in thickness, one being placed above the other. To the upper stone is attached a handle by which it is turned, and the motor power is supplied by two women. It is a familiar sight in Japan to see "two women grinding at the mill." The husks and coarser parts of the bean flour are then carefully removed, and the fine white residuum is mixed with water and pressed into squares which somewhat resemble cottage cheese in appearance. The *tofu* is then boiled, and is both palatable and nutritious, but rather concentrated.

Fish is also a common article of food. Japan is one of the greatest fish markets in the world. The surrounding waters abound in edible fish of various kinds, and there are thousands of Japanese whose only method of gaining a living is by fishing. The price of fish is quite cheap. A few cents will purchase a good mess.

One of the most common ways of preparing fish is by baking. A fish larger than a man's hand is nicely dressed, baked and served whole, and it is interesting to watch the nimble-fingered Japanese with their "chopsticks" adroitly pick up the flesh without touching it with their hands.

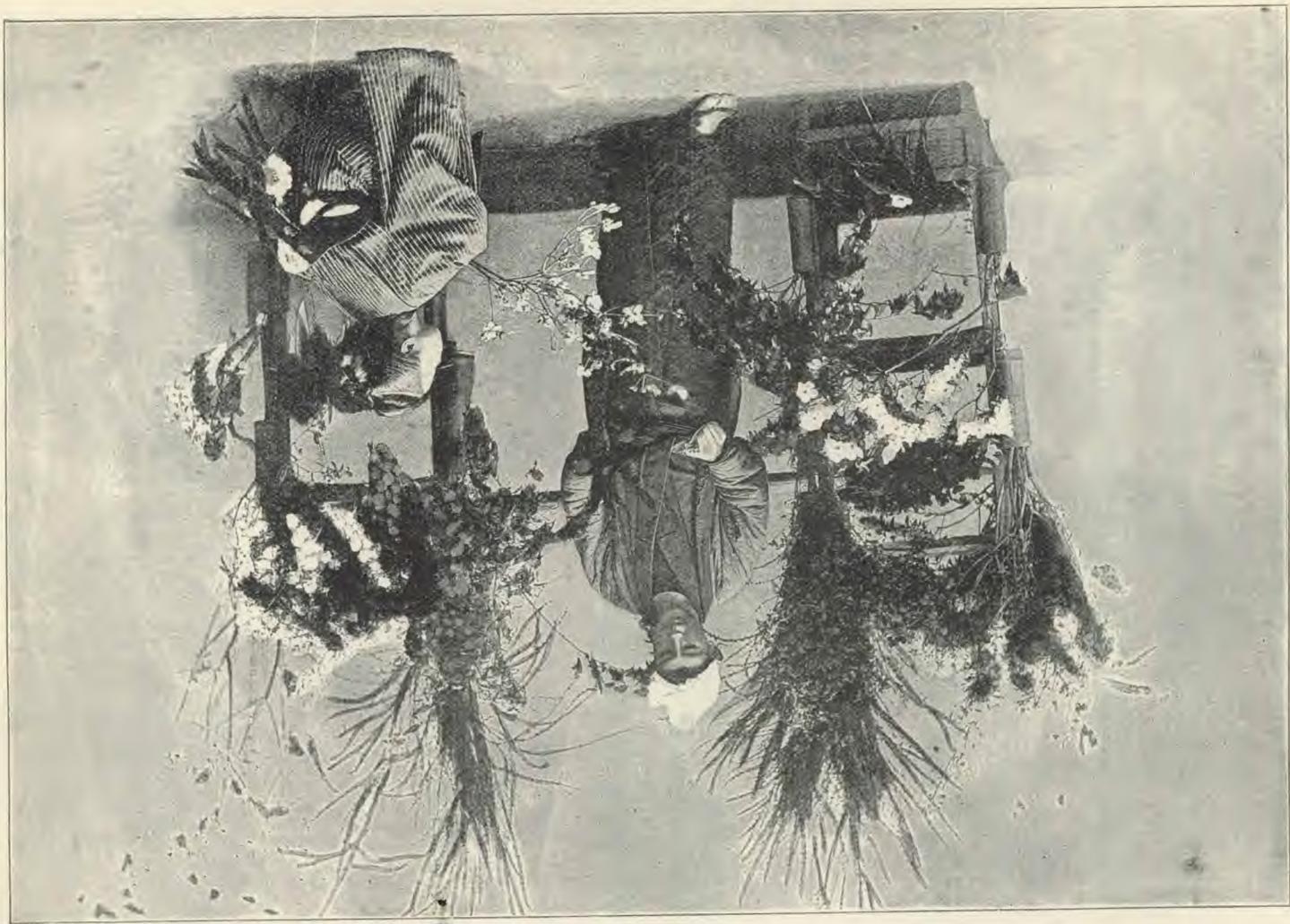
Fish is also served raw while yet

fresh — the fresher the better. As soon as it is taken from the water it is dressed and cut into small squares from which all bones are carefully taken, and served with *shoyu*, a kind of Japanese Worcester sauce. The idea of eating fresh raw fish is repulsive to the uninitiated Westerner, and he shudders at the thought, exclaiming, "Miserable heathen!" But why should he? He eats the raw oyster, sleek, slimy, and slippery, and considers it a delicacy. Why, then, should he consider the eating of a piece of clean, well-dressed raw fish by a Japanese as a dietetic abomination, when he himself is often guilty of an act even more reprehensible?

Vegetables of various kinds are commonly used. One can procure from the Japanese market or from the vegetable venders, beets, radishes, onions, cauliflower, tomatoes, squashes, etc. In the spring the bamboo sprouts are gathered while young, tender, and succulent, and are eaten with great relish. The voice of the countryman is frequently heard as he walks the streets and cries, "*Take no ko, Take no ko,*" which means, literally, "child of the bamboo, child of the bamboo," as the young sprouts are poetically called. These sprouts, when tender and well boiled, have a very delicate flavor, resembling, somewhat, that of the so-called palmetto cabbage which is so savory to the Floridian's palate.

The Japanese are a flower-loving people, and are natural horticulturists. They can transform an unsightly hillside, by means of a few touches here and there, as if by magic, into a thing of charming beauty and perennial joy. Perhaps no other nation takes so much pleasure in the sight of beautiful flowers as do the Japanese. Acres of peach and cherry trees are cultivated; not for the fruit, but for the

JAPANESE FLOWER VENDER.



flowers only. They have succeeded in developing the peach blossom into a rose with several rows of petals. The trees that produce such flowers do not bear fruit, but the beauty of the flower is compensation enough for the nature-loving, esthetic Japanese. The seasons for "cherry-blossom viewing," "iris viewing," "lotus viewing," and "wistaria viewing" are times of delight to the soul of every Japanese, and annual excursions to these places of attraction form a part of the routine of Japanese life.

The cherry festival takes place in April, when the cherry-trees, "the pride of flowering trees," are in bloom, and Japan is at its best. A recent writer in *Cottage Hearth* has aptly quoted in this connection the old Japanese proverb: "If you want a beautiful perfume, go to the plum blossom. But when you behold the glorious cherry you forget it is scentless."

The same paper, in speaking of the iris and lotus flowers, says, "The iris-beds are a mass of lovely colors,—red, white, purple, yellow, blue, pink, striped,—the flowers large and beautifully

variegated. The iris festival is held in June. In July the lovely lotus flower calls for admiration, and the ponds where it blooms are perfectly glorified with the flowers. The lotus is the symbol of purity and perfection."

The chrysanthemum is the national flower of Japan, and the imperial badge of the Emperor (or *Ten Shi* as the Japanese adoringly call him,—*Ten Shi* meaning Son of Heaven) is the open chrysanthemum. The chrysanthemum show takes place late in October or early in November, and is a sight well worth seeing. The varieties are numerous and differ greatly in color, size, and form. The most handsome varieties do not bear clusters, but produce only a single flower to the stalk. I have often seen chrysanthemum blossoms as large as a full-sized breakfast plate exhibiting the most delicate shades and exquisite tints.

To conclude, let me say in brief that Japan is a picturesque and beautiful country, and its people are bright, intelligent, kind, and very interesting. Japan has been called "the globe-trotter's paradise."

ARTIFICIAL INFANT FEEDING

BY KATE LINDSAY, M. D.

UNFORTUNATELY, under present abnormal conditions there is often inability or unwillingness on the part of mothers to nurse their infants. This unwillingness to fulfil an important obligation is much increased by the extensive advertising and extravagant claims made by the manufacturers of baby foods. Notwithstanding the many photographs of fat, hearty-looking little ones which adorn the papers, medical journals, and popular maga-

zines of the day, these artificial foods mean to infant humanity malnutrition, indigestion, scurvy and rickets. They result in imperfect mental, moral, and physical development, and premature death from acute diseases; as, cholera infantum, catarrh of the bowels, capillary bronchitis, or marasmus. Malted and condensed milk are little better, except to meet some emergency for a short time.

The best substitute for natural infant

food we yet know of, is cow's milk. To make even an approximation to mother's milk from this fluid, it requires many modifications. The cows giving the milk should be young and healthy, not pregnant, kept in clean, well-ventilated stables, and should have proper food and drink. Care should be taken that they eat no weeds when grazing, or in the hay given in winter; that they are not fed on distillery slops or other fermented food; and that they are not tubercular or otherwise diseased; the udder and teats should be sound, with no evidence of inflammation of the milk-secreting organs. The cow should also belong to a hardy breed. The Jersey and other extra butter-producing breeds should be avoided. She should be from four to eight years old, of gentle disposition, and kindly cared for. Milking should be done in an especially cleanly manner. The writer cannot do better than to quote directions for cleanly milking from Taylor & Wells's "Manual of Children's Diseases":—

"The cows should be kept in clean stables, groomed by brushing off all dust, and washing teats and udder before milking; milker's hands washed and scrubbed with soap and water five minutes; then rinsed in clean water; afterward washed in borax water, glycerine, or alcohol and water; milker to wear a clean, rough-dried, freshly-boiled cotton gown; milk-pails to be sterilized by boiling or steam before milking. Never rinse with any un-boiled water. Milk, as soon as drawn, to be filtered through surgical cotton. By use of special pails with perforated cover and rim, this may be done while milking, and it may receive a second straining into sterile glass jars, cooled at once by putting on ice, and jars covered with sterile covers or stoppers."

Such milk can be used for infant feeding without sterilizing, if all the other manipulations are sterile and the water used for dilution, cleaning nursery bottles, nipples, etc., is sterile. Infants do better on uncooked than on cooked cow's milk, if it is sterile and free from germs. As this ideal cleanliness is hard to attain to in hot weather, even when milk is fairly cared for, it is safest to sterilize it for babies by raising the temperature to 160° or 170° and keeping it there half an hour.

The next step after procuring sterility of the milk is to separate the milk and cream and then recombine them in the same proportions as are found in human milk. The top of the milk, or cream, may be taken after it has stood for ten or twelve hours in the refrigerator. This will contain from eight to twelve or sixteen parts of fat. The best centrifugal cream contains from twenty to forty parts fat. Ordinary cream is ten per cent fat.

Dr. Rotch gives many model formulas for milk modification for artificial infant feeding, a few of which the writer has tested for different ages and will give herewith:—

For feeding first week: cream, two ounces, or four tablespoonfuls; fat-free milk, the same amount; lime-water, one ounce, or two tablespoonfuls; water, fifteen ounces, or thirty tablespoonfuls; seven even teaspoonfuls, or seven drams, of milk sugar. Dissolve the sugar of milk in the fifteen ounces of sterilized clean water. Mix the milk, cream, and water with the sugar of milk. Divide half of this mixture into ten bottles, two tablespoonfuls in each, thus making the ten meals required for a day till the baby is a week old, feeding once in two hours during the day, and once in the night between 9:00 P. M. and 5:00 A. M.

When four weeks old the baby's stomach will hold twice as much food. The whole twenty ounces of food should then be divided into the ten bottles, putting two ounces, or four tablespoonfuls, into each bottle. It may be made somewhat richer in solids and with less water; as, cream, four ounces, or eight tablespoonfuls; fat-free milk, three tablespoonfuls; lime-water, two tablespoonfuls; clean sterilized water, thirteen and one-half ounces, or twenty-seven tablespoonfuls; sugar of milk, seven teaspoonfuls, or drams.

For the six-month-old baby; eight ounces, or sixteen tablespoonfuls of cream; no milk; lime-water, two tablespoonfuls; water, eleven ounces, or twenty-two tablespoonfuls; sugar, seven teaspoonfuls, or drams.

The infant may now be fed once in three hours during the day and not at all at night. Number of meals, six; each meal, six ounces, or twelve tablespoonfuls, which should be put, as before, into separate bottles.

There should be a gradual increase in the amount of cream and milk, and lessening of the amount of water with an increase of the size of meals, until at nine or ten months eight-ounce meals can be taken.

After mixing cream, milk, sugar, and water together, sterilize for thirty minutes in a boiler with false, perforated bottom, or a sterilizer. Put the six, eight, or ten bottles on perforated bottom, fill boiler up to neck of bottles with cold water, and then heat to 170° F. Keep at this point half an hour, each bottle being stoppered with absorbent cotton; cool at once, and cover with glass covers or stoppers. Keep on ice until used. For feeding the baby, heat to 100° by setting the bottle in warm water, take out stopper, and put

on an aseptic nipple without tube attachment, either glass or rubber. Hold baby while it nurses, taking the bottle away and allowing it to rest between times. When it is satisfied, take away the bottle and empty it at once. Wash both bottle and nipple with cold, sterile water, then with boiling water. Lay the bottle away in sterile water in which there is a teaspoonful of soda to the pint. Keep the nipple in sterile water in some glass vessel. Before using again, rinse it in hot sterile water.

It is best to add the lime-water, a teaspoonful or two to a meal, just before feeding. All the other materials should be sterilized together.

When the food can be kept on ice, a day's food can be prepared and sterilized at once. It is best to keep it in original bottles, each containing enough for a meal, until fed to the baby, since every handling means risk from germ infection.

These sample formulas will need modification to meet special babies' needs. Some will need more water, weaker food; some more fat and others less; and some more or less proteids.

A word about weaning and teething. Weaning, if possible, should never be done suddenly, but should take from six weeks to two months. Begin at from eight to ten months, and give the baby, if on breast, two teaspoonfuls of sterilized milk and gruel made from dextrinized meal. Double the amount daily, until in a week it takes a whole meal of milk and porridge. Then work in a second meal by the end of the second week, and so on until it has had the mother's milk replaced by other food by the time it is ten or twelve months old. Other foods, such as bread and milk, granose and milk, and fruit juices, may be gradually added until, if doing well, it may be taking sterile or clean

cow's milk, soft zwieback, granola mush and gluten mush, with browned rice and cream, for its four meals a day. In bottle-fed babies teething is apt to be delayed. If no teeth are out during the first year, it is usually a sign of rickets. When baby is well nourished and food agrees with it, it will be subject to no serious disorder from teething.

Never change diet nor wean during active teething periods if possible to avoid it. Wait until time of rest between the eruptions of the teeth. Never wean in hot weather nor when baby is weak from an attack of some acute disorder.

Never neglect a looseness of the bowels in hot weather, especially during active teething. It may mean the onset of some serious bowel disorder, as inflammatory diarrhea or cholera infantum. Seek medical counsel at once. Cholera infantum is an acute milk poisoning which never occurs unless a special germ gets into the food or stomach. A breast-fed baby who is well nourished and whose mother is cleanly, especially careful about her own diet and the state of her breasts and baby's mouth, need not fear this disease. Bottle-fed babies, especially those fed on artificial milk foods, or those given spoiled, unclean cow's milk, die of this disorder by the hundreds every year. The only hope

of saving the infant attacked is to stop the use of all milk or milk food. For the first twelve or twenty-four hours give nothing but sterilized water, hot-water enemas, and wash out the stomach. Then well-cooked, strained barley water, dextrinized meal gruels, strained, the white of egg, and water may be given. Often milk will not be tolerated for weeks. It is in such cases that some baby food prepared from dextrinized grains may help to keep the infant from complete starvation until its intestinal canal is free from the infection and it can tolerate milk food again.

Never let baby go to sleep with the nipple in its mouth. Never let it lie in wet or soiled napkins. Never let it chafe. The writer is fully persuaded that more than half the cases of subsequent vicious habits come from this cause.

Give baby a chance to learn to creep before it walks. Never let it fall asleep over the strap of its cart or high-chair. Do not allow it to be kissed, or tickled or agitated in any way.

Keep the little one clean and comfortable, and let it severely alone to enjoy itself at its own sweet will.

Always remember that babies, no matter how young, get thirsty, and always give them sterile water between meals, especially in hot weather.

CARE OF TEETH IN CHILDREN

BY B. R. PARRISH, D.D.S.

IN the past twenty-five years, dentistry has made rapid progress, and to-day there are many specialists in this line—dentists who do nothing but extract teeth, those who do only operating or filling, and others who devote their whole time to correcting irregularities of the teeth. It is against the cause of

such irregularities that parents should be warned.

Nature provides us with two sets of teeth, both of which are in process of growth at birth. Twenty temporary or baby teeth are for use during childhood, thirty-two permanent teeth for the balance of our lives. Between the fifth



FIG. 1.—Upper teeth of child five and one-half years of age. The dotted outline indicates where the first permanent molar will soon erupt.

and eighth months two baby teeth erupt, one on each side of the median line; these are called central incisors. Next come the lateral incisors, between the seventh and tenth months; cuspids, between the fourteenth and twentieth months; first molars, between the twelfth and sixteenth months; second molars, between the twentieth and thirty-sixth months. This makes ten above and ten below, there being five on each side of the jaw. Of course, there are often exceptions to the above, due to constitutional changes, lack of nutrition, etc.

It is important that these teeth should be kept in place until they have performed their several functions. They allow the child to masticate his food properly and enable nature to develop the jaws to their mature growth.

The temporary teeth are subject to decay. It is important that this should not be allowed, and it can be prevented by filling them on the first indications of decay. It

is not necessary, nor is it practicable, to subject the child to long operations, and if taken in time, the filling may be done with little or no pain. By accustoming the child to visit the office of the dentist early in life, he learns the importance of taking care of the teeth, which is a good habit and one for which he will always be thankful.

The shedding of the baby teeth is a perfectly healthy process. Nature has absorbent organs to do this work, and they act on the roots of the temporary teeth so that

when it is time for them to be shed, there is little or no root, and they drop out. In a few days, a permanent tooth may be seen peeping through where the temporary tooth has been.

The temporary teeth act as fore-runners, and guide the permanent ones into their correct positions in the arch. How important, then, that each should remain its allotted time. If allowed to decay, its life is shortened, and the



FIG. 2.—Showing the result of nature's attempt to close up space caused by loss of the first permanent molar.



FIG. 3.—Upper teeth of adult.

child may suffer from toothache. The tooth will probably come in an abnormal place in the arch, and leave the jaw undeveloped the space of one tooth on that particular side of the face. Many parents make the mistake of allowing the child's teeth to go uncared for until they think the baby teeth have all been lost, and often until the permanent teeth are so far gone that they cannot be saved. When a permanent tooth is lost, nature will try to close up the space, but she does it at the expense of the others, thus interfering with the proper articulation, and marring the symmetry of the face.

The writer has had the opportunity of seeing some bad conditions existing as the result of premature extraction of temporary teeth. There is also some danger in retaining the deciduous teeth too long. The only safe way is to place the child in the care of a reputable dentist.

The mouth and teeth should be cleansed after each meal, but if only once each day, just before retiring is probably the best time. When the parent cleans his teeth is an excellent time for the child to do so.

There are many kinds of brushes on the market, but the best is the one which mechanically cleans, such as is the Sanitol, or any one made after this model. It has a slightly concave surface of bristles with a little tuft at the end longer than the rest. There are children's sizes to suit all ages. The soft brush is in most cases the best for children; this, however, should be left to the discretion of the dentist. There are many kinds of dentifrices upon the market, most of

which are good. They all contain much the same constituents. If left to the dentist to prescribe, he will advise the best one for the particular case. Ignorance and neglect are the causes of many unhealthful conditions found in the mouth. Since prevention is so much better than cure, let us encourage a hygienic condition.



AN EARLY START.

" IN EVERYTHING GIVE THANKS "

BY MARY MARTIN MORSE

For the grandeur of the mountains
Where but angel feet have trod ;
For the desert-springing fountains,
Whose homeland is with God ;

For the gem that's called the dewdrop,
Outrivaling diamond gleam ;
The gold of springtime's buttercup,
That like a king's tiara seem ;

For the light in the eye of the linnet,
And the laugh in the bobolink's song,
For each day and the good there is in it,
Be it ever so short or long ;

For the grace of bending willow,
And the glory in morning's glow —

Foretaste of the Homeland splendor,
That our earth-life here may know ;

For the gold in the heart of the lily,
And the perfume in orchid's cup ;
For the voices in and around us,
That are whisp'ring to each, " Look up ; "

For the sunset's heavenly beauty,
That no artist's pencil knows ;
For the sweet that's in the bitter, —
That the thorn still has its rose ;

For the lowliest flowers that blossom,
And the highest stars that shine,
And all that lies between them,
To express the love divine.

TRAIN THE BOYS TO UNDERSTAND THE CARE OF THE SICK

BY MARY WOOD-ALLEN, M. D.

WHEN I hear young men repeat after the clergyman the words, " To cherish in sickness," I wonder what meaning is conveyed to their minds. In all probability they have not given this phrase any consideration whatever, looking upon it as a mere theological formula, a sort of *abra cadabra*, accompanying a transformation process, but having no value in itself. If, however, they have given this promise any thought, they have probably considered that it involved only the calling of the doctor, or employing a nurse and paying the bills.

A young husband was once asked what he would do if his wife were taken suddenly ill in the night.

" I would send for the doctor," was the reply.

It was called to his mind that doctors are not always available at a moment's notice, and, moreover, the distance the doctor would have to travel was so great

that it might be hours before he could reach the patient.

" Would you allow your wife to suffer, with no attempt to mitigate her pain ? " continued the questioner.

" I would do everything she wanted me to," asserted the young man; and he seemed somewhat surprised when told that persons sick and suffering are in no condition to direct their own treatment. He had greatly appreciated the loving and intelligent care which his wife had given him in illness, and yet, strange as it may seem, he had never for a moment pondered as to what he would do in case she were ill.

He is only typical of hundreds of young men who marry without the slightest consciousness that they have any responsibility in caring for a wife's health. Nursing is the woman's business, but how the woman shall be nursed is a question with which they do not trouble themselves. The sublime confi-

dence with which young men will take their brides to foreign lands or frontier countries, with no knowledge of how to care for them in case of sickness, would be admirable if it were not tragic.

As a practicing physician, I have had considerable opportunity to witness the ignorance of young men, which results in what is actual neglect, although not so intended. How few young men understand even the first principles of nursing! Their hearts are right; they would not intentionally do that which would be productive of discomfort or pain to their wives; and yet, through ignorance, they are continually adding to the suffering of the one whom they love.

They have no comprehension of the sacredness of sleep, nor how hard it is for a person nervously exhausted to woo back the sleep which some slight noise has banished. Such husbands slam the door, whistle, sing, clatter up and down stairs with noisy shoes, put coal on the fire with a great rumpus, sit in the sick room and rustle newspapers, or noisily turn the leaves of books, put the lamp where it will shine directly in the face of the invalid, jar the bed with needless movements, and do a hundred things without the slightest suspicion that they are violating the very first canon of good nursing, and would doubtless feel much aggrieved if they were accused of thoughtlessness.

When requested to go a little more quietly through the house because of the wife's nervous condition, a young man said, "I did not suppose she would want me to take especial pains to be quiet." He said he never wished people to be still on his account; in fact, he would be rather troubled if people should make an effort to avoid noise because of his illness. But the truth was, he had never been seriously ill. This same

young man, when the invalid was convalescing from a long, exhausting illness, made arrangements for a piano-tuner to come, and when remonstrated with, said he supposed it would amuse her.

It is not that the young men are callous, but simply that they are careless and untrained. They have probably been brought up in homes where the mother was the servant of all, and asked nothing in return. They have doubtless grown up with the idea that there are certain things which belong to woman's sphere of life which it is rather a disgrace for men to know anything about. These young men would scorn the idea of studying cookery, and, as a consequence, would not know, under the most urgent necessity, how to prepare an appetizing meal for an invalid.

When they themselves are ill, every delicacy is prepared and brought to them, arranged in the most dainty fashion. When the wife is ill, if there is no woman to wait upon her, she may fare badly.

To one young man who rather scorned the idea of being a cook, I said, "What would your wife do for food if she were ill?"

"I would send to the restaurant," was the reply.

I have seen invalid women who were obliged to eat food brought from the restaurant, cold and mussed by the dishes piled one upon another until the very sight was enough to destroy all possible desire.

I have seen such young men attempt to prepare a meal for a sick wife. They would perhaps bring in a paper bag of crackers, or a loaf of bread, a tin pan of milk, and various other articles in like manner, and then wonder why a capricious appetite refused food. On the other hand, I have known young

men who could prepare a most appetizing meal, and serve it so beautifully that desire awoke at the sight, and the appreciation of the viands must have been sufficient thanks for the cook.

If young men are so ignorant in regard to the first principles of nursing, we need not be surprised if they know nothing in regard to the treatment of diseases. They could work out a problem in Euclid more easily than give a fomentation scientifically.

I saw one young husband attempt to give a hot sponge bath to an invalid who was in a state of exhaustion. He seemed to think that to conduct the process as a huge joke would be the way to make the invalid feel happy. So he would uncover part of the body, wring the wash-cloth out of hot water, wave it in the air with a great flourish until it was cold, and then bring it down with a slap upon the shrinking patient, whose protestations were received as a part of the jest. When he reached the feet he left them uncovered and slapped them with the towel, while he repeated some humorous verses. Yet this young man was a sensible, quiet, self-poised individual in all of the circumstances of his own business life, but was so ill at ease under the conditions of sickness in the home, and so embarrassed by the unusual demands made upon him, which he felt incompetent to meet, that he was thrown out of his usual poise into a condition at least melodramatic, if not hysterical.

When we reflect upon the exigencies of every-day life and realize that the comfort, or perhaps even the life, of the wife may lie in her husband's hands, we begin to realize the necessity of training boys in the home to understand the care of the sick. If they do not learn it as boys, they will probably never learn it. If in the home, under the mother's direction, they are taught the preparation of some foods; how to serve them neatly; the sacredness of sleep and rest; how to give baths and fomentations; how to count the pulse and take the temperature; they will not forget it, although under the strain and stress of business life they may seldom have cause to think of it, and would have no time to learn it. When the emergency comes, the knowledge comes with it, and from impulse they do the right thing then, because in their earlier years they were taught how.

We are talking a great deal in these days of the necessity of training girls for the responsibilities of home life. It is a mistake to forget that boys will also have an interest and responsibility in these future homes and need preparation for it. Tennyson prophesies the time when men and women "shall liker grow;" in that day the discredit will attach, not to the man who knows how to care for his sick wife, but to the one who has not fully prepared himself for every emergency of home life.

THE first physicians by debauch were made;
Excess began, and sloth sustains the trade.
By chase our long-lived fathers earned their
food;
Toil strung the nerves and purified the blood;
But we, their sons, a pampered race of men,

Are dwindled down to threescore years and
ten.
Better to hunt in fields for health unbought
Than fee the doctor for a nauseous draught.
The wise, for cure, on exercise depend;
God never made his works for man to mend.

—Dryden.

PHYSICAL CULTURE AT THE BATTLE CREEK SANITARIUM

BY MABEL HOWE, M. D.

PHYSICAL training at the Sanitarium is recognized at its full value as a means of rational treatment for the ill, takes hold of your trunk and shakes up your liver and stomach and spleen in a most delightful fashion. Here is an-



THE GREAT GYMNASIUM

and sensible practice for the well. Every form of exercise or gymnastic apparatus known to be of value in therapeutics is here in daily enthusiastic use.

If you are too ill to raise your hand, the attendant gives you a most gentle form of massage. Often the throbbing pulse will be reduced to normal by a simple exercise given you by the attendant, which brings into play the large muscle masses of the extremities.

If you are able to be about at all, but not sufficiently strong to exercise yourself, the apparatus in the Mechanical Swedish Room will afford you the movements you need. There you will be exercised by merely placing yourself in the position to receive the careful manipulation of the ingeniously constructed apparatus. Here is one machine that

other that kneads the most obstinately refractory bowels into physiologic and rhythmical obedience to natural order. Still others rub or shake the feet until a warm glow pervades the limbs from toes to hips, and others yet which vibrate hands and arms, back, bowels, head, and heart until one really feels, for the time at least, translated into a world of new and most comfortable pain-annihilating sensations. Most unique of all, perhaps, is the vibrating chair, in which one may take an imaginary journey over a rather rough road-bed in a lightning express train, and feel a warmth and glow and exhilaration that pay him for the trip.

With a new sense of life, you go upstairs to the gymnasium, and perhaps voluntarily undertake some of the light practice work there. Here you realize



THE WOMEN'S SWIMMING POOL

your great opportunities. In one corner of the room you will perhaps see a class taking their free-hand gymnastics. In another part of the room a group will be vigorously wielding the dumb-bells; while in still another corner you may see the Indian clubs swinging about in a most fascinating way.

Soon the scene is changed. The dumb-bells are replaced with pulley weights; Indian clubs are exchanged for the wand exercise, which is under the careful direction of one who knows only too well the muscles you have allowed to be unused; and the first night's sigh of relief as you enter your room and get ready for a sound sleep, is the penalty you pay for daring to be introduced to the gymnasium at the Sanitarium.

This, however, is only a small part of the training here. In a few days,

after your treatment in the bath-room, you venture to the swimming pool, where the sounds of laughter from those who are enjoying the fun of learning to swim under the tutoring of an experienced instructor, must entice you to try. A short plunge in the cold pool makes you appreciate the larger one which is kept at the comfortable temperature of 78°. In a few days you learn that your head is really not so much heavier than your feet, and that swimming is not, after all, so difficult an art. You soon can keep your head above water, and know what to do with your arms and legs as the instructor calls out one, two, three. You cease to fear the water, and come to feel as much at home in the pool as in a parlor. Swimming is next thing to flying, and is the most healthful of all exercises.

Again you visit the Mechanical Swe-

dish room, and are attracted by a door in the rear. You have been here long enough to know that there is something interesting behind every closed door of the Sanitarium. You venture nearer and see the sign GYMNASTIC SLOYD. Just what it is you do not know. You enter and find yourself in a room which reminds you of a tool room at home where the children's rudely constructed toys, boats, wind-mills, etc., were stored. The walls are covered with mechanical drawings, and in cases are kept all sorts of carpenters' and cabinet-makers' tools. The instructor leaves his pupil for a moment and comes over to greet you, and you are delighted to learn that here is a special line of physical training at the Sanitarium of which you have not heard before. The idea of constructing useful things, at the same time performing exercise, fascinates you as nothing else has done. You consequently arrange an hour, and each day are at your post faithfully learning to

hit the nail, not your finger, and turn your mind from the turmoil of seething thoughts to this simple constructive philosophy which teaches you daily the great lesson that health is gained by simple means, easily within the power of us all if we only utilize them.

A new prescription is handed you by your physician; it calls for one hour daily in the outdoor gymnasium. You've been spending much time outdoors, and this is rather a puzzler. At twelve o'clock you wake up to find yourself in something new, and under the sun, too. Your puzzle is soon solved by handing your prescription to the one in charge, who kindly assists you in changing your apparel for as nearly nothing as possible, and for the first time since you stole away swimming, years ago, you feel the health-giving sun directly caressing every inch of your skin. You are attracted to the wood-pile, and now that you are in for it, you seize the ax or saw and work as vigorously as you once did in



THE GYMNASIIC SLOYD DEPARTMENT

view of the paternal wood-pile with a day's vacation for pay. A plunge in the pool, a mile's chase around the race-track, a sand bath, final plunge, and you reluctantly don your discarded garments, and retire to your room for an hour's rest before dinner time.

still fascinates you, but is perhaps forsaken occasionally now for a game of tennis, or a tramp around the golf links or across the fields to study fossils in the countless glacier-made moraines.

Now you stop a moment in your morning walk to encourage a new-



THE OUTDOOR GYMNASIUM

During the exercise in the afternoon you hear a group discussing their morning tramp. What! something new under the sun? Haven't you discovered it all yet? They are carefully looking at a map on the wall of the gymnasium. You learn that they have followed route number one, walked so many miles, carried themselves up so many feet of elevation. Only waiting for the morning to come, dry or wet, sunshine or rain, they strike out again for the purpose of finding that subtle something which each effort in the fresh air gives to the earnest devotee of the out-of-door cure.

As the spring begins to open up, you have become so enamored of fresh air and exercise that you are ready for a row on the lake. You add to your morning exercise a swim across the pond for lilies. The wood chopping which you learned to do in the winter

comes who takes his gymnasium work bundled up, sitting or lying out-of-doors, protected from the cold.

You see in this beginning the improvement and physical training which must develop if given a trial at the dear Sanitarium. Every possibility is arranged for. Careful guidance and direction await you at every door. You meet visitors, professionals even, who are charmed with the routine of training possible at the Sanitarium. With all the ability or disability you possess, right there you are taken and most carefully brought up in the most holy faith of physical righteousness. You bless the day that brought you to a place where your infirmities were appreciated, your possibilities prophesied, and where you sensed the reality of your responsibility to this marvelous physical mechanism whose perfect work means life.

HYDRIATIC TREATMENT OF TYPHOID FEVER

BY J. H. KELLOGG, M. D.

THIS disease is due to a special germ which is commonly received into the system through drinking water. Milk and milk products are sometimes the vehicle by which typhoid germs are received into the system. The infection may occur by personal contact with the sick, though this is rare except in the cases of those who become infected through carelessness while caring for persons suffering from this malady.

Whenever a case of typhoid fever occurs, care should be taken to inquire into the cause. If the patient continues to use the impure water by which the attack was induced, new infections may occur. It is also important to discover and suppress the cause so that other persons may be protected.

Friends who care for the patients should be instructed respecting the nature of the disease. They should be made to understand that unless great care is taken, those who attend the patient, and others who are brought in contact with the case, may contract the disease.

The surface of the patient's body is constantly swarming with the germs of the disease during and some time after the attack. The bowel discharges and the urine contain the germs in very great numbers; hence, it is important that the greatest attention should be paid to cleanliness. Whenever the hands of the attendant come in contact with the patient, they should be washed well with soap and water as soon afterward as possible.

In the care of this disease it is of importance to begin the treatment early, at the very first symptoms. For the reduction of temperature, what is termed the cooling pack (see page 271) is the

most generally serviceable and efficient measure that can be used. Sheets and water are available in every home. If the disease is brought well under control at the beginning, the duration will be likely to be short, and the convalescence rapid. The temperature usually does not rise so high during the first week as during the following. This is, then, a favorable time for bringing the malady under control. In the second week the fever often resists temperature-reducing treatment with great obstinacy. During the third week, or period of decline, however, the temperature usually yields quite readily to treatment, so that less vigorous measures will generally suffice to keep the temperature within safe limits.

In the treatment of typhoid fever, as in dealing with every other disease, it is important to bear in mind that it is the patient to be cured, and not the disease. In typhoid fever the elevation of temperature is a marked and often a serious symptom; nevertheless, the attention should not be given too exclusively to this particular symptom. The temperature may be lowered without in any way benefiting the patient. It is only when the temperature falls as the result of measures which produce general improvement by increasing the patient's resistance and staying the progress of the disease, that the patient is really benefited. Fortunately, such hydriatic measures as the cooling wet sheet pack, and other suitable procedures, lessen the temperature by improving the patient's vital conditions and diminishing the activity of the malady.

As convalescence is approached, the temperature yields very readily to treatment, and care must be taken that

the fever-reducing treatment is not overdone. Too prolonged cold applications may greatly depress the patient and lessen his resistance.

The abdominal compress is a measure of the highest importance in typhoid fever. The compress should be large enough to cover the entire abdomen from the fifth rib to the pubes and extending well around the sides. It should be employed during the entire course of the disease, night and day. It should be changed as often as it becomes warm, but should be warmed to near the temperature of the skin before it is changed. When the skin is very hot and the temperature high, it may be necessary to change the compress every eight or ten minutes. With a more moderate temperature, once in fifteen minutes will suffice, and when the temperature approaches the normal, the compress may remain in place thirty or forty minutes. It is better that the compress should be thick enough to hold a considerable amount of water, so that too frequent changing may not be required. Cheese-cloth is the best material, of which ten or twelve thicknesses will be needed. If linen or cotton toweling is used, four thicknesses will suffice.

The purpose of the abdominal compress is not simply to aid in reducing temperature, though it exercises a valuable influence in this direction; its real purpose is to contract the mesenteric vessels and to energize all the abdominal organs, especially the lymphatic glands, the liver, the spleen, and other parts in which the battle against the invading microbe is most vigorously waged.

When convalescence is established, the abdominal compress may be exchanged for the wet girdle, which should be worn night and day, being changed morning, noon, and night, or

each time the patient receives treatment.

One of the most serious complications which occur in typhoid fever is hemorrhage from the bowels. This requires absolute rest in bed, suspension of cold baths and cold packs, and the application of ice to the abdomen. For a large person, three or four ice-bags should be used. The ice-bags should be removed for five minutes every half hour to allow the blood-vessels of the skin to react. A very hot fomentation applied to the surface for two or three minutes every half hour aids in maintaining an active circulation in the skin, and lessens the amount of blood in the mesenteric vessels. A hot pack may be applied to the legs and hips. Special care must be taken that the patient does not become chilled, as this will increase the internal congestion. The blood-vessels of the legs may be kept filled by heating compresses applied after the hot packs. This complication seldom occurs when the abdominal compress is used in the manner directed from the beginning of the fever, especially when the temperature has been kept down by proper hydriatic treatment.

The diet of a fever patient should be very simple, consisting almost wholly of fluid food, such as strained gruels of barley or gluten, fruit soups and juices. In the early stages of the disease, especially during the first week, but little food other than fruit juices, as orange and apple juice, is required. This liquid food taxes the stomach very little, and introduces an abundance of fluid into the system. Later, especially when there is an appetite for food, granola, malted nuts, meltose, and dextrinized breads and cereals may be given in small quantities.

The fever patient can digest but little and can appropriate but little. On this account it is useless to crowd large

quantities of food upon him. When administered at intervals of three or only fluid food is taken, it should be four hours, when the patient is awake.

A CITY GARDEN

BY MARY HEATH

IF you feel "run down" and "worn out;" if you are taking a gloomy view of things, or feel that your life is a ceaseless round of dreary duties; if you cannot get away this summer for a rest in the country,—make a garden. If you want to feel in buoyant spirits, to see your cheeks glow with health, to get close to nature and learn some of her beautiful secrets—make a garden. If you feel (as you should) in splendid health, still I say—make a garden. You'll do it all the better.

"Why, I should like to," you say, "but I haven't time." Oh, but you have. A very creditable garden can be the result of a few spare moments a day.

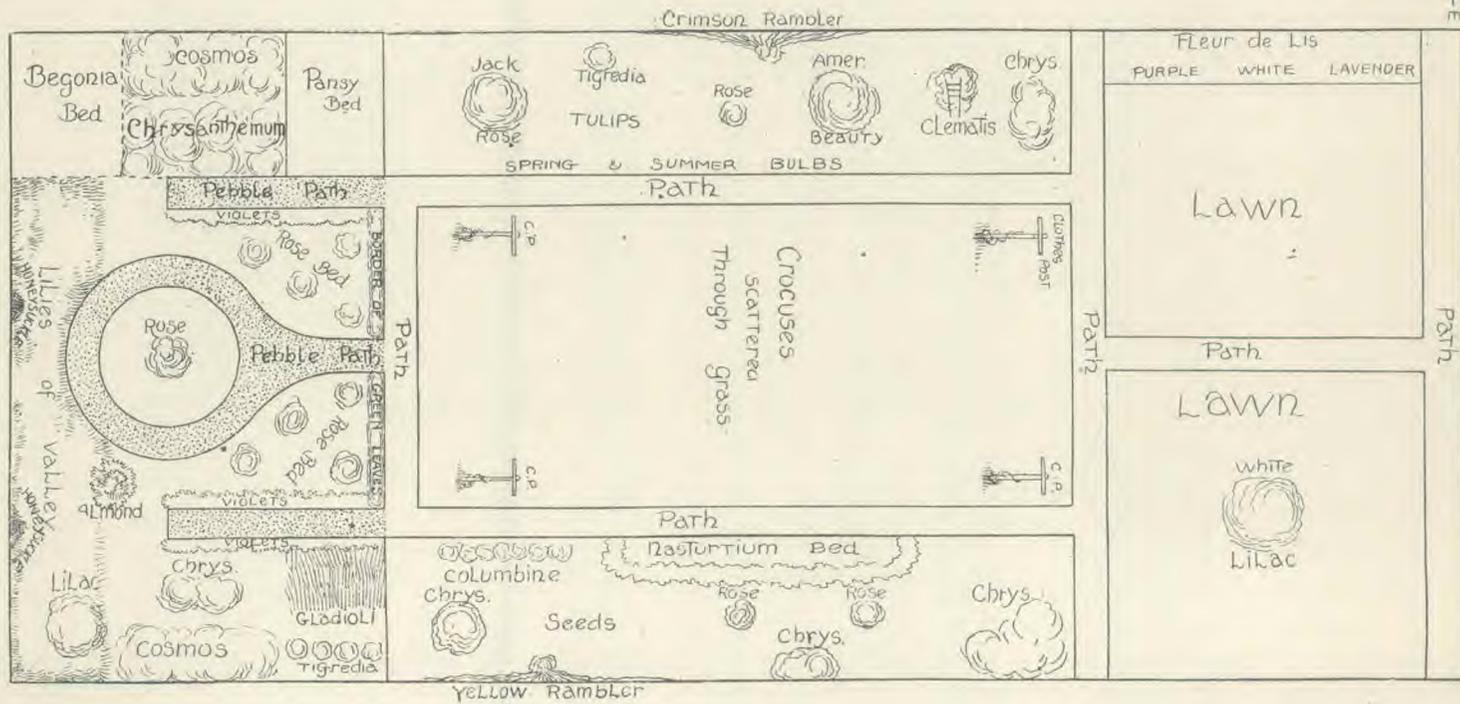
"Well, I haven't space. I live in the city, and have only a city back-yard to work in—and we dry the clothes there, too." But that is plenty of space for a beautiful little garden, with a variety of flowers in it that will astonish you. I know that by experience. Start with a few roses, a package or two of seeds, some hardy plants, and see what results you will have. Then add gradually, every year, new flowers, and before you know it your garden will be a thing of beauty.

Let me tell you a little about our garden. It has a southern exposure, which is certainly an advantage, but it is merely the "back-yard" of a city home and measures only twenty by sixty feet—and one day a week the clothes must be dried in it. Being what it is, it is necessarily somewhat after the conventional plan as to shape and spacing; but, I cannot find room on paper

to tell of all the flowers we have in it.

There are three squares of grass,—two small plots near the house, and a large middle space where the clothes must be hung to sun and dry. Here are the clothes-posts, unsightly enough in themselves, but objects of beauty all summer, for they are clothed with vines. In the spring we plant Japanese morning glories in a circle around each post. This vine grows fast, and has large gay-colored blossoms. Unlike the ordinary morning-glory vine, it does not spread, overrunning everything, but dies down in the fall, and the seeds must be gathered and planted again the next season. The grass must be well looked after, since a green, velvety, well-clipped lawn makes all the difference in the world in a garden. If the sods are poor in your yard, have the plots spaded up, raked, and scatter bone-dust over them. Then get some good, reliable lawn seed, and sow it thick. Every spring we scatter bone-dust over the lawns and sow seed in bare places, where it seems to be needed. Later in the season we often have to cut weeds out of the grass, and then again we plant a little seed—clover seed—if the grass looks "thin in spots." We water the plots well, daily, in very hot weather, and our bits of lawn are the finest in the neighborhood.

The unsightly fences we cover, too, as much as we can. Two roots of honey-suckle have grown to clothe the back fence almost entirely, and this keeps green all summer. The blossoms fill the air with their fragrance, and we have plenty of flowers to use



HOUSE

indoors. On the side fence we have a crimson and yellow rambler. These roses grow quickly and easily and in June the blossoms make a very bright showing. They are not, however, of use as cut flowers.

I think we get the best returns from our roses. We have fifteen bushes, and nearly all summer we have some blossoms. In June they are the crowning glory of our garden, and great bunches of roses, or single perfect flowers in tall vases beautify our rooms. There are two beds of roses at the back of the yard, with three bushes in one and four in the other (roses can be planted quite closely if the soil is kept well fertilized), and one round bed in the center with a single large bush. This is perhaps the most beautiful one we have, a Gloire de Dijon. It is hardy and blossoms all summer. The flowers are a delicate yellow-pink, looking like a hothouse rose, and with a delicious fragrance. In the beds we have several Mrs. Jno. Langs, a good, hardy rose with great pink blossoms, La Frances, and one Madame Plantier. Then in the beds we have one large Jacqueminot, from which we have cut three hundred blossoms in one season; two American Beauties, than which no rose could be more satisfactory, since they are hardy, and the flowers on their long, thornless stems are beauties indeed; and several small teas. And we did not spend very much money for all the wealth of blossom June gives us back. Our most expensive rose, the big Jack, cost seventy-five cents, but all the others were only ten cents apiece. We bought them at one of the department stores (that troubled our consciences a little!), and finer blossoms than some of ours I have not seen in the parks.

It is high time to set out your roses, or if they are already out, to trim them. To

plant new bushes, soak the roots in tepid water while you prepare the ground by digging a rather deep hole. Into this spade some fine dirt, well mixed with sheep manure. Loosen the dirt all around, and sprinkle in some bone-dust. Then plant your rose and water it *well*. All summer you must keep the ground loosened about the roots. This, together with the other necessary work in the garden, means something to call you outdoors, pleasant exercise in the fresh air, and so better health and spirits — in short, roses in your cheeks as well as in the garden.

Between the first rose-bushes on the west side we have another plant I can recommend — a purple clematis. This is hardy, and will blossom freely if given the proper care. You must have a trellis for it, and in a few years it will cover it with a mass of purple bloom.

The other more important bushes in our garden are a white lilac in the center of one of the smaller squares of grass, to shade the laundry window; a purple lilac in the southeast corner, a flowering almond back of the roses, and a hardy hydrangea in the southwest corner. All these we put out in the spring, except the lilacs, which we planted as soon as we came into our garden in the fall. That fall, too, we planted the spring-blossoming bulbs, putting crocuses all through the grass, and on the side beds daffodils, jonquils, hyacinths, and tulips. The crocuses peep up first of all. Oh, how glad we always are to see their bright gold, white, and purple heads when the snow seems hardly to have left the ground! The daffodils are beautiful — cheerful, sunny, hopeful blossoms, that are a tonic just to look at. They will come up year after year, with little or no attention except to thin the bulbs when each clump gets too full. The hyacinth

bulbs, however, must be taken out of the ground when the blossoms are gone — such sweet, gay, fragrant blossoms!

In the spring we planted the summer-blooming bulbs — gladioli, massed, to keep the color in one bright spot; tigerdias, with their gorgeous blossoms, which pay, even though they last but a day, dahlias, etc. The first two are planted in spots left vacant by cutting away the tops of the spring bulbs, and on top of these latter, too, we planted our seeds: Nasturtiums, which will blossom profusely all summer, and furnish decorations for the luncheon table which will beautify the simple meal; columbine, red, white, and purple; hollyhocks, tall and stately; bright asters; and cosmos, to make a gay show in the early fall. Get the dwarf nasturtiums, as they take up less room, and blossom as well as the other variety, and plant the cosmos near the fence, to give it a support for its tall stalks. Put out the chrysanthemums now, too, and be sure to have some, for no plants pay one better. They are hardy, and, like the early flowers, they bloom when the garden is bare of nearly all else. Do not put chrysanthemums too close to the roses, for they take a great deal of strength from the ground about them.

As you see, all our flowers, so far, are hardy plants which will live out all winter. The only house-plants we have are a few begonias. These will grow in the shady southwest corner, where nothing else can live. We have twelve varieties, and how they do flourish in the summer! As all the yard back of the rose-beds is shaded a good deal by the high back fence, we thought at first we could grow nothing there, until one season, we tried lilies of the valley. They were an entire success, doing well in this shady, damp end of the garden, and yielding us many fragrant bunches

of flowers for the house. They spread quickly, and must be managed with a firm hand, like unruly children, lest they overrun the other flowers. Every year after they have blossomed, we thin them out, ruthlessly pulling up all the stragglers that are making toward our roses, and keeping our lily bed square and even.

All around the side paths we have a border of English sweet violets, and how sweet they are! In front of the rose-beds we have a border of a plant with a very decorative green and white leaf, but the blossom does not amount to much. Every year we find space for a tiny pansy-bed, for the blossoms are so cheerful and pretty, and decorate so well indoors.

Perhaps you are beginning to wonder where we find place for so many things, and I will only say: Try it yourself and you will see. I remember once, when I was visiting some friends, we began to talk about flowers. At every new variety mentioned I would exclaim, "Oh, yes, those are splendid! I have them in my garden." At length one of the ladies remarked,—

"You must have a very large garden, Mrs. —."

"Oh, no," I answered, "it is no larger than the ordinary city backyard."

"Well, then," she laughed, "it must be several stories high."

Well, in a way it is, for bulbs can be planted above bulbs, and crocuses beneath the grass. But there's more room on the ground floor of our garden, so to speak, than any one who is not a gardener would imagine.

Don't be discouraged at a few failures. We have not always succeeded, by any means. Our strawberry shrub gradually departed this life after one season of fragrance; I don't know why, for most people seem to find it easy to

grow. Our pinks were a failure. We are trying them again this year. Our poppies—oh, how we had planned and hoped for those poppies! They were to be, according to the seed catalogue, large, wonderfully handsome poppies of every hue and shade, double and single, but they weren't. For some reason only a meager handful came up and they were sad failures. We will not give up the idea of poppies, however. Often the fault lies in the quality of the soil. It is hard to get it rich enough in a city yard at first. In fact, it should be well manured every fall. Or perhaps the insect foes are killing the plants. Look out for a white scale covering the branches of roses and other bushes. Wash the infected parts with soap and water, and if you can't get rid of the pest any other way, sacrifice a bough or even a whole bush. We lost a Madame Plantier rose in this way, but we saved the other roses by taking it away in time.

Water the garden well in hot weather.

We use a hose nearly every day in July and August. Weed every spare moment you get, lest these little rowdies crowd out the more delicate plant-life. Read and study everything you can find about gardens. Above all, love your flowers, and they will repay you. Do you say there can't possibly be time in your busy days for all this? I honestly believe there will be. Although I have spoken of "our" garden, since we all shared in its expense and in its blessings, it was made and is cared for almost entirely by one busy woman—mother and housekeeper—who cooks, sews, and plans for her family besides. In fact, she takes to gardening as a recreation from her other duties, and never feels that she can give more time to it than an odd ten minutes now and then.

I am sure you will reap a reward from any effort you may make, in beautiful surroundings, a pleasant vista and resting spot, and above all in better health and happier days.

HYGIENE ON THE FARM

ALTHOUGH country life is the ideal thing, and farming the most healthful of pursuits from the sanitary standpoint, there is, as a rule, much to be desired. The idea that disease is a visitation of Providence, instead of the result of our own ignorance or carelessness, leads to gross neglect of the hygienic measures necessary for its prevention. The need for such measures, and the precautions that should be taken to keep the farm sanitary and healthful, are well described in an address delivered at the Huntingdon meeting of the Pennsylvania State Agricultural Society, by Dr. Harvey B. Bashore:—

“But is the country really unhealth-

ful?’ somebody asks. Here are some facts: The death-rate is lower, both in town and country, than ever before; the greater decrease has been in the cities. In Connecticut, for example, during the past ten years the city mortality has dropped from 20 to 17 per 1,000, while the rural only from 17 to 16 per 1,000. In Massachusetts the difference has been still less, and in New York State the rural mortality rate has actually increased. Pennsylvania statistics are incomplete, yet in the beautiful Cumberland Valley, just across the river from Harrisburg, with a rural population of only 100 to a square mile, there was last year just as

much typhoid fever as in the capital city itself, with a population of 10,000 to a square mile. This is a very poor showing, indeed, for the country. But Michigan beats it, with a record in some districts of twenty times as much typhoid in the country as in the neighboring cities. This is the kind of story that figures tell about rural hygiene; and this is the reason why we have been asking our legislators for better sanitary laws.

"When we come to take a sanitary view of the farm, the first point of interest, of course, is the house. This should have a clean, dry cellar, and the rooms in the house should have plenty of air and sunlight. Sunlight, I know, fades carpets, but faded children are worse.

"The heating of country houses should be looked after more carefully than is customary. The method of heating, which is almost always that of stoves, is in itself defective, and little can be done to remedy it, unless the rooms have open fireplaces. If these are kept open instead of being closed, there will be much more effective heating and much better ventilation.

"The next point which requires attention, and the one in which occurs the greatest defect, is the water supply, though it comes from a well or a spring. It is a proved fact that fifty per cent, at least, of all farm wells, are grossly polluted, and the water unfit to drink. It is hard to give up our sentimental ideas about the 'moss-covered well' and the 'old oaken bucket;' harder yet to give up our ideas of purity about the old spring; but the fact that we have so many epidemics of typhoid fever occurring in isolated farmhouses — three, four, and five cases sometimes in one family — goes far to show the bad character of the water.

"'But,' you will say, 'granted that our wells and springs are polluted, what are we going to do about it? We must have water, and there is no other way to get it.' One way to remedy this is to use rain-water collected in a very carefully made cistern, but a better way, to my mind, is to remove the source of pollution, and this source, in the country, is almost always one thing — *the old-fashioned country privy*. This should be abolished — the pit filled up and a dry closet substituted. A dry closet consists simply of a pail, a seat, and a receptacle for dry earth or sifted coal ashes. When the pail is filled, the contents should be emptied on cultivated land. If near the house, earth should be raked over the pile, but if at all distant, this is not actually necessary. Sunlight and the germs in the upper layers of the soil soon dispose of all danger from such filth.

"Another way is to have a cemented pit, throw earth into this every day, and every month or so remove the contents to the fields. All privies and earth closets must, of course, have tight-fitting covers, so as to exclude flies.

"Another thing to be gotten rid of is the slop and waste water. In the city this goes into the sewer. In the country it generally goes out the kitchen door and helps to pollute the soil and the well, and thus becomes a disturbing factor of health, not only from poisoned water, but also from polluting the atmosphere by evaporation.

"In the absence of sewers the proper way to dispose of slop waters, is by some form of a surface or subsoil drain, allowing the filthy waters to drain over or under cultivated land. Cultivated land, by the way, is the great sewer in the country, yet it is even better than a sewer, for it not only removes filth, but actually destroys it.

"The garbage or solid waste from the kitchen, if not fed to the stock, should be put in a furrow in a field or a hole in the garden bed. The sum and substance of the sanitary disposal of all putrescible waste about a country house is its speedy removal to cultivated land.

"The filthy barnyard — an eyesore to many an otherwise fine farm — is a great point for improvement, not only on account of its unsightliness, but on account of the adjacent soil pollution and the fact that stable refuse is a breeder of flies; and flies are well known to be carriers of disease germs. The manure should immediately be carted to the field, instead of allowing it to accumulate and putrefy in the barnyard. The sooner it is gotten there the better, not only in a sanitary sense, but for economic reasons, for the nitrogen, instead of being wasted, gets into the soil, where it is needed.

"The rain barrel, the cistern, and the country privy are the great mosquito-breeding places; although the malarial variety quite often prefers the roadside puddle and the pools of the little streams. To diminish the mosquitoes of a locality it is necessary to drain or fill all swampy places, to screen the cistern and rain barrel, and to put two or three ounces of kerosene oil in the privy every few weeks. Inasmuch as mosquitoes do not stray far from home, but are 'born and bred' where they are, it becomes a very easy thing to eliminate them in an isolated place; in a town, however, unless everybody

falls in line, it is quite a different story.

"The cow-stable is another point which directly affects the farm people, and sometimes other people who do not live on the farm. Cows are very prone to tuberculosis, and although there has been much discussion lately as to the interchangeableness of bovine and human tuberculosis, the weight of opinion at present favors the idea of the transmission of tuberculosis from cattle to man.

"Damp, dark, filthy and unventilated stables predispose to the disease; and to prevent it, cleanliness should be enforced. There should be also an abundant supply of fresh air and sunlight. Some other diseases, such as typhoid fever, diphtheria, and scarlet fever, have been traced to polluted milk; and in the great cities the terrible infant mortality in summer has been attributed to the same cause. So, even if we eliminate tuberculosis as one of the results of filthy milk, there is still enough danger left to stimulate us to use every precaution with regard to other diseases. In order, then, to have good, pure, and healthful milk, we must, of course, have good cows to start with, and they must be housed in clean, airy stables, and after this the whole secret is persistent cleanliness. The milkers should be clean, but they do not necessarily need to be dressed in white duck. There are only three things necessary, by the way, for cleanliness, and these are soap, water, and inclination, and the greatest of these is inclination."

WISER it were to welcome and make ours
Whate'er of good, though small, the present brings,
Kind greetings, sunshine, songs of birds, and flowers,
With a child's pure delight in little things.

—R. C. French.

Chautauqua School of Health

GRACE AND BEAUTY EXERCISES

BY THE EDITOR

EXERCISE is one of the first things essential for purity of the blood, soundness of the nerves, clearness of the skin, and elasticity of the spirit.

Healthful exercise may not to any great extent modify the features of the face, but it will secure grace and beauty of form and movement; and there is far greater attractiveness in a graceful and well-developed figure than in a simply pretty face.

Correct poise lies at the foundation of grace in movement. Among civilized people scarcely one person in a hundred can be found who knows how to stand correctly, or who can take at once a correct poise when told how to do so. The most perfect male figure the writer ever saw, was among the wilds of Arizona, in the person of a Yuma Indian, who in form and poise stood as perfect as an Apollo. The scanty clothing which he wore had imposed not the slightest restriction upon his bodily movements, and the active out-of-door life which he led, had resulted in a perfectly symmetrical muscular development. Why should not civilized men and women have equally perfect and graceful figures? — Simply because that symmetrical development of the muscular system upon which grace and beauty of form depend, is almost wholly neglected among civilized people. Our bodies are allowed to grow

out of shape, to fall into ungraceful and unhealthful attitudes. The flat chests, round shoulders, crooked spines, caved-in-stomachs, protruding abdomens, straight backs, awkward gait, and general lack of grace in movement, are not, as most persons probably suppose, the result of inheritance or a lack of natural endowment, but the effect of wrong education, or rather a lack of proper education of the body.

A graceful bearing in sitting, standing, and walking, is of first importance. A person who preserves constantly, in sitting or standing, a correct poise, can in so doing maintain a physical bearing which can scarcely be otherwise than attractive. As Aristotle says, symmetry of grace and symmetry of form are much more to be desired than simply comeliness of features.

It is noticeable that health, grace, and beauty always go hand in hand. A graceful attitude is always a healthful one; hence cultivation of grace in the sitting and standing poise is an important aid to health and beauty; and, in fact, it is the natural result of obedience to an important law of Nature.

Of the accompanying cuts, Figures 1 to 5 illustrate the method of acquiring a healthful sitting poise. Figure 1 shows a lady sitting in the position commonly assumed in the ordinary chair. The proper sitting poise is shown in Figure

2. By a careful study of these two figures, the difference in position maintained will be readily apparent. In Figure 1, the center of the back rests against the back of the chair, the chin drops forward, the chest is flattened, the stomach and bowels depressed, and all the muscles of the trunk relaxed. In Figure 2 the hips and shoulders touch the back of the chair, while the center portion of the back is not in contact with the chair back. The chest is held well up, the chin drawn in, the abdominal muscles and all the muscles of the trunk are contracted, and the stomach, bowels, and other organs are thus held in proper place. The position shown in Figure 1 is transformed into the correct position of Figure 2. First, the hands are placed upon the hips, as shown in Figure 3. The head is thrown backward so that the eyes look up toward the ceiling, a little more than is shown in Figure 3. The body is then bent forward, as shown in Figure 4, the head being carried well backward, while vigorous pressure is made on the back with the thumbs. The purpose of the pressure with the thumbs is to cause firm contraction of the muscles of the back. This brings the chest forward, and corrects the posterior curve of the back, which is acquired by the habit of sitting in a relaxed

position, as shown in Figure 1. While making firm pressure with the thumbs, the body is raised to the correct position shown in Figure 5. The pressure with the thumbs prevents relaxation of the muscles of the trunk while the body is being raised to position. While holding the body in correct position, the hands are removed from the hips, the shoulders allowed to rest against the back of the chair, the muscles of the trunk still remaining in forcible action, and thus the position shown in Figure 2 is acquired.

In Figure 6 is shown a young man sitting in correct position in an ordinary chair. The strong forward curve of the spine may be easily noted. Figure 7 shows a person sitting in correct position in a Sanitas health chair. The position of this chair has the advantage that the back is made at such an angle and has such a curve that the muscles may be relaxed without allowing the body to fall into a wrong attitude. The backward inclination of the chair-back carries the center of gravity for the trunk so far back that the weight of the trunk rests upon the back of the chair, and the weight of the head is carried by the anterior muscles of the trunk which are attached to the breast bone, the clavicle, and the first rib, and thus the weight of



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the head is made to pull the chest forward. Forcible sitting, shown in Figure 2, is tiresome. The Sanitas chair, shown in Figure 7, enables one to relax without getting out of position, and thus a sensation of rest and relief is experienced at once when one takes a seat in the chair. These chairs are in general use at the Battle Creek Sanitarium, the new building being supplied with chairs of this sort



FIG. 6

made expressly for the purpose. Figure 8 shows the outline of a woman sitting in an ordinary chair in the position usually assumed in sewing. In a person sitting in this position, the stomach, bowels, and other abdominal organs are necessarily crowded down out of position; the lungs are cramped, breathing interfered with; the abdominal viscera become congested because of interference of the blood circulation, and the foundation is laid for diseased conditions which may result in complete undermining of the health.

Figures 9 and 10 show the incorrect and correct standing positions. The correct standing position may be readily found by a simple exercise taken by aid of the edge of a door, or a perpendicular wall.



FIG. 7

In Figure 9 the person is shown standing with the usual incorrect poise against the

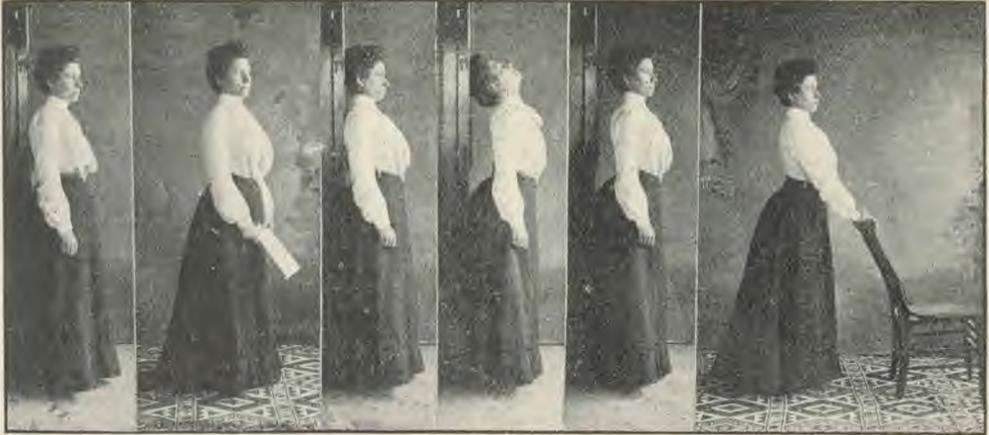
edge of a door. Figures 11, 12, and 13 show how the correct standing position is obtained. Standing with the heels, hips, head, and shoulders against the edge of the door, the head is thrown backward until the chest is lifted forward, as shown in Figure 12, the heels and hips being held against the edge of the door. The hands are now put upon the hips, as shown in Figure 3. With the thumbs backward, a

firm pressure is made with the ends of the thumbs. This contracts the muscles of the back so that when the head is thrown forward the position shown in Figure 13 is found. Holding the muscles of the trunk forcibly contracted, the arms are allowed to drop by the side, and stepping free from the door the excellent standing position shown in Figure 10 is acquired.

These exercises are excellent for developing the abdominal muscles, and, in fact, all the muscles of the trunk, which is necessary for a person who would constantly maintain a correct position in sitting, standing, and walking. Certain additional exercises are also useful for this purpose. The exercise shown in Figure 14 is especially good. This consists of grasping the back of a chair, which is made to bear part of the weight of the body, and



FIG. 8



9
10
11
12
13

raising the heels as high as possible. As the body is raised upon the toes, the abdominal muscles contract vigorously. A still more vigorous exercise can be secured by springing upward so the toes rest entirely free from the floor. At each spring the abdominal muscles contract with great vigor. Lying on the back and raising the head as far as possible is another excellent exercise for this purpose. Leg-raising requires still more vigorous action of the muscles. Raising the head and legs at the same time forces the abdominal muscles into most active and vigorous contraction. These movements may be repeated thirty or forty times, several times daily.

Another good exercise is to sit on the

edge of a chair, and take the position shown in Figure 3; then throwing the body backward, raise the knees at the same time. Thus rocking backward and forward thirty or forty times, the abdominal muscles will be thrown with each movement into vigorous contraction.

Still another excellent exercise for developing the abdominal muscles is tip-toe walking, or walking with a springing step, an exercise which is practiced as part of the German Army drill.

Out-of-door walking is especially conducive to health, as it secures abundance of fresh air and, at the same time, exposure to the air and sun, health-producing factors of the greatest importance.

FOODS FOR THE SICK

BY LENNA F. COOPER

A SUCCESSFUL nurse will often have to devise plans by which to tempt the appetite of her patient. Not that food should be crowded upon the sick one, but that an honest, healthy appetite, which is, as it were, the forerunner of a good digestion, must be created.

The first thing to do is to prepare the patient for the meal. Administer the

morning cold bath in whatever form prescribed,—the mitten friction, towel rub, or other form. The toilet should then be made, cleansing the teeth and mouth thoroughly. The following is a good antiseptic wash which should be used frequently: one teaspoonful cinnamon essence; one tablespoonful carbonate of magnesia in a pint of water;



MOCK CHICKEN JELLY

shake before using. Indeed, the mouth should always be rinsed before swallowing even a mouthful of water.

Put on the clean or aired gown and bed linen. Cover the patient well, open up the windows, and encourage him to breathe deeply if he is able. This is a very important thing to do, as there is nothing to sharpen the appetite more than exercise in the open air. While the patient is getting his fresh air, the room should be tidied and set in order.

Then give the patient a half glass of hot or cold water to drink, whichever agrees with his digestion best. If he is troubled with a "sour stomach" after eating, give the hot water. In fevers and cases where the tongue is thickly coated, give the cold water. Sometimes a glass of orange, apple, or other fruit juice without cane-sugar, is preferable to the cold water. An ice bag over the stomach a half hour before eating is an excellent measure to encourage the appetite. This is rarely contraindicated.

Let him rest for a half hour or so while the meal is being prepared. But

do not ask him what he wishes to eat. Let it be a surprise unless he asks for some special thing.

The appetite may be appealed to through the three senses, taste, smell, and sight.

In the recent experiments of Pawlow by which the esophagus of a dog was divided, allowing the masticated food to pass out of the body instead of into the stomach, it was found that the gastric juice had been secreted by the stomach the same as if the food had been swallowed, showing that the taste of food excites the flow of gastric juice. It was found, also, that the flow was excited by allowing the animal merely to smell and also to see food which it thought was to be fed to it. But food which was placed in the stomach without the dog's having seen, smelled, or tasted of it, remained in the stomach a considerable length of time before the flow of gastric juice began, and that which was secreted was much inferior to that which was excited through the appetite by one of the three senses.

These very important facts should be

known by those having the care of preparing and serving foods for the sick.

In the first place, all foods served should be tasty. This does not mean spicy, however, but often the addition of a small pinch of some of the sweet herbs, such as mint, thyme, or marjoram, or even a small bit of onion, will render a tasteless soup or broth a palatable, appetizing dish. No seasoning should be made so strong, however, as to be easily distinguished, or as to obliterate the taste of the food.

In many cases of illness the sense of taste is capricious or well nigh obliterated, though the patient may be unconscious of it, blaming the food for his lack of appetite. In such cases the appetite must be appealed to through the senses of smell and sight.

Warm foods should always be served *hot*, as they give off an odor due to the volatile substances in the foods. These are given off according to the degree of heat applied to the food. It is evident, therefore, that the hotter the foods are served, the more aroma will be given off, and consequently the more the appetite will be appealed to.

Dishes in which hot foods are served should be warmed before being filled.

Breads, crackers, grain flakes, etc., should be thoroughly heated and toasted in the oven just before serving.

The sense of sight is by no means an unimportant factor in tempting the appetite. Foods carelessly served, though carefully prepared and tasty, will have no attraction for the sick one. Foods should be served in small quantities, and only a few kinds at a time. It is better to let the patient call for a second dish than to destroy his appetite by bringing in a great quantity at first.

Dainty dishes, polished glass and silver, and clean linen ought to be provided for the invalid's tray. Indeed,

no pains should be spared to make it as charming and tempting as possible. Even the colors should be studied and harmonized. A good plan is to follow a color scheme, using a different color or combination of colors each meal. Pink, red, yellow, purple, and white are color schemes easily carried out. In the illustration, red is the color used. A glass of strawberry juice and a red apple, polished with a dry cloth until shiny, supplied the fruit; raspberry granola, the grain; breakfast toast and whole-wheat wafers, the breads; cherry jelly with meltose dressing for dessert; a glass of strawberry egg-nog, as a nitrogenous food; and a pat of coconut butter for fats. A red rose completes the scheme, and adds a charm that is quite irresistible.

Of course, it will hardly be possible to have everything on the tray of one color, as, of course, breads will be on every tray; but fortunately they are of such colors as to harmonize with any other color chosen.

A tray should never be crowded. A few simple dishes are much more appetizing than an over-crowded tray.

The following are recipes for a few simple relishes for the invalid's tray:—

Breakfast Toast.—Cut rather thin slices of bread into two or three pieces. Put these into the oven and let them bake very slowly for two or three hours, or until of a golden color and crisp throughout. This is an excellent substitute for breads and much more wholesome. It is delicious served with cocoanut or dairy cream or butter.

Cocoanut Cream.—Cut fresh cocoanut into thin slices and grind the nut very fine in a chopper or some strong hand mill. If nothing of this sort is available, the cocoanut may be grated. To each cup of the prepared nut add one cup of hot water, stirring and beating

with a spoon to extract as much of the juice as possible. Drain off the liquid and add a similar quantity of hot water, and, after beating again very thoroughly, strain through a cloth or very fine sieve, pressing out all the liquid possible. This may be used at once as a substitute for milk, to be eaten with rice or other grains, or to prepare

put into an iron or heavy bottomed kettle. Pour over it one cup of boiling water and let it boil eight to ten minutes, or until it is perfectly clear. Strain through cheesecloth. Have prepared one and one-half cups cherry juice, one-fourth cup lemon juice, and one cup sugar, to which add the cooked vegetable gelatin. Pour into molds



puddings or sauces. It is excellent served with granose flakes or eaten with zwieback. If placed on the ice for a few hours, the cream will rise to the top and may be taken off, making a pure cocoanut butter.

Raspberry Granola.—Into a pint of boiling red raspberry juice (that obtained from canned fruit) sprinkle one cup of granola. Cook two or three minutes and serve at once.

Strawberry Egg-nog.—Beat the yolk and white of one egg separately, and to each add one teaspoonful of sugar. To the yolk add one teaspoonful of lemon juice and two tablespoonfuls of strawberry juice. Stir in the white, leaving enough to serve as a meringue for the top.

Cherry Jelly with Meltose Dressing.—Soak one-quarter box of Sanitas vegetable gelatin in warm water twenty minutes. Remove from this water and

which have previously been wet with cold water, and set in a cold place or on the ice to mold. For a dressing beat one cup of meltose until very light. Flavor with one teaspoonful vanilla.

Mock Chicken Jelly.—Cut a pound of nuttolene into cubes. Put into a double boiler, and add three cups of hot water, the yolks of three eggs, well beaten, and one-half cup of cocoanut or dairy cream. Season with one teaspoonful of salt, one teaspoonful of celery salt, one slice of onion, and a pinch each of mint, marjoram, and sage. Cook forty-five minutes. Strain and measure. To every two cups of the broth, add one cup (one-quarter box) of the cooked vegetable gelatin, prepared as for cherry jelly. Mold and cut into oblong or square sections, and garnish with celery, lettuce, or parsley. By omitting the gelatin, an excellent broth may be made.

THE COOLING PACK

WATER at a temperature of from 60° to 70° should be employed for this pack. Wring a sheet from the water and wrap the patient in it in the same manner as directed for the hot pack in the January number, and cover with a single blanket. As soon as the sheet is warmed, it should be replaced by a freshly cooled sheet, and this again by another as soon as it approaches the temperature of the skin. This process may be continued until the sheet no longer becomes quickly warmed, or until the temperature of the blood has been lowered, as indicated by shivering.

In obstinate cases it may be necessary to continue these cooling packs for two or three hours, or even longer. Generally, however, five or six changes will be sufficient to lower the temperature one or two degrees, or below 102° F. It is not necessary to lower the temperature below 101°, though in some cases it is reduced to a lower degree, especially in very feeble patients, and in typhoid patients after the second week, or toward the termination of the disease.

In employing the cooling pack, it is important to remember that the patient should be carefully covered by at least a single flannel blanket. No attempt should be made to increase the cooling by allowing evaporation from the surface of the sheet. This produces slow chilling of the surface and contraction of the blood-vessels, the opposite of which is desired. The sheet should be covered so that reaction will occur. With the reaction, the surface vessels are dilated, and the blood is thus brought to the surface where it may be cooled by contact with the cool sheet. It is also injurious to leave the sheet in contact with the skin after the body temperature has been raised, as super-

heating may thus occur, so that the fever may be actually increased. As soon as the sheet is warm, it should be replaced by another. The first sheet may be warmed in six or eight minutes. The second sheet will probably require a longer time, ten or twelve minutes; the third, perhaps fifteen minutes; the fourth, twenty minutes; the fifth may require a still longer time, which will indicate that the effect desired has been obtained.

If the warming of the sheet does not occur quite promptly, reaction may be encouraged by rubbing the surface of the sheet with the hands placed beneath the blanket, but the sheet should never be left uncovered, even for a moment, and changes should be made as quickly as possible.

By the systematic employment of this valuable cooling measure from the beginning, the duration of most fevers may be very materially shortened, and their mortality enormously lessened, while the suffering and inconvenience may be diminished to an almost incalculable degree. If, however, the cooling measure is not resorted to until after the patient has been sick for several days, it may be found quite difficult to control the fever, and the best results may not be obtained.

In such neglected cases, it is only by the most persistent efforts that the intensity of the disease process may be controlled, and the fever rendered manageable. Failure to obtain immediate success should not, however, lead to discouragement and abandonment of the method as useless or inefficient; experience in a vast number of cases has shown that the cooling wet-sheet pack is capable of lowering the temperature *in every single case*, if properly and persistently employed. J. H. K.

SCHOOL OF HEALTH SEARCH QUESTIONS

GRACE AND BEAUTY EXERCISES

1. Name four desirable things that result from healthful exercises.
2. What lies at the foundation of grace in movement ?
3. Describe how a healthful sitting poise may be secured.
4. What invention enables this poise to be maintained without effort ?
5. Name the special advantages of the Sanitas chair.
6. Describe how the body may be brought into correct standing poise.
7. Give six simple exercises that strengthen the muscles by means of which a correct poise is maintained.
8. Why is out-of-door walking especially conducive to health ?

FOODS FOR THE SICK

1. What constitutes a good antiseptic mouth wash for the patient to use before eating ?
2. What are the indications for the giving of hot or cold water before meals ?
3. In what simple way may the appetite be encouraged ?
4. What important discovery with regard to the flow of the gastric juice was made by Pawlow ?
5. What bearing has this on the serving of food for the sick ?
6. When the taste of the patient is capricious, how may the appetite be appealed to ?
7. Why is it advantageous to have the foods served hot ?
8. Tell of one good way in which the invalid's tray may be made charming and tempting.

THE COOLING PACK

1. What should be the temperature of the water employed for the cooling pack ?
2. What should be done when the sheet is warmed ?
3. How long should this process be continued ?
4. What is the effect of cooling by evaporation ?
5. How may it be prevented during this treatment ?
6. Why is it injurious to leave the sheet in contact with the skin after it becomes warm ?
7. How may reaction be encouraged if it does not occur promptly ?
8. What is effected by the cooling pack if properly and persistently employed ?

Hundred Year Club

A GREEN OLD AGE

If her life is spared until July 27, Mrs. Sylvia Langdon Dunham will have reached the great age of one hundred and four years. Her long life has been particularly tranquil and free from excitement, and mental tranquility undoubtedly favors longevity. She still lives in the old home at Southington, Conn., to which she was taken as a bride in 1824, and has been but once out of her State. Being a farmer's wife, she has had abundance of hard work, both indoors and out, and this she herself considers to be one of the causes of her length of days and good health.

During the latter part of her life, most of her waking hours have been spent out of doors, caring for her old-fashioned flower garden. Life insurance tables prove gardening to be the most healthful of pursuits. It keeps one in the open air, giving sufficient exercise

without overtaxing the strength; and the constant contemplation of the beauties of nature which it involves, tranquilizes the spirit, and gives the mental peace which is the first requisite of health.

Mrs. Dunham has made a practice of retiring early, taking at least nine hours' sleep every night. She rises at six, and has been accustomed to take a walk in her garden before breakfast. She has been quite abstemious in her habits, taking only simple food, and never using liquors of any kind.

The aged lady is remarkably well preserved for her years, and is known as "the grand old woman of Connecticut." Her health has been unusually good; at the age of one hundred and one she remarked that she believed she had found the secret of perpetual youth, for during the previous quarter of a century she had but twice



MRS. LANGDON DUNHAM

required the services of a physician.

To look at her, one would hardly think that she had lived to see twenty-four presidential elections. The incidents in her life which she regards with greatest pride and pleasure are: Born July 17, 1800; at five years of age rode in a stage-coach; at forty, in a canal-boat; at ninety-nine, in an electric car;

at one hundred, rode in an automobile.

If more women would follow Mrs. Dunham's example, combining simple food and abundant sleep with light outdoor work, such as gardening, bee-keeping, or fruit-raising, there would be fewer premature funerals and far less havoc due to shattered nerves from artificial and death-inviting habits.

CURIOUS FACTS FROM LIFE INSURANCE RECORDS

EVERY one who is troubled with "symptoms" will be interested in the statistics prepared by the Mutual Life Insurance Company of New York, showing at what ages different diseases may be expected to stop human machinery. The figures deal with a period of fifty-three years—1845–1898—during which time 46,525 deaths passed under review. They, of course, tell nothing of individual cases, but of the average or typical cases they reveal much.

Skilful physicians are connected with the large Life Insurance offices, to examine into the physical condition of applicants for insurance, and to make a careful investigation of the causes of death in cases of policy holders.

The Mutual Life's records show that the chances are about six to four that consumption will carry off its victims before the age of forty-five. Fifty-nine per cent of sufferers from this disease die before they reach this age. Above sixty, the per cent of cases is only twelve.

In general diseases, such as small-pox, diphtheria, measles, etc., the chances do not differ widely. Thirty per cent of the deaths from these diseases occur under the age of forty-five; 36 per cent, between forty-five and sixty; 34 per cent, above sixty.

Apoplexy, softening of the brain, and paralysis chiefly afflict elderly people, 55 per cent of the deaths from these causes occurring above sixty, and only 12 per cent below forty-five.

The probabilities are that sufferers from other nervous diseases will not reach the age of sixty, only 27 per cent of deaths from these causes occurring after that age.

Heart disease afflicts principally the elderly and middle aged, only 11 per cent of deaths from this cause occurring before forty-five years of age.

Although pneumonia has been called "the old man's disease," the chances are sixty-four to thirty-six against one dying of this disease after the age of sixty. Twenty-nine per cent of the deaths from pneumonia occur under forty-five, 35 per cent between forty-five and sixty, and but 36 per cent above sixty. Other respiratory diseases, such as bronchitis, pleurisy, etc., grant a little longer lease of life.

Derangements of the digestive system do not glean from the aged a very large number of victims, the chances being more than two to one against those so afflicted reaching the age of sixty. Thirty per cent of the deaths from this class of diseases occur under forty-five; 38 per cent, between forty-five and sixty; 32 per cent, above sixty.

Victims of Bright's disease have a fair chance of reaching sixty, only 16 in 100 dying of this disease before forty-five.

Complaints classified as "genito-urinary" are old-age diseases, 77 per cent of the deaths from such causes occurring at ages above sixty.

Fifty per cent of the deaths from violent causes occur under forty-five.

Fully 68 per cent of the typhoid fever deaths occur under forty-five, and only 9 per cent at ages higher than sixty.

The foregoing data, briefly summed up in the following table, relate to all lives without regard to sex:—

Percentages of Deaths, by Ages, from Familiar Diseases, as Shown by 53 Years' Experience of the Mutual Life Insurance Company of New York.

	Per cent Under 45	Per cent 45 to 60	Per cent Above 60
Consumption	59	29	12
Other general diseases	30	36	34
Apoplexy, paralysis, softening of brain, etc.	12	33	55
Other nervous diseases	35	38	27
Heart disease	11	33	56
Pneumonia	29	35	36
Other resp'y diseases	24	30	46
Digestive diseases	30	38	32
Bright's disease	16	37	47
Other genito-urinary diseases	—	—	77
Unclassified and ill-defined	14	23½	62½
Typhoid fever	68	23	9

The essential differences between the sexes in the mortality tables result from the accidents and diseases due to the function of maternity. Deaths from violent causes have a much higher percentage among males than females, but the cancer death-rate among females is much greater than among males.

Mr. Francis Binnion.

Mr. Francis Binnion, of Vernon, Ill., celebrated on the ninth of last August his one hundred and third birthday. With the exception of failing eyesight, his faculties are preserved to a remarkable degree. He is vigorous both in mind and body, and in appearance would pass for a man twenty-five or thirty years his junior. He conducts a tavern in the little town where he resides, tilling the soil for the vegetables he uses upon his table, and caring for and milking his own cows.

He was born in Virginia in 1800, and came to Illinois in 1842. His father lived to be 104, and his grandfather died at the age of 110, the latter meeting his death by accident. He has nine children, twenty-three grandchildren, and thirty-three great-grandchildren.

Mr. Binnion neither smokes nor drinks, although he declares that tobacco was largely in a way responsible for his robustness. Down in Virginia, near Lynchburg, when he was a boy, every one, at the beginning of the last century, raised tobacco and made whisky. The mother, who was the family physician, dosed the children with a decoction of whisky and herbs for every little ailment. That's why Mr. Binnion *never liked whisky*.

As for *tobacco*, he tried it once. His first chew was cut from home-cured twist. He became excited and swallowed it. He was so ill in consequence that he never repeated the experiment, to which fact he attributes in a considerable degree his good health and long life.

.. *By the Editor* ..

THE RETURN TO NATURE MOVEMENT

THE one encouraging note in the general discord which disturbs the harmony of human life at the present time, is the widespread desire manifested by men of all nationalities and all conditions in life to find the way back to Nature. Among reflecting men and women, the feeling is gaining ground that the general trend of civilization for centuries back has been too decidedly toward artificial and perverting habits. George Ripley, Thoreau, Emerson, Alcott, Margaret Fuller, and a score of other New England reformers who entered into the Brook Farm experiment, were fully persuaded of the need of a return to Nature, and sought by their example to lead the way. The experiment failed, but the necessity remained, and the idea has been spreading and deepening in the minds of men that we have already gone far enough in the direction of artificiality to see the pernicious effects of leaving the path of naturalness and simplicity, and that we should at once face about and find our way back to normal and physiological habits.

Tolstoy is one of the foremost European representatives of this return-to-Nature movement. In Russia there are thousands of earnest men and women who are loyally following in the footsteps of this noble pioneer of simple naturalness in practice as well as in philosophy. The influence of this man of genius is also clearly felt in all parts of the world.

In Germany there are more than four hundred local societies for the promotion of the *Naturheilkunde*, and many thousands of disciples of the principles of rational living, and there are hundreds of institutions in which natural methods are used for the sick,—water-cures, light institutes, open-air cures, etc.

In this country the movement begun by the Brook Farmers, Graham, Shaw, and others, has progressed slowly, and at times has seemed to be almost dead; but the wonderful reinforcement of facts which has resulted from modern bacteriological and physiological researches in various countries, though conducted chiefly by men not wholly in sympathy with reform movements, has revived and reanimated interest, and has strengthened the hands of those, who, through the recognition of right principles, have for years been laboring for the advancement of the return-to-Nature movement.

Just at present there is in America, as in most other civilized countries, a growing interest in the "natural method" in education, which has attracted an increasing amount of attention from leading educators in the past forty years, and now is accepted without question as sound and practical. The necessity of bringing the whole life and conduct into harmony with right and natural principles is daily becoming apparent to a growing number of intelligent men and women.

Never before for centuries has there been such a widespread interest in the natural modes of life as at the present time. Those who for many years have been contending earnestly in behalf of temperance reform, diet reform, and other needed reforms have much reason for encouragement. While it is not to be expected that reforms that strongly antagonize natural appetites and tendencies will ever become popular, it is nevertheless gratifying to note the increasing number of those who recognize the value of natural and physiologic rules in maintaining health and in dealing with disease.

FLESH EATING THE CAUSE OF APPENDICITIS

PROF. LUCAS CHAMPIONNIERE, in discussing the subject of cancer before the Academy of Medicine at Paris recently, declared that every day brings forth new confirmation of his belief that the principal cause of appendicitis is the use of flesh food. He called attention to the remarkable fact that appendicitis is four times as frequent in England and in the United States as in Paris, and that the meat consumed in England and the United States is about equally greater in proportion. In Brittany, a portion of France in which very little meat is eaten, appendicitis is exceedingly rare. The military surgeon in charge of the French troops in Algiers has recently pointed to similar differences between the French troops and the native Arab troops. The Arabs rarely ever taste meat, while the French troops have meat regularly served in their rations. Among the former, appendicitis is almost absolutely unknown.

It is easy to understand why flesh eaters should be especially liable to inflammation of the appendix. Flesh readily undergoes decomposition. In the colon are always present great numbers of germs which are capable of giving rise to putrefaction in putrescible substances. The warmth and moisture always present in the colon particularly favor the putrefying process. The fecal matters of flesh eaters always contain fragments of flesh which are undigested. In the colon this undergoes decay the same as when ex-

posed to the same conditions elsewhere. It is this which gives rise to the extremely offensive character of the fecal matters of carnivorous animals. The feces, or the food residue, of the sheep or the horse are not so offensive as those of flesh-eating animals; they are, in fact, almost odorless. This is because they contain so little putrescible material. Flesh eating thus encourages the growth of germs in the colon. The same germs which give rise to putrefaction are also capable of producing inflammation and suppuration. Professor Bouchard has observed cases in which one half of the total weight of fecal residue consisted of germs. Others have observed a still larger proportion of germs in feces. It is evident, then, that the use of flesh food must encourage inflammatory processes in the colon, and hence increases the liability to inflammation of the appendix, or appendicitis, through extension of the inflammation from the head of the colon to the little pouch connected therewith, which is known as the appendix.

If the whole truth were known, it would appear that not only appendicitis, rheumatism, gout, and a few other disorders which have been directly traced to the use of flesh are due to this abnormal diet, but that a large proportion of all the maladies with which human beings suffer are directly or indirectly due to the use of animal flesh as food,— a practice absolutely unnatural and a prolific cause of disease.

GOING TO SCHOOL OUT OF DOORS

NATURE is quite too much left out of our educational system. A few weeks with botany, mineralogy, or some other natural-history subject are thought to be sufficient, while several years are spent over the dead languages, and in the study of abstruse mathematical problems which do not come into the practical life of more than one man in ten thousand. That our educational systems need re-

form is patent to many, and to teachers more than any others. An educational reform movement is in progress. It is encouraging to note that there is a decided effort in the direction of a better acquaintance with nature. In summer time, at least half the study hours might profitably be spent out of doors, not simply in roaming the fields, but in minute and careful observation of what

is going on in the natural world. Trees, shrubs, grass, flowers, insects, brooks, rivers — all are at work doing something. The unenlightened are almost wholly blind to this marvelous activity of the natural world.

One of the objective points in a true educational system must be to open the eyes of the child to see the wonderful things which are happening in the natural world about him, and to discern the divine Intelligence which works in every leaf and flower, in every passing cloud, and every ray of light. Vacation periods might be most profitably spent in regular, organized, systematic out-of-door study. Such a use of vacation days would be far more profitable than aimless sport. Part of the time might be spent in vigorous exercise or labor well calculated to encourage bodily development. Exposure to life in the air has a most beneficial effect upon a growing child, increasing the appetite, improving the assimilation, and developing the qualities of endurance

and resistance, which are the most effective protection against disease.

Every child ought to be taught to swim. Swimming schools should be connected with every public school; also an outdoor gymnasium, in which, in suitable weather, children may expose a large part of the surface of their bodies to the action of the sun's rays. By this means only can the skin be made vigorous and healthy. A healthy skin is the best possible protection against disease of the lungs and other internal viscera. Catarrhs, consumption, and dyspepsia are not easily introduced in one who has a vigorous skin.

Outdoor schools may be successfully conducted even in winter time, and all children should spend at least two or three hours in the open air daily, even in cold weather. In summer time the child should spend every moment possible in the great out of doors, absorbing life and energy from the living world about him.

THE MARCH OF DEGENERACY

THE last report of the Census Bureau tells a lot of interesting things about the march of disease and degeneracy which have a most practical bearing on everyday life and practice. It is shown that while quarantine and Board of Health restriction and improved treatment have lessened the prevalence and fatality of several acute maladies, chronic diseases and degenerations have greatly increased. For example, the death-rate for 1890 was forty-seven in every 100,000. In ten years the rate increased to sixty. The annual death-rate from apoplexy in 1890 was forty-nine; in 1900, sixty-six. Diabetes increased from five to nine, and kidney diseases from fifty-nine to eighty-three.

These figures show an enormous increase in five of the most formidable and incurable maladies. They show an increase for cancer of twenty-eight per cent; apoplexy, thirty-five per cent; diseases of the kidneys, forty-one per cent; diabetes,

eighty per cent; and deaths from old age, twenty-three per cent. When we remember that this increase has occurred in ten years, the fact acquires great significance. Such an increase within two or three centuries would be ample cause for apprehension; but an increase in five fatal maladies, at an average of about forty per cent, occurring within ten years is truly appalling. If these disorders continue to increase at the same rate, in twenty years more the number of deaths from cancer and old age will be doubled; from apoplexy, the increased fatality will be two and one-third times increased; kidney disorders will kill three times as many as in 1890, and diabetes six times as many.

A study of the last census shows that in this country deaths from cancer have increased twenty-eight per cent; from apoplexy, thirty-five per cent; from diabetes, eighty per cent, and from kidney diseases, forty-one per cent, in the past ten

years. At this rate, in fifty years cancer will kill three and one-half times as many as at the present time; apoplexy, four and one-half times as many; diabetes, nineteen times as many; kidney diseases five and one-third times as many. The total death-rate of these four diseases would then be more than eleven per thousand, which is equal to the total death-rate at the present time in healthful localities. Diseases of degeneration are rapidly increasing. The world is getting sicker every day, and there is an increasing demand for the help which well-trained doctors and nurses are able to give.

If we look for the causes of this enormous increase of disorders due to constitutional deterioration, they are easily found. We do not have to seek out some subtle cosmic influence or some new germ. Cancer is probably directly due to a parasite, but the real cause is the preparation of the tissue soil, the degradation of the body by wrong habits of life to such a

degree that the tissue cells have lost their power to resist the attacks of invading parasites.

Apoplexy and old age are the result of a disease of the blood vessels, the direct cause of which is without doubt due to an excessive accumulation of uric acid in the blood. Diabetes and kidney disorders are, according to Dr. Haig, also due to uric acid.

Chronic uric-acid poisoning is distinctly a meat-eater's disorder. Haig and others have shown that uric-acid accumulations in the body are the result of the introduction of this poison into the system with the food. Meat eating has unquestionably greatly increased in recent years; and while other causes, as tobacco using, the use of alcohol, and tea and coffee drinking, are doubtless partly responsible for the appalling increase in disorders of degeneration, the wholesale tissue poisoning resulting from the increase of use of flesh foods, must be regarded as the chief cause.

A New Remedy for Appendicitis.

German medical journals are recommending a new and peculiar remedy for appendicitis, the employment of which, it is declared, will obviate the necessity for the use of the knife in the great majority of cases. This remedy consists in walking on all fours twenty minutes four times a day. A contemporary states that this method is not only original, but almost aboriginal. However this may be, the method is certainly worthy of consideration. This method of treatment operates by strengthening the abdominal muscles. When these muscles have relaxed, the bowels become displaced, congested, and diseased; the disease extends to the appendix, and thus an inflammation is produced. It is claimed that a well-known German diplomat has been recently cured of chronic appendicitis by this method.

We do not doubt that a person having this disease, if not in an acute stage, may

be benefited by getting down on all fours and walking like a dog; but there is something more he must do, also. Though he may with benefit walk like a dog, he must stop gnawing bones like a dog. The dog's method of locomotion is good gymnastics for strengthening the abdominal muscles, but the dog's diet is not adapted to the human constitution. Flesh eating has repeatedly been shown to be an active cause of appendicitis. Persons who do not eat flesh are little subject to appendicitis. This has been clearly proved by statistics collected in Algeria and elsewhere where there is an opportunity for comparison of flesh-eating and non-flesh-eating classes. Undigested fragments of flesh undergoing decomposition in the colon are especially the cause, setting up inflammatory processes in the colon which easily extend to the appendix and even to parts that are more remote.

... Question Box ...

10,058. Intestinal Catarrh.—H. L. S. Hawaii: "1. What is the cause of passages from the bowels of mucus and strings of what looks like the mucous lining, accompanied with great tenseness and nervousness and mental and physical depression? 2. Is it chronic malaria and catarrh of the stomach and bowels? 3. Can it be cured? 4. Outline treatment."

Ans.—1. Chronic intestinal catarrh.

2. We have no means of knowing whether malaria affects the person or not. An examination of the blood would be required to determine this.

3. Yes.

4. Such a case requires treatment in a well-conducted sanitarium. Would advise a visit to the Battle Creek Sanitarium or some of its affiliated institutions. If you cannot do this, the best thing for you to do would be to adopt a natural dietary and a simple mode of life. Live out-of-doors as much as possible. Take sun-baths daily. Expose the skin to the action of cool air and cool water as much as you can. Sea-bathing daily, for a half hour or an hour, will be helpful. Cleanse the bowels daily with a large enema of water from 76° to 80°. Use fruits and fruit juices freely. Avoid meats altogether, also tea, coffee, chocolate, condiments, and other unwholesome, indigestible foodstuffs. Cow's milk is generally harmful, except in the form of buttermilk or kumyss. Potatoes are the only vegetable well tolerated. Rice is excellent. Apply a moist abdominal bandage night and day. A sitz bath at seventy degrees, ten or fifteen minutes daily, will be found helpful.

10,059. Nervousness—Palpitation—Pain in Shoulder and Heart—Noises in Head—Inability to Breathe through the Nostrils—Nasal Douche—Middle Ear Catarrh.—A. S., Canada: "I am twenty-two years of age and have suffered with the following symptoms ever since a bad attack of malarial fever ten months ago. 1. Intense nervous-

ness and palpitation. A heavy, tired, and sometimes cutting pain in left shoulder. Stabbing pain at the heart and between shoulder blades, when sleeping on left side. Noises in head. Inability to breathe through the nostrils when sleeping. Constipation. If any of these are curable, please state treatment. 2. Is a nasal douche with antiseptic powder, twice a day, at all beneficial for noises in the head? 3. Is the climate of England preferable to this for a man who is troubled with middle ear catarrh? 4. Is it wise for me to give up clerking, and lead a vigorous, open air life, such as farming?"

Ans.—1. All of these troubles are curable. You should visit a thoroughly equipped sanitarium and put yourself under the care of competent specialists. You can derive great benefit at home by following a natural mode of life. Write to the publishers of this magazine for copies of the following booklets: "The Reason Why," "The New Dietary," and other printed matter, which will be sent you. Enclose two two-cent stamps.

2. Possibly, if due to catarrh of the middle ear.

3. No.

4. Yes.

10,060. Enlarged Tonsils—Difficult Breathing.—Mrs. E. J. W., Washington, would like to know what should be done in the following case: Child four years old; tonsils have been enlarged almost from birth; palate lies on one tonsil continually, and the other is nearly as large. Nasal cavity also much swollen, so that breathing when asleep is very difficult.

Ans.—Consult a good specialist. There are probably some vegetations in the back part of the nasal cavity which should be removed, together with the enlarged tonsil. The child's general health and vital resistance should be improved by daily, careful cold bathing and proper diet. Avoid meats, candies, and all unwholesome foods. Give an abundance of ripe fruit and fruit juices. Teach the child to chew well.

10,061. Congestion of Head.—Mrs. E. J. S., California, who is seventy years of age, has congestion of head and suffers much from dizziness, especially on lying down or getting up. Some months ago she fell and struck her head, cutting the scalp, which bled profusely, and since then it has been worse than before. She would like (1) plain directions as to how to live in order to get relief; (2) to know how the trouble is likely to end, and (3) if there is danger of insanity.

Ans.—1. Live naturally. Cereals, potatoes, fruits, fruit juices, and nuts are the proper food. Live out of doors as much as possible. Sleep with open window. Take a cold bath daily, and dress healthfully, especially have the garments loose at the waist, and suspend the garments from the shoulders. Clothe the knees warmly.

2. In recovery.
3. No.

10,062. Fruits and Legumes—Gluten Bread—Buttermilk—Regurgitating Foods—Peanuts.—H. L., Ohio: "1. Are fruits and legumes considered a good combination? 2. Is fresh baked gluten bread as objectionable as fresh white bread? 3. Is buttermilk that has been bottled for a week still fit to be used if it tastes all right? 4. What is the cause of regurgitating food after a meal? 5. Are unroasted peanuts more easily digested than roasted ones?"

Ans.—1. Yes.

2. Yes, unless very well baked.

3. Yes, but should not be used if at all bitter, and should be kept in a cool place to be sure there has been no injurious change.

4. Excessive irritability of the stomach.

5. No. Raw peanuts are indigestible. Cooking is the only proper method of preparing them for eating.

10,063. Face Cream—Skin Food.—K. S., Missouri: "1. What is the best cream for the face and hands when the skin is dry? 2. Can it be prepared at home? 3. Which is the best skin food?"

Ans.—1. A little fine vaseline. White Virginia vaseline is the best.

2. You can buy this at any drug store.

3. There is no food which specially feeds the skin. So-called skin foods are humbugs.

10,064. Exercise and Bathing—Diet.—R. L., Kansas: "1. When is the best time to exercise and bathe, for a man who works indoors all day? 2. What is the best diet? 3. What time should he eat? 4. I exercise

every night, but do not sleep well. Have been troubled with breaking out on my limbs for some time. Suggest treatment."

Ans.—1. Take warm baths at night, just before retiring; cold baths in the morning.

2. Natural foods. Write the publishers of this magazine for booklets entitled "The Reason Why," and "The New Dietary;" enclose two two-cent stamps.

3. This depends upon his working hours. If working hours can be regulated to suit, 8:00 A. M. and 3:00 P. M. are the best hours. If one must accommodate himself to ordinary working hours (7:00 to 12:00 A. M. and 1:00 to 6:00 P. M.), breakfast may be taken before going to work, a hearty meal may be taken at noon, and a lunch of fruit may be taken at night.

4. This is because you eat supper, which is a very potent cause of sleepless nights. A bath at 92° for fifteen or twenty minutes is an excellent night-cap, also a good remedy for the condition of the skin. The application of a lotion consisting of equal parts of glycerin and water will perhaps relieve the breaking out. If this does not afford relief, bathe the parts night and morning with resinol soap, and then apply the lotion prepared from the following formula: Ichthyol, one part; alcohol, two parts; olive oil, two parts; lime water, two parts; distilled water, four parts.

10,065. Skin Disease.—S. J. H., Ohio: "Between the two middle fingers of my left hand I have a sore which began three months ago with a small blister not larger than a pin-head, but which has now spread to near the first joint on both fingers and toward the palm of the hand. There is no pain, but severe itching, and the skin comes off. 1. What is it? 2. What can I do to cure it? 3. Is it true that the Jews are never afflicted with cancer? If so, what do you consider the cause of their immunity?"

Ans.—1. Probably eczema.

2. Bathe with castile soap daily, and apply some germicide preparation. The following is good: Ichthyol, 2 drams; almond oil, 2 drams; lime water, 2 drams; alcohol, 2 drams; water, 4 drams. Bathe alternately with hot and cold water, twice daily, for four or five minutes.

3. No. Jews are probably less subject to cancer than is the average civilized man, and perhaps for the reason that they do not, as a class, use pork.

LITERARY NOTES

AN EXCELLENT BOOK OF TRAVEL AND DESCRIPTION.

It is a pleasure once more to direct attention to that beautiful volume of travel entitled "Travels by Land and Sea through Five Continents."

The author, Geo. C. Tenney, performed a journey of 40,000 miles in gathering materials for his book, and is an actual observer of what he describes. The book is written in easy and attractive style, and is full of interest from start to close. It is a most appropriate book for young people. The author is a member of the editorial staff of *GOOD HEALTH*, and Instructor in Bible Exegesis in the Training-school for Missionary Nurses, connected with the Battle Creek Sanitarium. The book is published by the Review and Herald, of Battle Creek and Washington, and may be obtained of them or of *GOOD HEALTH*, or of the author. Contains 392 pages, 150 illustrations. Price, postpaid, \$1.50.

In the April *McClure's*, Thomas Nelson Page gets at the heart of the negro problem, throwing the light of his intimate knowledge upon its difficulties and fallacies. He discusses the days of reconstruction, and exposes the grave mistakes by both North and South in the trying post-bellum time.

Jules Guérin's pictures of the St. Louis Fair, which appear in the April *Scribner's*, are beautiful representations of the picturesque buildings which are so soon to be open to the public. Several of them are reproduced in color, and are the best interpretations of this wonderful Exposition which have yet appeared. Montgomery Schuyler, the art critic, writes about the architectural features of the Fair.

A handsome and valuable issue of *Good Housekeeping* is that for April. Among the leading features of the magazine this month are George W. Cable's paper on Neighborly Gardens; a collection of very attractive summer cottages, printed in a tint; a paper on Childhood in Japan, by Florence Peltier, illustrated from drawings made in Japan by Genjro Yeto; a study of Co-operative House-keeping, by Marion Foster Washburne; Art

in Its Relation to Feminine Dress, by Professor Frank A. Parsons of Columbia University; Poultry Raising for the Woman of To-day, by Katherine E. Willis; Housekeeping Made Easy, a physical culture paper by Constance Sidney; and the usual departments.

Mr. A. Maurice Low contributes to the April-June *Forum* an article on Foreign Affairs which is especially noteworthy as containing the full text, not previously printed, of the demand made by Russia upon China in April of last year. This *communiqué* finds place in the detailed account given by Mr. Low of the causes which have led up to the present war.

"**Thirty-nine Reasons Why I Am a Vegetarian**," by Rev. Henry S. Clubb. Published by The Vegetarian Society of America, 1023 Foulkrod St., Frankford Station, Philadelphia.

In this most optimistic little pamphlet, the author gives us the "thirty-nine articles" of his faith in vegetarianism, which he regards as essential to human progress and development. The first eighteen of the "Reasons" are negative reasons for not eating the flesh of animals. The remainder are positive reasons for the use of a pure dietary—the products of orchard, field, and garden.

This timely booklet will be of interest to both vegetarians and flesh-eaters. The former will find in it confirmation of their views and practice, and the latter, food for reflection.

A little lake twenty miles long, an average of two and one-half wide, fourteen hundred feet above the sea, looking down upon Lake Erie seven miles distant, from a height of seven hundred feet, its blue-green waters perched like a translucent, emerald-hued gem upon the hills of western New York—such is Lake Chautauqua. When I gaze upon its beauty, its superb natural setting of rolling fields and wooded hills, I little wonder that the original owners, the Indians, fought as they did to save their lands and rivers from the transgression of modern civilization.—*From "Charming Chautauqua," by Will Larrimore Smedley, in Four-Track News for April.*

PUBLISHERS' DEPARTMENT

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A Journal of Hygiene

J. H. KELLOGG, M. D., EDITOR

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BATTLE CREEK. MICHIGAN

OUR request for vegetarian menus has brought so many responses that it will require some little time to make a decision respecting the merits of those submitted. It is proposed to have the full meal as outlined in each menu carefully prepared and served for the judges both to see and to taste the various dishes, before rendering their decision. The menu selected as the best will be printed in the Midsummer Number. All other deemed of special worth will be given in following numbers.

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The publishers offer a prize of \$25 for the

best health story, \$15 for the second best, and \$5 each for the three next in merit, upon any of the following subjects: —

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 - How The Other Half Live.
 - The House Healthful.
 - Kitchen Sunshine.
 - Out of Doors, M. D.
 - A Good Dinner.
 - The Wage-earning Woman's Health Problem.
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- The stories need not be limited to these topics, but each must exemplify the principles of health and hygiene taught by this magazine.
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A SYMPOSIUM on Vegetarianism will be the leading feature of our June number. It will contain contributions from more than a dozen writers, on such subjects as, The Diseases of Animals, The Economic Side of the Question, The Ethics of Animal Slaughter, Pythagoras and Byron on Flesh-eating, Vegetarianism from the Bible Standpoint, Vegetarianism and Longevity, etc. Mr. Albert Broadbent, secretary of the oldest and most important vegetarian society in Great Britain, will give the history of the development of the Vegetarian Idea in modern times. Rose Wood-Allen Chapman will contribute a humorous sketch entitled "The Conversion of John Robinson." Dr. Lindsay will write on the subject of Vegetarian Diet. A number of photographs of life-long vegetarians will be presented, with a brief sketch of their history. This important question will be considered in all its bearings, making this a most valuable issue, and just the thing to put into the hands of inquiring or skeptical friends to convince them of the importance of this question from both the physiological and the ethical standpoint.

CYCLING FOR HEALTH.

THE bicycle has wrought a revolution in many a household. Sedentary men and women, whose occupations keep them indoors, have, by means of the bicycle, been enabled to check the advance of chronic disease, and to restore health and vigor to their systems.

In our big cities, people live, hemmed in by brick and stone, breathing the impure air of overcrowded streets and tenements. If every one could only have the means of getting away into the beautiful country, where the brain may be rested and the body invigorated by the contact with nature.

Note what a mighty intelligence has colored the grass such a restful green. Tired eyes and tired heads become recuperated by gazing on it. It might have been red instead. Imagine the effect. Thank God for the cool shade of the trees and the sparkle of the water; for the smell of the damp moss and the fresh earth, the delicate beauty of the ferns, and the sweetness of the wild flowers.

O, if every dweller within dingy city walls, with their collections of stuffy furniture, dust, and microbes, had a pair of wings, and, leaving behind every cobblestone and brick, could

rest for a while on the green, under the shade of the trees; or stretch himself out in the sunshine and draw into his lungs the pure, life-giving breath of heaven.

The fortunate few who can afford an auto are lucky. But, never mind, almost every one can afford a bicycle now-a-days. The bicycle fad has passed, and has left the roads to the true lovers of the pastime, who appreciate the advantage of a wheel, which have not diminished in the least. The bicycle is better fitted now than it ever was before to give you the health-renewing exercise which mind and body need; to bear you swiftly into the sweet, fresh country, where the grass is just as green, the sun just as bright, the air just as life-giving, as ever. It is more within the reach of every pocketbook than it ever was before, and it is just as indispensable for recreation and health. The faddists have done with it. Now the sincere seekers after health and pleasure have all the more chance.

To the bicycle, more than anything else, is due the reform in woman's dress. Before its advent a woman was liable to be arrested if she wore a short skirt on the street. Now she is more in danger of arrest for wearing one too long. The comfortable shirt-waist, loose jacket, absence of corsets, and other changes owe their coming largely to the bicycle. We hear the rumor that tight waists are coming in again. Women, to your wheels! Ride down the health-destroying, lung-compressing fashion. Ride hard, breathe deep, expand your lungs until tight waists are an impossibility, and long skirts are objects of contempt.

THE PIANO QUESTION.

A QUESTION which every household considers at some time or other is how to get the best piano possible at the lowest possible price. It is a well-known fact that the profit on pianos sold in retail stores or by piano dealers is very large, usually not less than \$75 or \$100, and often as much as \$250.

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MORMON MYSTERIES

And Gospel Mysteries Illustrated and Compared, defining the relation of marriage and polygamy to true civil and religious liberty. An exposure of the Mormon counterfeit of the closing gospel message, fully illustrated. Contains up-to-date matter from Rev. Josiah Strong on Political Aspects of Mormonism; also valuable pointers from Rev. R. S. Mc Niece (21 years in Utah); Rev. D. J. Mc Millan (10 years in Utah); Rev. Wm. R. Campbell (12 years in Utah); A. T. Schroeder; and Richard Wake, cor. sec. "Gentile Bureau of Information; with Ten Reasons Why Christians Cannot Fellowship the Mormon Church," passed by the Presbyterian and Congregational and Baptist associations of Utah; also sworn testimony of witnesses before U. S. District Court, on blood atonement polygamy, and the priesthood's aim to unite Church and State, showing the evils of religious zealots controlling the civil power; also essence of Smoot investigation at Washington, to June 1. Orders filled then. Makes plain the TRUE "latter day" gospel and true religious liberty compared with modern COUNTERFEITS. Marriage and the Sabbath are divine institutions, from Eden. Mormons say to the State, Hands off! Sabbatharians say the same. What difference? Beautifully illustrated, 25 cts. Two for 35 cts. in May; ten for \$1.50; 20 at half price, \$2.50. Sells quick. While Mormon error is being studied by all the world from the Washington investigation, NOW is the time to put the TRUTH in place of error. Order of F. E. Belden, Battle Creek, Mich. It has cost millions to get the world's attention on this subject. Why neglect this great opportunity for truth? Other truth will keep. Push where God opens the way. Don't waste time blasting a pathway when the crowd is somewhere else.

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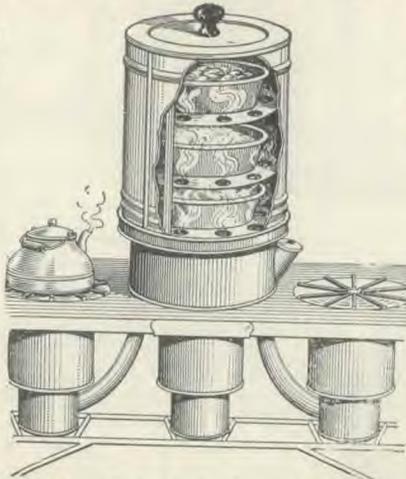
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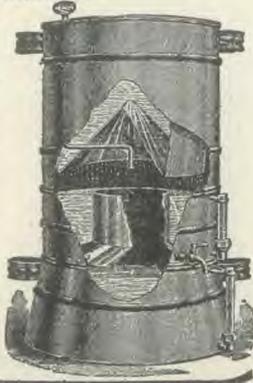
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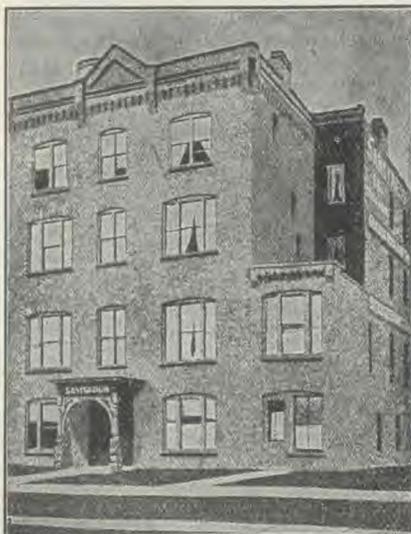
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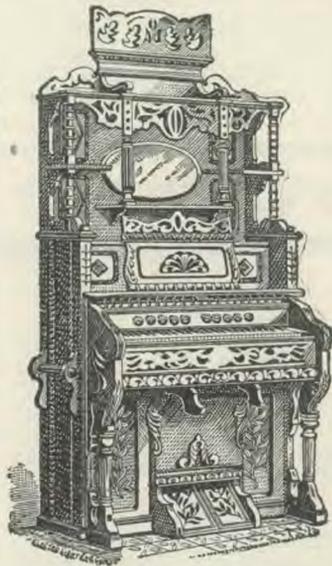
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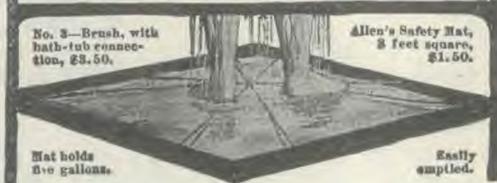
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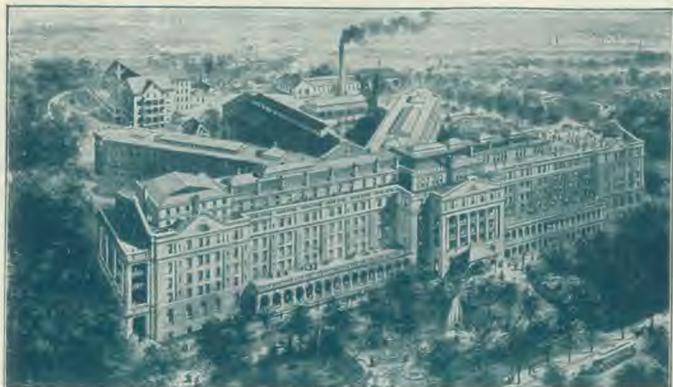
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