Life & Health

THE NATIONAL HEALTH MAGAZINE

April 1916

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LIFE AND HEALTH

April, 1916

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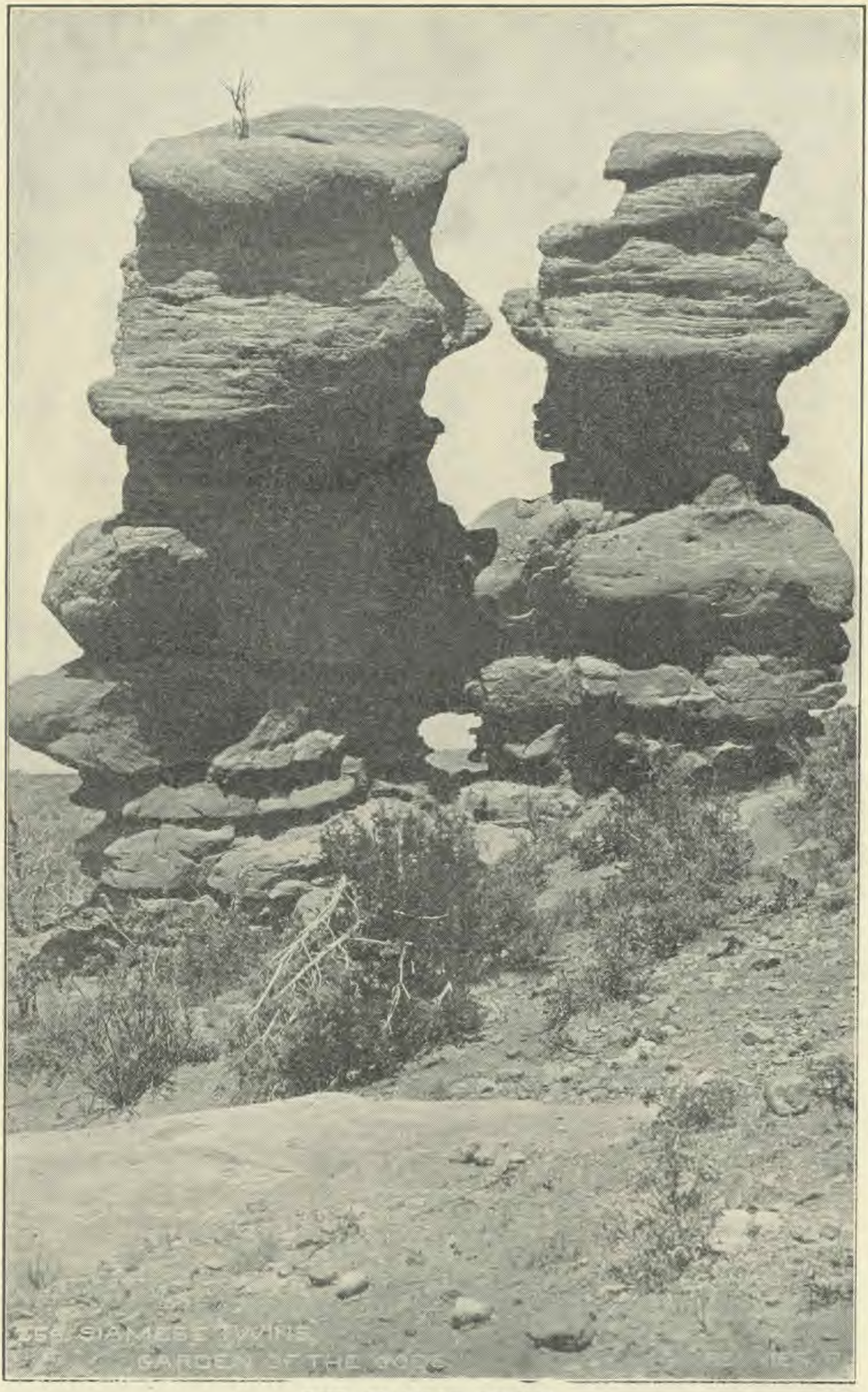

THE SIAMESE TWINS

A bit of natural sculpture in the Garden of the Gods, Colorado.

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Life & Health
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APRIL
1916

AIM: To assist in the physical, mental, and moral uplift of humanity through the individual and the home.

G. H. HEALD, M. D., Editor — L. A. HANSEN, Associate Editor

Physician's New-Year Prayer

LORD, I humbly beseech thee to sharpen my vision, to make my conscience more sensitive, and point out to me more clearly, during the coming year, my full duty as a physician and surgeon. Give me each day thy divine light, and instruct me how I may honestly and conscientiously perform my daily tasks for the good of humanity. Impress upon me mine imperfections both in conduct and in education, and impel me to seek from thee — its source — true knowledge, which, joined to mine own individual effort in those cases intrusted to my supervision, will lead them on to healing. Urge me to seek divine counsel whenever occasion demands, and compel me to act toward every patient as though he were a cherished member of my own family. Eliminate in me all unworthy and ambitious desires, and enable me to perform my daily duties in strict accordance with the golden rule. May I undertake to perform all my medical obligations with honesty and sincerity of purpose, in keeping with the honored profession of which I am a member. Extend to me thy support, and help in every laudable undertaking. Make me the embodiment of all that is holy, righteous, and just, and lend me thine assistance continually in mine efforts to relieve suffering. Steady mine hand and sharpen my wits and be with me, to the successful completion of all my surgical labors, thereby aiding me to restore to health and happiness such as are intrusted to my care, unless it be thy will otherwise — when let it be mine to solace and comfort those bowed in bereavement. Do thou grant all these requests in the name of the Great Physician. Amen.—
Texas Medical Times, December, 1915.

MILE THREE

The Pike's Peak Auto Highway at this point reaches an elevation of 8,500 feet.

MOTORING ABOVE THE CLOUDS ON THE SUMMIT OF PIKE'S PEAK

N. L. Drew

AGAIN have the eyes of motordom turned westward to the Nation's Playground, to witness the virtual completion of the Pike's Peak Auto Highway, highest and most wonderful of the earth's motor roads. The road is wonderful in its marvelous engineering triumphs; wonderful in that it reaches into the clouds 14,109 feet above the sea, and still more wonderful in the magnificence of its scenery. Climbing, as it does, the north or precipitous side of the mountain, every mile is crowded with scenic interest, and from its terminus more miles of mountain and plain are visible than from any other point on the globe reached by automobile,— sixty thousand square miles in one vast, limitless view,— with a downward sweep to a greater depth than the Grand Cañon of Arizona, 8,109 feet from the snow-clad summit to the rolling plain; while indented on the western sky are a thousand pallid monsters of the Rockies, sublime in their massive grandeur.

Long has Colorado Springs dreamed of such a road. Many efforts were made to have it built, but owing to the tremendous obstacles its construction presented, all were failures. At last, realizing the great importance that such a road would be to Colorado, Eugene A. Sunderlin, of Colorado Springs, a prominent railway executive, who at one time had the distinction of being the youngest railway president in the United States, set about it, over a year ago, to overcome these obstacles. Consultations were had with city, county, and State authorities, which resulted in a petition to the United States Forest Service for a permit for a toll road through the Pike National Forest Reserve. The Department, finding public sentiment unanimously in its favor, granted the permit without delay.

Thus in May of the present year the titanic undertaking was begun under the personal direction of Mr. Sunderlin, its

MILE FOUR TO MILE TEN

The road, in traversing this six miles, rises from an elevation of 6,000 feet to 10,000 feet.

builder. His specifications were not merely for an ordinary road, but for a double-track mountain boulevard, wide enough for two machines to go abreast or pass at any point from its beginning to its end. "Safety First" was the keynote of construction; and lastly, but of prime importance, the grade was not to exceed ten per cent.

Construction camps were established every mile or so. Experienced rock workers and tons and tons of powder were brought in to force the way through fields of massive bowlders and up the sheer granite walls of the peak. Nearly a carload of high explosives was required for each mile of road. Finishing gangs with wide-tired Good Roads trucks followed in their wake, to pack and smooth the surface.

What sort of road has this builder built? Not only has it been made double track all the way, but three and four machines may go abreast at many points. Wide pull-outs are provided at the more interesting points, for rest and an uninterrupted view of the magnificent scenery. The grade has been held to an average of six per cent, with a maximum of ten per cent, so that any machine may climb to the summit with comparative ease. All the sharpest curves are twenty-six to fifty feet wide and superelevated. Masonry parapet and curve guard-rail walls are provided where needed. Stanch bridges of reenforced concrete of the ballasted deck type are located on tangents only, and may be seen three hundred feet away. The minimum sight distance is two hundred feet, except in two places, where but one hundred and twenty-five feet could be obtained. The average is four hundred feet.

Surface ditches are dug continuously on the upper edge, with Armco-pipe culverts set in concrete headings to carry the water away. Up-to-date gravity or windmill tank and hose water stations

AT TIMBER LINE, 11,500 FEET

Showing Mts. Yale, Princeton, Harvard, Grays, Massive, Lincoln, Longs, Evans, and Quandry, 150 miles away on western horizon.

are spaced every third mile, with automobile supply stations at convenient points. Local and long-distance telephone stations afford communication with the outside world. The cross section of the road is a parabolic curve, and surface material is nearly all of a disintegrated granite formation, which packs down to a hard, smooth surface exceptionally easy on tires. Each mile, with its elevation, is announced by a metal signpost. Each curve has its signal.

MILE TWELVE

The elevation is 13,000 feet, more than two and a half miles vertically from sea level.

It is also the intention to build a beautiful Swiss chalet at Glen Cove, a natural amphitheater near timber line in mile eleven, where the traveler may enjoy the solitude of the mountains and drink of the cold, pure water that gushes out of the rock-walled side of the mountain. Any one may drive his own machine to the summit, and in addition, a large fleet of automobiles have been provided to carry tourists from Colorado Springs and Manitou. The round trip can be made in five hours.

The new highway offers ideal conditions for a supreme hill-climbing test, and plans are already under way for such a contest to be held this year. Substantial prizes have been pledged, one being a $1,000 cup donated by Mr. Spencer Penrose.

The route from Colorado Springs is by way of the far-famed Garden of the Gods to Manitou; thence up historic Ute Pass to Cascade, twelve miles west of Colorado Springs, the starting point of the Pike's Peak highway. From here the eighteen-mile motor trip to the summit has a perpendicular rise of 6,694 feet. Miles one and two wind up the forested side of Cascade Mountain to Observation Point, then along Cascade Creek through picturesque scenes to Crystal Creek summit, and on to its headwaters in miles seven and eight. Glen Cove is reached by skirting the front range, where contact is made with the granite walls of the peak. Timber line is reached just beyond Glen Cove, where the ascent of the mountain's rocky cliff begins. Up and up in ten great swings, reaching the crest of the Rampart Range in mile fourteen at an elevation of thirteen thousand feet, but so easy has been the rise that one scarcely realizes that he has motored to the top of the world.

NEAR THE SUMMIT

The road at this point reaches the altitude of 13,800 feet.

What a magnificent vision greets the eye! South, west, and north are three hundred miles of giant peaks mantled with eternal snows. Eastward the billowy plain rolls far out into Kansas; while below, mile upon mile of the highway winds gracefully up through the National Forest, whose towering pines, from this altitude, seem but blades of grass. Down below, on the eastward side, Colorado Springs is seen as a checkerboard on the edge of the plain; and directly beneath, on the west, the great Cripple Creek mining district appears no larger than your car. A tiny lake, a speck of a farm, or a mountain town, is scattered here and there like dots in the blackness of the forest. The course now follows the backbone of the continent on nearly level grades to mile seventeen, the last pull to the rock-strewn summit, three miles high.

Such is the Pike's Peak Auto Highway, highest and most wonderful of the earth's motor roads. Long will it stand as a monument to the genius and pluck of its builder.

SOME GARDEN CITY HOMES
Top of Temple Fortune Hill, Hampstead Garden Suburb, London, England.

THE BUILDING STONES OF THE BODY

G. H. Heald, M. D.

IT is a matter of common knowledge that houses differ not only in appearance, but also in structure and composition. There are large houses and small houses, low houses and tall houses, white houses, brown houses, gray houses. Some are made of wood, some of stone, some of brick, some of tile, some of sod, some of concrete. We may say that the unit used in the construction of one house is a brick, of another house it is a stone, of another it is a tile, of another it is a piece of lumber; the units differ. Living things differ, even more than houses, in appearance, size, and structure; but they are composed of one kind of units — cells. The whale and the elephant, the mouse and the humming bird, the oyster and the angleworm, are composed of cells; and these cells in all the various animals are, after all, of a remarkable similarity, yet they are not alike. The leaves of the forest have a remarkable similarity, yet no two leaves are exactly alike.

Every living thing is a cell or a multitude of cells. Sometimes, as in sponges, these cells are loosely aggregated, with no central government; but usually there is a central directing government, or sometimes, as in worms, a connected series of such centers. It is only in the higher animals that this government of the body becomes more fully centralized in what we call a brain.

Every living animal, even if it consists of countless millions of cells, was at one time a single cell, which became two, and then four, and so on, these cells multiplying and taking definite form until the body in all its complexity was fully developed.

In every living animal the living part is the cells. It should be borne in mind that not all parts of the living body are living. The shell of the oyster, for instance, is not living; it is only a material secreted or formed by the cells of the oyster, and deposited to form a house of protection. As the silkworm spins a cocoon and the spider a web, so does the cell elaborate or build up structures in the body which are in no sense living. The outer layer of our skins, which is constantly being washed off or rubbed

FOREST OF SMALL TIMBER

The clearing and grading is preparatory to the laying of a railway track.

off, is not living. It consists of dead or flattened cells, which were once living, but which have now been crowded out by younger cells from beneath, and have become a horny, protective mass. In the epidermis, or scarfskin, generation after generation of these minute cells are formed,— many millions of cells,— and as they are pressed outward, they become more and more horny and finally lifeless. After remaining as a horny layer of protection for some time, they are finally rubbed off, being replaced by the underlying cells.

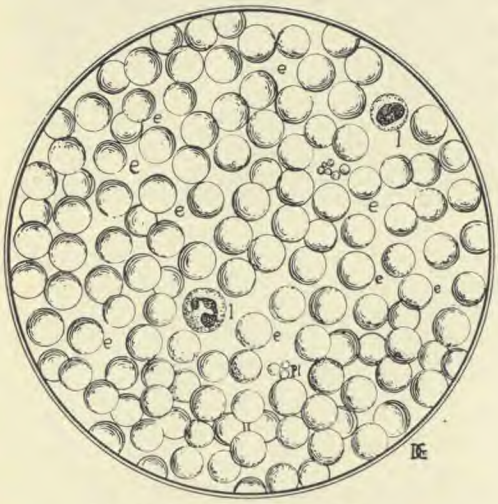
Especially in plants do we find much that is not living. The rough outer bark of the oak is entirely nonliving matter. The wood is largely nonliving. The green part of the plant is living, and the tender shoots and leaves and the layer immediately under the bark contain the largest proportion of living matter. All animals, though not to the same extent as woody plants, have much nonliving matter in their bodies. The bones, for instance, though they contain living cells, are largely built up of nonliving mineral matter. The hoofs and nails and hair are nonliving, although they contain much less mineral matter than the bones.

As was said at the beginning, every animal is either a single cell, as in the case with many microscopic animals, or a multitude of cells; and so far as man has observed, every cell comes from some previous cell.

Now what is a cell? It is a very small mass of protoplasm or living matter, which may be roughly compared to the white of an egg, though egg white is far from being protoplasm. I said a cell is very small. It is so small that a glass of considerable power is required in order to make it visible at all; and yet this little bit of protoplasm lives, takes food, grows, moves, does some special work (as, for instance, the making of saliva or the contraction of a muscle), and may produce other cells like itself.

Not every cell, however, is a reproductive cell. Every animal large enough to be seen without the aid of a microscope, is a community of such minute living beings, each with its specific work or function. These little beings do not have minds, as we have, though they appear to have some intelligence. In the minute animals consisting of one cell we have a condition analogous to the country store, whose owner sweeps, builds the fire, tends the post office, waits on customers, keeps books, and collects ac-

counts. He does everything that is to be done about the store, and does it fairly well. In the larger stores, the department stores, for instance, there are many salesmen, many cashiers, janitors, bookkeepers, floorwalkers, each one with his specific duty; and it requires the harmonious interaction of all these to make the store successful. This is accomplished

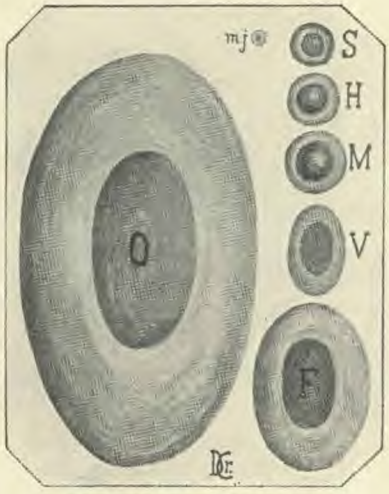


NORMAL BLOOD CELLS

The two with dark centers are white cells, or leucocytes. The remainder are red blood cells. Highly magnified.

by the central or managing department, which directs and which has some means of communication with all the departments in the store.

In the same way, in larger animals, each kind of cell has its particular work, its specific function. As the employees of a large store gain efficiency by doing the same kind of work over and over again, so each class of cells has its specific work which it can do better than any other class. The cells which have the work of secreting saliva cannot by any possibility be made to move the jaws; neither can the muscle cells in the stomach secrete gastric juice. It might be possible to train the janitor of the department store to be a bookkeeper, but you could not change the cells to do widely different work, though they vary their work within certain limits. For instance, the stomach of the child has digestive fluids prepared to digest milk. There is one ferment always present which seems to be there for the purpose of splitting up milk sugar. Ordinarily, adults lack this ferment, but those who continually use milk still produce the ferment by which the milk sugar is properly handled. It is probable that the glands of the digestive tract gradually adapt themselves to produce digestive fluids in accordance with the food the person habitually eats; that is, the secreting cells that manufacture the digestive or other fluids of the body are able to a certain extent to change their work to meet the demands made upon them.



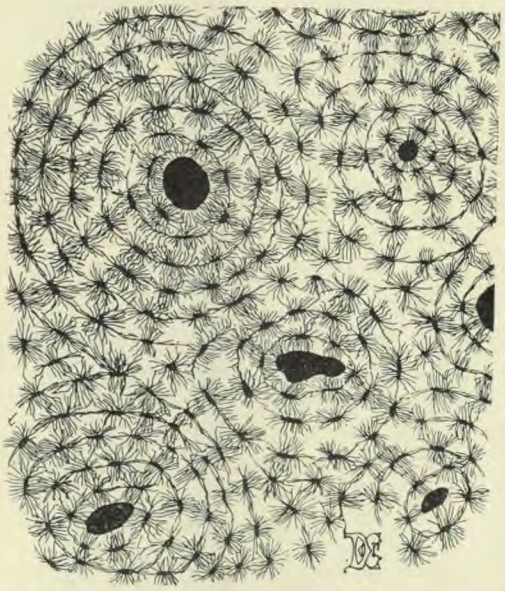
BLOOD CORPUSCLES

O, proteus; F, frog; V, small bird; M, man; H, dog; S, sheep; mj, muskrat.

In the lower animals this ability to change function is more marked. For instance, there is a little animal whose shape may be roughly compared to a thimble. The inside of the thimble is the stomach. Around the edge of the thimble are a number of arms by which food is forced into the stomach. The little animal draws appropriate material into the stomach, and when all the nutritive material is abstracted from it, the refuse is thrown out the same way that it was taken in. We might say that this is an animal with a skin on the outside

and a stomach on the inside. If this animal is turned inside out, as we sometimes reverse a stocking, what was before the skin becomes the stomach wall, and it immediately begins to do the work of the stomach.

The wonderful thing about the cells is



MAGNIFIED CROSS SECTION OF BONE

The Haversian canals, lacunæ, and canaliculi are well shown. The black represents the openings in the bone.

that they work, not for the protection of themselves, for they die and are replaced by others, but for the good of the entire body, just as bees in summer gather honey which, after they are dead, will be eaten by other bees. The instinct of each bee seems to be to preserve the hive. It is governed much more by unselfish consideration than human beings usually are. So with the body cells. Often millions of them sacrifice themselves that the body may live.

For instance, the creamy "matter" of a boil consists almost entirely of dead soldiers; that is, of white blood cells which have rushed to the spot to defend the body against the foreign intruders. The swelling of the boil, which is so painful, is due to the fact that millions of cells are packed in and around the poison spot, so as to make a solid wall, and thus keep the poisonous material from getting to other parts of the body; for if this poison gets scattered throughout the body by the blood, we have blood poisoning, or septicemia. The painful boil is the protective wall or fence erected round the poison spot.

The cells are wonderful structures. So small that high magnifying power is required in order to see them, they possess marvelous capabilities. They would seem — aside from accident — to have an immortal life. For when one cell becomes two daughter cells, which is the elder? The existing cells of today are the result of the splitting up again and again, countless millions of times, of the first cells, which were brought into existence at creation.

It is the same stream of protoplasm, a continuous living stream, which has not

MAGNIFIED LONGITUDINAL SECTION OF BONE

Each of the little spiderlike lacunæ contains a bone cell.

ceased to live. Cells die by myriads, but *some cells live,* and these reproducing cells are direct descendants, or rather parts, of the first cells. Not that the composition is the same; for each cell is, as it were, merely a living sieve, through which a stream of nonliving matter is flowing; and from this stream of nonliving matter the cell abstracts material for its own nutrition and growth, and it gives

out to that stream its waste products. So that a cell, while its individuality remains the same, is constantly changing in substance, in the same way that large animals, composed of many cells, are constantly changing, through the food they eat and the wastes they give off. The large animal is simply a huge incubator, hatching, if we may use the word, myriads of new cells to replace the cells that are worn out or aged.

DROP OF BLOOD HANGING FROM NEEDLE

Such a minute drop of blood contains 25,000,000 red blood cells, 1,500,000 white cells, and 2,000,000 platelets.

The city of London is changing in its people every day. There are none of the people and hardly any of the buildings that were there three hundred years ago; yet it is the same London. The identity remains, though there is a constant stream, living and nonliving, flowing in and out of it. My cat is the same cat that I owned three years ago, though his entire substance may have changed since that time. And so the individual cell maintains its identity as long as it lives; and in case it becomes two cells, is the identity lost? Among the single-celled animals, every individual has a potential immortality. The cells now living are the direct descendants, through an unbroken line of cells, from the first cells.

TO DRIVE AWAY EVIL SPIRITS

Curious Gargoyles on Notre Dame Cathedral, Paris.

FRESH-AIR TREATMENT OF RESPIRATORY DISEASES IN CHILDHOOD

John Lovett Morse, A. M., M. D.

Dr. Morse, who is professor of diseases of children in Harvard Medical School, and physician to some of the children's hospitals in Boston, read at the Philadelphia meeting of the American Association for the Study and Prevention of Infant Mortality, a paper on the treatment of "Respiratory Diseases in Infancy and Childhood," which was published in the January 8 issue of the *Journal A. M. A.* The parts of Dr. Morse's article of most interest to parents are given here, with a few changes to make the meaning clearer to the ordinary reader.

IT was formerly supposed that the discomfort felt in a close room was due to the presence of poisonous organic constituents derived from the breath, or to an excess of carbon dioxide in the air. There is much difference of opinion as to the presence of organic matter in the expired breath. The weight of evidence seems to show that it contains very little if any. However this may be, it has been proved conclusively by experiment that the symptoms experienced in a badly ventilated room are not due to poisons excreted in the breath. It has also been proved that people can breathe for many hours without discomfort air containing a very much larger proportion of carbon dioxide than is ever present in a room, provided the temperature of the air is low and the air is in motion. Recent experiments seem to show, on the other hand, that the discomfort is due to a disturbance of the normal heat relations of the body, the symptoms experienced in a close room being very similar to those felt on a hot, damp day. The cause of the discomfort is apparently an interference with the normal rate of loss of body heat. Three factors are concerned in this interference,— the high temperature of the air, its high moisture content, and the lack of movement in the air. It is evident, therefore, that as fresh air is the opposite of bad or close air, the essential characteristics of fresh air are not freedom from carbon dioxide or some other organic poison, but coolness, dryness, and motion. Therefore, fresh air may be defined as air which is cool, dry, and in motion.

It is self-evident that if the well feel better in fresh air than in close air, fresh air is better than close air for the sick, whether or not suffering from diseases of the respiratory tract. It is also evident that air which is free from dust is more suitable in these conditions than air which is full of dust. It is also evident that improper ventilation increases the dangers of reinfection from the patient, and of infection from other patients or attendants.

Coolness is one of the essential elements of fresh air. Cool air is not, however, cold air. Does cold air have a different action from cool air, and, if so, what is the action of cold air?

In the early stages of a fresh cold in head and throat, cold air increases the

irritation of the mucous membrane, and consequently intensifies the symptoms; but in the later stages, when the mucous membrane is swollen, it relieves the discomfort to a certain extent. Cold air predisposes to affections of the ears. Fresh air is of advantage, however. Children with acute colds should therefore be kept in the house in cold weather, in well-ventilated rooms at a temperature of about 60° F. if they are in bed, and between 65° and 68° if they are out of bed.

In acute sore throat with marked hoarseness, cold air has a strong irritant action on the inflamed mucous membrane, and in the early stages increases the symptoms very materially. Cold air does no harm in the later stages. Patients are more comfortable when the air is moist than when it is dry. Children with this condition should, therefore, be kept in well-ventilated rooms, at a temperature of about 70°, the air being kept moist.

In the early stages of acute cold in the chest, cold air increases the cough and the sense of constriction of the chest and of heat under the breastbone. The cough is less troublesome when the air is moist than when it is dry. Children in the early stages should, therefore, be kept in well-ventilated rooms at a temperature of from 60° to 70°, with the air moistened. During the later stages, cold air ceases to act as an irritant, but there is no apparent advantage in cold air over air which is warmed. Moisture is of no importance, because the mucous membrane of the bronchial tubes is already moist. The temperature of the room is of less importance at this time. During the later stages they should, therefore, be kept in well-ventilated rooms in which the temperature of the air is moderate, but not cold.

In very acute cold in the chest associated with difficulty of breathing and tendency to turn blue, the objections to the use of cold air are the same as in the milder cases. There is never any lack of oxygen in the air, therefore there is no advantage in outdoor air. There is no more oxygen, moreover, in cold air than in warm air.

While children with lobar pneumonia are undoubtedly more comfortable when treated with cold air, it is doubtful whether the mortality of lobar pneumonia in childhood has been lowered materially, if at all, by the cold-air treatment. The statistics at present available are sufficient to show the influence of this form of treatment on the mortality.

If children who have lobar pneumonia are exposed to cold air, whether out of doors or in the house, they must be dressed for it. They, in the same way as children with broncho-pneumonia or even well children, may be injured by exposure to cold. It is sufficient to expose the face. The body must be warmly covered and protected.

In conclusion: Fresh air is of advantage in the treatment of all diseases of the respiratory tract. It is also of advantage to have the air pure, that is, free from bacteria, dust, and smoke. Cold air is of advantage in some conditions, but harmful in others. It must be used with discretion. It is not possible to treat all diseases of the respiratory tract in the same way.

A FEW SUGGESTIONS ON HYDROTHERAPY

L. A. Hansen

THE value of water in the treatment of disease, or hydrotherapy (water cure), is becoming more and more recognized. Of all "therapies," this is probably the one most likely to come into household use.

That the increasing favor with which water treatment is regarded is due to its real value as a curative agent, goes without saying. The medical world has set its stamp of approval on the rational use of water in the treatment of disease, and has, by scientific research and verification, given it a field of widening usefulness.

One of the chief values of water is in its property of communicating and absorbing heat. Water has a large storage capacity for heat. Hot water readily gives off heat, and cold water will absorb it in large amounts. This means that hot water is most valuable for applying heat to the body; and that cold water will absorb heat from the body, cooling the skin and other tissues, and thus reducing fever.

The solvent properties of water are valuable both without and within the body. The cleansing value of water is perhaps better known in its external application than in its internal use, though the latter is of great importance. Free water drinking is beneficial largely because it aids in dissolving the poisons of the system and in eliminating them.

It might be well to remember that any physiological solvent owes its solvent property to the water that it contains. The same may be said of any drink for quenching thirst. Whether it be a table beverage, a soda fountain drink, or the juice of fruit, the water content is that which quenches thirst.

The availability of water lends to its value for treatment purposes. In the first place it is nearly always accessible. It is usable in all its various forms. While its largest use is in liquid form, both ice and steam find a place.

The temperature of water, ranging from freezing to that of steam, plays an important part in therapeutic results, and sometimes the application of heat and cold through the agency of water is the principal remedial agent. The ease with which the temperature of water can be accurately and definitely controlled is of great value.

The usual classification of temperatures follows: —

Very hot	104° F. and above
Hot	98° to 104° F.
Warm (neutral 94° to 97°)	92° to 98° F.
Tepid	80° to 92° F.
Cool	65° to 80° F.
Cold	55° to 65° F.
Very cold	32° to 55° F.

A reliable water thermometer, registering up to boiling point, is needed for regulating the temperature of all baths. It is not at all desirable to trust to guess or to test with the hand or elbow.

With all that may be said about the advantages of water for therapeutic purposes, and of its beneficial properties, it may also be stated that water may become a destructive agent and a means of great harm.

It is not wise to act on the principle that water treatment can do no harm, even if it does no good, or to think that "simple treatments" means such simplicity in application that no particular

skill or care is required, and that just anybody can give them.

It is well to bear in mind that while water is a powerful remedial agent for good when properly applied, it is also a powerful agent for harm when improperly applied. While its use is usually not so dangerous in the hands of the unskilled as is the use of drugs, it requires a certain amount of knowledge and skill in order to secure beneficial instead of harmful results.

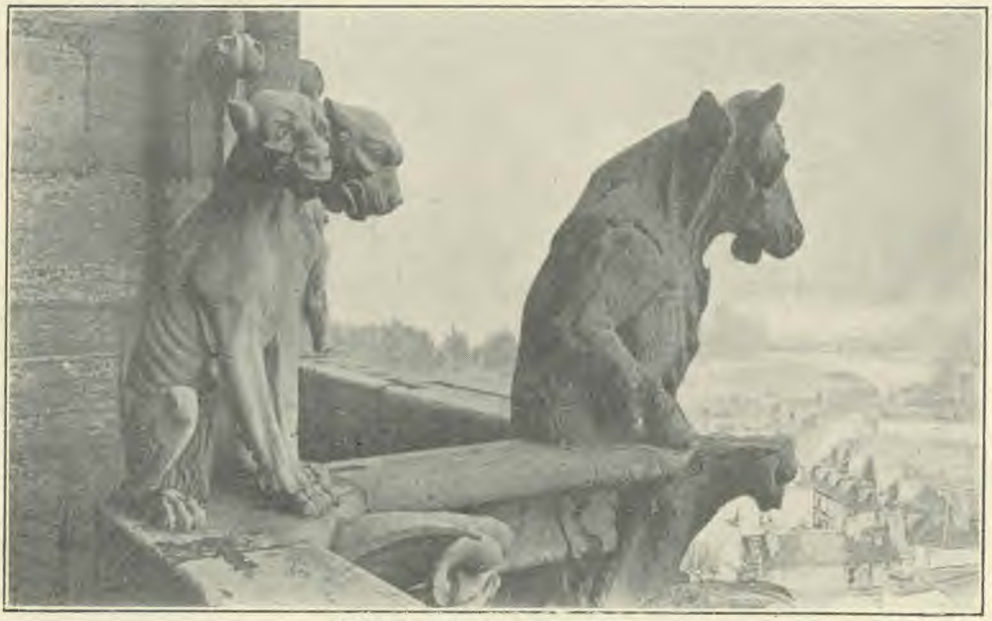
In serious ailments hydrotherapy should be administered only under the direction of competent medical authority, and by those qualified to use it intelligently. More water treatments would probably be prescribed by physicians if they knew they would be properly given by the nurse or mother: the fear of serious results deters them.

Hydrotherapy has come to the front as a valuable curative measure, useful in many conditions. It would be well for people to study it more in order to make use of it, either in self-use or for others, in simple disorders, or under the direction of the doctor in serious ailments.

As the use of water treatment becomes more popular and widespread, the possibility of harm through its misuse becomes greater. Popularity does not change its nature or laws of operation. The uniform action of water is one of the things that makes it so dependable. This uniformity does not vary to suit the ability, or the lack of ability, of the user. So again we say, knowledge and skill are necessary in order to obtain the best results in hydrotherapy.

One should not fall into the error of thinking that water is the only remedial agent. Neither is it a cure-all. It is not the only thing, and it will not cure everything. It is one among a number of valuable aids in the treatment of disease, and it is one of the most important.

Takoma Park, D. C.



MORE SPIRIT CHASERS

No self-respecting "spirits" would come around these figures.

HOME COOKING SCHOOL

A LESSON ILLUSTRATING THE USE OF SUGAR

George E. Cornforth

WE shall first finish our experiments to determine the effect of heat on the food elements. We wish to know the effect of heat on protein, or albuminous matter, the building material of food. White of egg is composed almost wholly of this kind of food, therefore we shall use it to experiment with. Put the white of an egg into a saucer or small plate, and with two knives cut it up, resting the ends of the knives on the plate, crossing the knives like a pair of scissors, then drawing the cutting edges of the knives toward each other, the ends of the knives thus cutting through the egg white. Put one-half cup of cold water into a glass and stir into it a tablespoonful of the cut-up egg white. Notice that the white mixes with the water. Now put the mixture into the cup, set it on the stove, and heat to boiling. Notice that as the water heats, it turns white and thickens; and when it boils, the white substance becomes hard and tough. Now put an unbroken egg into water a little below the boiling point, and allow it to remain thirty minutes. Then put the egg into cold water to cool it. Remove the shell and cut the egg into halves. Notice the firm condition of the white.

Now cook an egg ten minutes in boiling water. Remove the egg from the shell, cut it in two, and notice that the white is harder and tougher than the white of the first egg. Compare the white of a fried egg with these two. The white of the fried egg is seen to be still tougher because the heat of the fat is greater than that of boiling water.

From these experiments we learn that heat hardens and toughens the protein food element, and the higher the temperature, the tougher the substance becomes.

It is not so easy to obtain pure cellulose to experiment with, so I will state that cellulose is not affected by cooking, but the connecting substances are softened and the cellulose can be separated.

Now I will give recipes for making a few kinds of candy to illustrate the cooking of sugar. This may seem inconsistent after all I have said against the eating of candy. But a little candy indulged in very infrequently will not do harm. It is constantly making sugar too large a part of the diet that I have been giving a warning against.

Satisfactory results in making these candies will be more certain if one has a candy thermometer to use. Such a thermometer can be bought at almost any hardware store.

I might say that in the next lesson I shall give a list of utensils needed in following these lessons.

Walnut Creams

2 cups granulated sugar.
½ cup water
Halves of walnut meats

Heat the sugar and water in a saucepan that has a cover, till the mixture is nearly boiling, then with a brush dampened in cold water wash down the sides of the saucepan to remove the crystals of sugar. Cover the saucepan and allow the sirup to boil two or three minutes. Then take off the cover and put the thermometer into the sirup. Watch the thermometer, and when the mercury reaches 238° take the saucepan from the fire and pour the sirup into a dish in which it will be one-half to three-fourths inch deep. Allow the sirup to cool till lukewarm. Then with a spoon stir and work the candy till it becomes white and creamy, then knead it till it is soft and velvety and free from lumps. Form the

candy into balls about one and one-fourth inches in diameter, and press a half of a walnut meat into the top of each. Vanilla or any desired flavoring may be worked into the cream. Maple sugar or maple sirup can be used in the same way to make maple walnut creams, or the white sugar may be flavored with maple flavoring.

Caramels

If the reader has had the same experience that I have had, the caramels he has bought have been so hard that he has had to visit the dentist to have the damages repaired after attempting to eat them. Here is a recipe by which caramels can be made that can be eaten not only with no danger to the teeth but with great pleasure to the taste: —

2 cups granulated sugar
1 cup corn sirup
¾ quart cream
A few grains salt

Put the sugar, sirup, salt, and one cup of the cream into a saucepan. Set over the fire and stir till it boils, then gradually add the rest of the cream, keeping the mixture boiling. Stir constantly till it reaches 250°, or till it will form a firm ball in ice water. It will take some time to cook these sufficiently, because there is considerable water to evaporate; and it must be stirred constantly, or the cream will scorch and the candy be dark or black. When boiled to the right stage, pour out into a large oiled pie tin or into two oiled bread tins. When cold, cut into squares and wrap in oiled paper. Instead of wrapping the caramels in paper, they may be rolled in powdered sugar so as to coat them well.

White Taffy

2 cups granulated sugar
A few grains salt
½ teaspoon lemon juice
1 tablespoon cooking oil

Boil these ingredients together to 270°, or till a little dropped into ice water becomes brittle. Pour the sirup into oiled plates to cool. As it cools around the edges, turn in the edges. When cool enough to handle, pull until white and glossy, working into it one-half teaspoon vanilla. Pull out into a long strip and cut with scissors into one-inch pieces. Lay on oiled paper or on an oiled plate.

Popcorn Balls

1 cup sugar
½ cup molasses
½ cup water
½ teaspoon salt
1 tablespoon oil

Put the sugar, molasses, and water into a small saucepan, and boil to 270°, or till it becomes brittle when dropped into ice water. Stir in the oil and salt, then pour the candy over three quarts of freshly popped corn. Mix the corn and candy thoroughly, then oil the hands and form into balls as quickly as possible. It will be necessary to exercise care in cooking this, and to stir it to prevent its scorching.

Nut Slices

Make a three-sided box, like a miter box, about two and one-half inches wide, three and one-half inches high, and ten inches long, letting the bottom of the box project about two inches beyond the sides at the ends.

5 cups walnut meats
2 cups sugar
A few grains salt
½ teaspoon lemon juice
½ cup water

Boil the sugar, salt, lemon juice, and water to 310°, or till a little dropped into ice water becomes very hard and brittle, then stir in the nuts. Take out onto an oiled platter, and when cool enough, squeeze it into a long square piece that will fit into the box. Then, by running a knife across the candy at the end of the box, cut it into slices about one-fourth inch thick. It should not be sliced till it is cool enough to hold its shape after being sliced. Or instead of slicing this, it may be poured out in a thin sheet on an oiled pan, and marked in squares when cool.

This is a comparatively wholesome kind of candy because it contains so large a quantity of nuts, and one does not eat so much sugar in partaking of it.

Measuring and Combining Ingredients

Accuracy in measuring and in following directions is very essential to success in cookery. Failure may often result because one does not carry out some little detail in the recipe, or imagines that the recipe means something it does not say. Dry material, such as flour, meal, and powdered sugar, should be sifted before measuring. A cup of dry material is measured by dipping into the cup with a spoon more than enough to fill the cup, then with a knife cutting off the material even with the top of the cup. A cup of liquid is all the cup will hold, not simply as much as can be conveniently carried in the cup. If a cup of liquid is to be carried, the cup must be set into a saucer to prevent spilling the liquid. Tin measuring cups marked off in quarters and thirds should be used for measuring, not ordinary china or porcelain cups. A tablespoonful or teaspoonful of dry ma-

terial is measured by dipping up with the spoon more than enough to fill it, then, with a knife, cutting the top off level with the edges of the spoon. It is well to have a combination measuring teaspoon that includes a half and a quarter teaspoon. Be sure when measuring not to confuse a tablespoon with a dessertspoon.

Comparative Table of Measures and Weights

60 drops equal 1 teaspoon
2 teaspoons equal 1 dessertspoon
3 teaspoons equal 1 tablespoon
16 tablespoons equal 1 cup
2 cups equal 1 pint
2 pints equal 1 quart
4 quarts equal 1 gallon
1 cup weighs about 8 ounces

Perhaps our readers remember learning in school that —

"A pint of water
Weighs a pound and a quarter."

And the other rhyme,—

"A pint's a pound
The world around."

These are approximately correct, as is also the following table of measures of one pound: —

2 cups milk
2 cups oil
2 cups granulated sugar
3 cups brown sugar
3½ cups confectioners' sugar
2⅔ cups beans
4 cups sifted flour
3 cups granulated corn meal
3½ cups cornstarch
6 cups rolled oats
2 1-6 cups rice

If tablespoons is read in the place of cups in the above table, the weight is about one ounce.

It must be remembered that no table of comparative weights and measures is exactly correct, because different samples of the same material vary in bulk for weight. Therefore, for exact results, substances must be measured by weight.

And there is a difference in the way different persons measure the same materials. I have observed in teaching cooking classes that in making a batter, for instance, three (or perhaps six) different persons will, with the same recipe, the same utensils, and the same materials, make batters of as many different grades of stiffness. This accounts for the different results different persons have in using the same recipe. You often read in recipes, for instance, "3½ cups flour, more or less, according to the quality of the flour." Now I think the "more or less" does not depend so much on the quality of the flour as on the quality of the measuring. There is little difference in quality between the different brands of the best bread flour. There is considerable difference, however, between bread flour and pastry flour in the amount of liquid they will take up. Bread flour requires more liquid than pastry flour. Of course, difference in measuring is not all that causes different results. Difference in skill in carrying out the process described in the recipe makes a great difference in the results, sometimes a greater difference than anything else.

SIMPLE FOOD TESTS

S. Leonard Bastin gives, in the *Scientific American* of January 22, a number of simple food tests, together with illustrations, from which the following are taken: —

TO test butter, a piece of the suspected article about the size of the tip of the little finger is placed in a spoon. This is held over a gas burner. Real butter boils quickly, producing a quantity of small bubbles. Margarine or process butter crackles or sputters as green leaves do when placed on the fire.

The use of alum in bread, often used to mask an inferior flour, is to be condemned. Small quantities of alum taken regularly in this way are harmful. To detect the presence of alum in bread, place a piece in a saucer and pour over it a solution of ammonium carbonate. If alum is present, the bread will turn black.

A large amount of jam is dyed. Brightly colored articles should always be suspected. To test for this form of adulteration, mix a sample of the jam or jelly with an equal quantity of water. Throw into the mixture a piece of cotton wool, and boil for half an hour. Then try to wash out the stain. If dye has been used, the stain will be permanent.

NOTRE DAME BIRDS

WHAT SPIRIT WOULD FACE THESE WINGED GUARDIANS?

EDITORIAL

ARE YOU IN VIGOROUS HEALTH?

ASK the first ten or hundred or thousand persons you meet this question, and if they answer truthfully, the greater number will reply No. Perfect health is the exception. One who is in superb health — who knows no aches nor pains; who digests well, sleeps well, and has perfect use of every organ; who is efficient physically and mentally — ought to be earning a salary as the principal exhibit in a side show; for such an individual is really more of a curiosity than the fat man or the two-headed man, the giant or the dwarf.

But if we accept a lower standard, and seek for those who, while not in absolute health, are satisfied with their condition of health, we still find that a large proportion of persons do not reach the standard. Begin a little personal investigation on your own account, and you will find that the average person is dissatisfied with his present physical condition, and with this dissatisfaction you will likely find a deep-rooted belief that for this "off" condition there must be somewhere a remedy, if only it can be found.

Skilfully worded advertisements help to increase this confidence in the efficacy of drugs, or of plasters, belts, oxyfakes, or other appliances. Countless millions are spent yearly for patent medicines and other fake cures. One nostrum after another, one appliance after another, is tried in the vain hope of finding relief.

The poor patient who has found himself badly duped regarding one nostrum, or who has paid out hard-earned dollars which he could ill spare for some electric foot warmer or ozonized belt or violet-rayed trinket, turns just as eagerly and hopefully to the next flaming advertisement he sees, and parts with more of those precious dollars. Why? — Because it is a part of his faith, inculcated from childhood up, that disease is an entity that can be driven out by something in a bottle or by some appliance, and that for every disease there is a specific remedy if only he knew what it is. For this sublime faith the poor sufferer gives himself a martyr, and the harpies and scalawags reap the ill-gotten harvest, all the time protesting loudly against the improvement in the Public Health Service; for well they know that when this is so efficient that the common people are taught the science of health, the nature of disease, and preventive methods, with the three R's, at school, the fake cures might as well go out of business.

There is some truth in the statement, "For any disease there is a remedy," but the remedy has relation to the cause of the disease.

The first rule in the treatment of disease is, *Find the cause* (or causes) *and remove it.*

The second is like unto it, and none the less important: *So surround the body by favorable conditions* that it will increase in its powers of resistance and throw off the disease.

There are some occasions when the medical man may help a little by giving "something in a bottle;" but at best this is only a temporary expedient. The body, if it is given half a chance, is its own best defender.

The path to health is not a short cut. The short cuts of the fake cures all have their pitfalls, and lead nowhere but to destruction.

J. H. Kellogg.

FRESH AIR WINS BACK HEALTH

Rodger Babson, government statistician at Wellesley Hills, Mass., was by his doctors ordered to the West to live in the open, on account of "broken health," probably tuberculosis. Babson decided to take his fresh-air cure at home while pursuing his regular work. As his stenographers must wear heavy mittens on account of the cold, they are furnished with specially prepared hammers with which to strike the keys.

BETTER KNOWLEDGE AND PRACTICE OF HYGIENE NEEDED

Importance of Spreading the Gospel of Health

INSURANCE men are troubled. With all that has been done to improve living conditions and to instruct the people in the essentials of personal hygiene, there is an increasing tendency for men and women to die young.

It is true that we have steadily diminishing death rates, but this is owing largely to the fact that we have learned to lessen the infant slaughter due to bad milk and other insanitary conditions.

But when we come to the age periods from thirty to sixty, we find a steady and marked tendency toward a shortening of the life period. As one insurance authority says,—

"The trend of mortality in middle life, that is to say, after the age of forty-five, is at present unfavorable and increasing, due to the more frequent occurrence of degenerative diseases of the brain, heart, arteries, and vital organs in general."

Although insurance men speak of this as a "degeneration," they find much more evidence of it here in America than in Europe. Discussing the causes of this "national degeneration" this authority mentions hygiene first: —

"The gospel of hygiene as applied to our everyday lives is not sufficiently impressed upon the minds of the public in general, or our medical students in particular. Hygiene is taught as a major subject by trained scientists who give their whole time to this task, in only six of the thirty-eight medical schools in America. In Germany and Austria every school where medicine is taught has a hygiene department maintained under the constant supervision of a thoroughly competent instructor, while in England every medical graduate is required to pass a rigid examination in hygiene as applied to public health."

And again, he gives as causes for the present downward tendency,—

"the present strenuous mode of living, the rush and bustle of our industrial life, and the reckless, overindulgent, and pernicious habits of certain classes of society. We consume more spirituous liquor and our diet consists more largely of nitrogenous foods, which, together with the fact that food is not always pure or thoroughly digested, is conducive to various diseases of the vital organs. This condition is augmented, since as a nation we do not take sufficient exercise."

The matter is thus summed up: —

"It may, of course, be truly said that as a nation we do not devote sufficient attention to safeguarding the lives of our people, and that we are not thorough in planning and performing our work pertaining to public hygiene; still the fact remains that the chief aid to national improvement is personal or individual hygiene, involving moderation in eating and drinking, proper care of the mouth, teeth, and other organs, with plenty of sleep, regular exercise, and deep breathing."

In other words, however much we may lay the blame to the failure of sanitarians and public health officers, the blame is primarily upon the people themselves for neglect of the practice of personal hygiene. Right here is the kernel of the nut. Through either ignorance or indifference the people themselves neglect those things which make for health and a longer life, and do those things which make for disease and a shorter life.

It is, and it has always been, the purpose of LIFE AND HEALTH to point its readers to the better way, the easier way, and the more pleasurable way of living a full life by conforming to physiological law.

Typhoid Fever Reduced in Rural Communities

REDUCTION in typhoid fever and improvement in sanitary conditions have followed the intensive investigations of rural communities carried on by the United States Public Health Service in cooperation with local and State health officers, according to the annual report of the surgeon-general of that service. During the past fiscal year 16,369 rural homes in eight different States were visited, and many of them revisited. In each of these homes information was obtained as to the prevalence of disease and insanitary conditions, and a complete sanitary survey of the premises was conducted. This was followed by reinspections to determine if remedial measures had been instituted.

In but a relatively small percentage of the cases did the persons concerned, after having their attention drawn to the danger of a particular unhygienic condition, fail to inaugurate corrective measures. Stimulus was given to the work by means of public lectures, the formation of active sanitary organizations, and the enlisting of all public-spirited citizens in the campaigns for reform. Public buildings were also inspected, and local authorities in various localities were given expert advice in solving such sanitary problems as the disposal of excreta, the prevention of soil pollution, and the maintenance of pure water supplies.

The surveys made during the year 1914 showed that less than one per cent of the rural homes had sanitary toilets, and that more than fifty per cent of the people were using water from polluted sources. This condition made the rural sanitation question loom large among the matters vitally affecting the welfare of the nation. Following these studies and as a result of the interest aroused, the typhoid fever rate, an excellent indicator of the sanitary status of a community, has been markedly reduced, in some places to one quarter of its previous figure.

In Berkeley County, West Virginia, the cases of typhoid fever were reduced from 249 to 40 in one year. In Orange County, North Carolina, the rural sanitation campaign resulted in a reduction of the cases from 59 to 17.

The results indicate that marked advancement in maintaining hygienic and satisfactory surroundings in country districts is possible. Insanitary conditions exist largely because they are not known to be such. Actual demonstrations of their harmfulness, together with definite recommendations for their correction, constitute a most gratifying and successful method of instituting reforms, and in the experience of the Public Health Service have been invariably accompanied by definite and measurable results.

INFANT NUTRITION

Mother's Milk for Mother's Baby

IN the January *Scientific Monthly*, Dr. Henry Dwight Chapin gives some important reasons why the young of any species should feed on the milk of that species. He notes that milk constitutes the universal food of the young of all mammals. "It is a complete food, containing all the elements necessary to sustain life," says the doctor; and he continues:—

"From this standpoint it is a perfect food, and all milks are alike in this respect."

"But while each species of mammalian young is perfectly nourished by the milk of its own mother, the food elements are present in varying proportions in different species, this depending largely on the rapidity of the growth of the offspring."

Another peculiarity common to all milks is that they occur in fluid form; but in the stomach of the young animal they soon become more or less solid, and the form and degree of coagulation are

different in different species. While there are many grades of coagulation, these may roughly be divided into three classes: —

In ruminant herbivora, such as the cow, the coagulum is a tough mass that cannot readily escape from the stomach. In these animals digestion is performed largely in the stomach. In nonruminant herbivora the coagulum can easily leave the stomach. In these animals digestion is performed largely by the intestine. Evidently there is a relation between the milk coagulation and the digestive capacity of the animals.

The human milk occupies a position intermediate between that of the ruminant and nonruminant animals, and this corresponds with a digestion more evenly divided between the stomach and the intestine, so that the milk of either the cow or the horse can be used as a makeshift for the human infant; but the baby will do far better on human milk than on any substitute, no matter how skilfully it is prepared.

In each case the milk furnishes an analogue to the future food of the suckling, and evidently has a part in training the digestive system for its future work. This is the important distinction in infant foods. As Dr. Chapin says,—

"We have thus seen that the milk of herbivorous animals whose digestion is principally gastric, forms solid curds that cannot leave the stomach; that the milk of the herbivorous animals whose digestion is principally intestinal, forms glutinous curds which easily leave the stomach and pass into the intestine; that the human milk, which is intended for a digestive system in which gastric digestion is more than that of the horse but not so great as that of the cow and goat, curds in flakes that stand between these two types. Hence it is a law that coagulation of proteins and milk always takes place in such a way as most readily to adapt the digestive tract for its future work as this function needs special preparation.

"The directly practical point that can be deducted from this study, is the importance to mothers of every species suckling their own offspring, as they always do except in the highest species, man. . . .

"From the nutritional standpoint milks do not differ very markedly, but in developmental quality they are very far apart. This forms a very good conditional reason why every human mother should, if possible, nurse her own infant."

Mother's Milk for Mother's Baby

Dr. Wm. W. Riha, Bayonne, N. J., read at a meeting of the Hudson County (New Jersey) Medical Society, Dec. 7, 1915, a paper with the above title, in which he has made some very striking statements. For instance: —

"Baby must creep before he can walk. Figuratively speaking, this is just as true of the baby's stomach. Mother's milk is the great educator of the baby's stomach, the changes taking place in the composition of milk keeping pace with the changes in the digestive powers of the baby's stomach. Mother's milk is for mother's baby, educating the stomach and preparing it for the diet of the adult."

Dr. Riha holds a creed, he says, which no amount of proselyting can take away from him; namely, that "the majority of stomach disorders among adults have their origin in the abuse of the stomach in infancy and early childhood." He proceeds: —

"When a baby seven or eight months of age is getting tea, coffee, Frankfurters, cucumbers, pickles, and beer, . . . a lifelong pathological condition of the stomach must be the inevitable sequel. Mothers tell us that baby cries for the food on the table, and that they cannot endure its distress. A simple and efficient method is to feed the baby first, whereupon the parents can sit down to an uninterrupted meal."

The following is a scathing rebuke he gives to unnatural mothers who, because of their social activities, neglect to nurse their babies: —

"We have heard of her who will not sacrifice her social duties for the sacred duties of motherhood. To her, motherhood is a misfortune, and its responsibilities are a bore. My sympathies go out to the mother in the lowest stratum of society. Her life, to be sure, is governed largely by superstition, folklore, and myth, and her mind knows nothing of the higher learning, yet she has filled her heart so brimful of love that, among her kind, deliberate weaning is a rarity. One day while making a qualitative examination of a poor mother's milk, I was amazed to see her pour the portion that I did not use over her baby's cradle. In answer to my question as to her reason for doing this, she said that her breasts would cease to function, her milk would be lost, and her baby would not thrive if she wilfully destroyed her milk. The superstition that prompted this act seemed ludicrous; and yet how pathetic is the other extreme — the cases where mothers in the circle of the élite sacrifice motherhood for society Personally,

I think there is no greater gift to society than the healthy baby growing up with all the assets of babyhood and none of its liabilities.

"Do you know the maternal habits of the brown-headed oriole? To her, motherhood is a joke. She seeks out the nest of a smaller and weaker bird, throws out an egg or two to make room for her own, and forsakes it. The foster mother hatches it and then cares for the foundling.

We find the brown-headed oriole's counterpart in human society where mothers are seen wantonly and deliberately, without medical advice, to forsake their young to be nurtured by such foster mothers as the cow and the can of condensed milk."

SOME CAUSES OF STOMACH DISTURBANCE

Hyperacidity and Ulcer of the Stomach Due to Excess of Carbohydrates

IN 1912 Deeks called attention to the probable relationship between the excessive use of sweets and starches and the increase in hyperacidity and ulcer of the stomach, and later he showed that in all cases of pellagra which came under his observation in the Canal Zone, the patients had been on a diet characterized by excess of carbohydrates and insufficiency of protein.

In the *Journal of the A. M. A.* of January 29, Dr. Willard J. Stone calls attention to the subject. He instances: (1) The great increase per capita of sugar in the past fifty years; (2) the possible relationship existing between the increased sugar consumption and the apparent increase in incidence of gastric and duodenal ulcer; and (3) the influence of a restricted carbohydrate diet in treating such cases.

The per capita consumption of sugar in the United States, he says, was four pounds in 1819, seven pounds in 1821, thirty-six pounds in 1871, sixty-one pounds in 1891, eighty-two pounds in 1912. There is a similar increase in Europe. He gives reasons why sugar might have an injurious effect on the wall of the digestive tract, and states that operations for gastric ulcer have increased to the greatest extent in the two countries where the increase in sugar consumption has been greatest. He proceeds: —

"From a practical standpoint, patients with hyperacidity and ulcer do better with an almost starch-and-sugar-free diet, at least during the time of active symptoms."

In the treatment of his ulcer patients he prohibits the following: candy, sugar, sirups, and condiments; the fresh fruits which contain more than ten per cent carbohydrates, such as apples, pears, bananas, cherries, currants, plums; of the vegetables, peas, parsnips, baked beans; macaroni, bread, crackers, cocoa, chocolate, and coffee. He finds that attention to the coexisting constipation is important. He concludes: —

"The plan which has given me the most satisfaction has been the use of liquid petrolatum [liquid paraffin, or mineral oil] with fruit juice once or twice daily, together with copious water drinking and attention to regular habits. The important point in the medical treatment of hyperchlorhydria and ulcer appears to be to decrease the intake of sugar and starchy foods, and to use such means as will limit bacterial decomposition in the stomach."

Disturbances of Digestion Due to Eyestrain

THERE are cases of persistent gastrointestinal disorder —"stomach trouble" or "indigestion"— which seem to resist all dietetic and hygienic measures. No matter what the patient eats or how he lives, his stomach "goes back on him." In such cases the probability is that the primary cause of this trouble is not in the digestive apparatus, and that the symptoms of indigestion are reflex, or secondary to trouble elsewhere. Recently mention was made of such troubles' originating in diseased tonsils. It is well to keep in mind, also, that eyestrain may be a cause, and an important cause, of stomach trouble, or digestive disturbances, with such symptoms as loss of appetite, stomach irritability, stomach trouble after eating regardless of the nature of the food, nausea, vomiting, dizziness, and headaches.

Chronic Tonsillitis is Sometimes Responsible for Stomach Trouble

DR. LOUIS FISHER, of New York, describes a form of chronic tonsillitis with frequent spells of fever, headache, vomiting, and loss of appetite, which may be mistaken for stomach or intestinal derangement. The intoxication in these cases is due to absorption of poisons from the germs harbored in the recesses of the tonsils. Such toxemias (blood poisoning) not only give a train of symptoms resembling gastric fever, but by their frequent recurrence they excite suspicion that something besides the diet and the digestive tract must be at fault.

Despite the greatest care in dieting, there will be recurrent attacks of "indigestion" accompanied by fever, and after the second or third day the crypts (lacunæ) in the tonsils are found to be filled with pin-point deposits, and examination shows that the tonsils are in a condition of chronic inflammation.

The treatment is surgical. The tonsils should be enucleated, and all of the diseased tissues removed. This will suffice to stop the recurring attacks, according to Dr. Fisher. His caution to physicians is given in these words:—

"The point I wish to emphasize is that no case presenting gastric symptoms should be permitted to pass with such a diagnosis until we have assured ourselves that there is no chronic inflammatory tonsillitis at the root of the trouble. It would be a very disagreeable commentary on our diagnostic ability if, after several of these attacks, our patient was taken to one more skilled in diagnosis, who ascertained the real cause. The danger is not so much in the gastric disturbance as in the possible endocarditis [heart disease] or nephritis [Bright's disease] which the repeated tonsillar infection is likely to cause."

SOME OF THE NEWER TREATMENTS

An Accident Discovers a New Treatment: Tincture of Iodine for Erysipelas

L. S. ROGERS, M. D., reports in the *Medical Record* of Jan. 15, 1916, two cases of erysipelas cured by giving iodine internally. A good many years ago Dr. Rogers lost one or more cases of erysipelas. Then he had a case of erysipelas complicated with acute alcoholic delirium, and gave tincture of iron internally. The patient made a tedious recovery. Later he had another violent case of erysipelas, the patient being a Negro. He ordered tincture of iron in twenty-five-drop doses every four hours. When going away for a day or two, he ordered the prescription refilled, and later found that by mistake the prescription was filled with tincture of iodine instead of tincture of iron. But the patient grew rapidly better, notwithstanding the fact that a twenty-five-drop dose of iodine is generally supposed to be a very heroic dose. Dr. Rogers says:—

"You can imagine my surprise when I entered the door and found the Negro sitting up in bed, and eating a piece of corn bread and drinking a glass of buttermilk with great relish. All fever had gone, and the swelling of the face and scalp was entirely relieved. In fact, he was a well Negro."

After twenty years another case of erysipelas of the scalp and face came under Dr. Rogers's care—a robust patient, twenty-five years old, who in a street fight had been bitten through the nose. Dr. Rogers prescribed tincture of iodine in twenty-five-drop doses, every four hours. The temperature went down rapidly and the swelling was relieved, and on the fourth day the patient was discharged. Thus iodine taken internally would appear to be almost a specific for erysipelas. But, of course, a report of two cases is insufficient to establish this method of treatment.

Emetine and Ipecac in the Treatment of Pyorrhea

IN view of the favorable reports made by Bass and Johns and by others regarding the efficiency of ipecac and its alkaloid emetine in the cure of pyorrhea alveolaris, otherwise known as Riggs's disease, the United States Public Health Service has undertaken a series of observations at Ft. Stanton, where there are stationed a number of old sailors under treatment for tuberculosis. A large proportion of these patients were found to be suffering with pyorrhea in varying degrees.

The consent of the men was obtained, and they were treated in groups.

The injection of emetine in all cases was followed by a clearing away of the endameba-buccalis — the organism believed to be responsible for pyorrhea. It took as high as twelve hypodermic injections of emetine in one case, and as low as three in many of the cases, to effect a clearing of the endamebas. The injection was followed in some of the cases by more or less unfavorable and unpleasant effects, so that in these cases the experiment had to be discontinued.

Before beginning the emetine treatment, the teeth were scaled, old roots and hopeless teeth were extracted, and the mouth was put in as good condition as possible. After the emetine treatment had rendered the mouth as free from endamebas as possible, the patient was given fluid extract of ipecac in small doses by mouth in order to prevent reinfection.

Notwithstanding this precaution, all the mouths showed the presence of endamebas a few weeks later, and there seemed to be no improvement in the mouths as a result of the treatment. The conclusion reached was: "Emetine is an amebicide, but alone will not cure pyorrhea alveolaris."

A fuller account of this series of experiments is given in *Public Health Reports*, Jan. 21, 1916.

CURES THAT ARE NOT CURES

Labels Must Not Make Extravagant Claims

THE Sherley amendment to the Pure Food and Drugs Act made it unlawful to make false and misleading statements regarding the curative power of medicines. Under this amendment, thirteen cases of Eckmann's Alterative, shipped in interstate commerce, were seized by the United States marshal. In every package of the stuff was a circular bearing the statement, "Effective as a preventive of pneumonia. We know that it has cured and will cure tuberculosis." The proprietors of the nostrum attempted, by appealing the matter, to obtain a decision declaring the Sherley amendment to be unconstitutional. It was carried to the Supreme Court of the United States, and on January 10, Justice Hughes handed down the decision conferred in by the entire court. As reported, Justice Hughes said: —

"We find no ground for saying that Congress may not condemn the interstate transportation of swindling preparations designed to cheat credulous sufferers, and make such preparations, equipped by false and fraudulent statements, illicit with respect to interstate commerce, as well as, for example, lottery tickets."

When Theory and Experience Tell the Same Story

IN cases of heart weakness it was a favorite method of the old Chinese doctors to administer powdered tiger's bone. This treatment must have been eminently successful, for it was based on two undoubted facts: —

1. The tiger is a strong-hearted animal, and what more certain way can there be to acquire a quality than to take something possessing that quality?

2. Many patients have recovered after taking tiger's bone, and who knows but they might have died had they failed to take it?

There you are: an *a priori* and an *a posteriori* argument, one from theory, the other from experience. With two arguments, one from the theoretical and the other from the practical viewpoint, converging on the one point of the soundness of this tiger-bone treatment, what more do you skeptics demand?

But the first will prove cannibalism to be a meritorious procedure, and the second will give a warrant to every form of treatment ever given.

But if you will take the great bulk of the advertised "cures," their arguments might be simmered down to about as threadbare a foundation.

Two Kinds of Almanacs, Patent Medicine and Public Health

WE do not see much of the first kind nowadays, but a generation ago they were everywhere in evidence. Possibly they still constitute the standard literature of some back counties. In "Speaking of Operations——,"[1] Irvin S. Cobb gives a humorous but very accurate description of these purveyors of medical knowledge. After describing the cover of the almanac, he proceeds:—

"Such was the main design of the cover, while the contents were made up of recognized and standard varieties in the line of jokes and the line of diseases which alternated, with first a favorite joke and then a favorite disease. The author who wrote the descriptions of the diseases was one of the most convincing writers that ever lived anywhere. As a realist he had no superiors among those using our language as a vehicle for the expression of thought. He was a wonder. If a person wasn't particular about what ailed him, he could read any page at random and have one specific disease. Or he could read the whole book through and have them all, in their most advanced stages. Then the only thing that could save him was a large dollar bottle."

Contrasting favorably with the old-time patent-medicine almanac is the public-health almanac issued by some of the departments of health. One recently received from the New York State Department of Health at Albany, has the regular almanac calendars for each month in the year, and opposite each calendar is a page of health suggestions applicable to that month. This is health education of the right kind. It is to be hoped that this class of almanacs will drive the old-style almanacs entirely from the field.

A Pen Picture of the Old Family Doctor

BUT Cobb's picture of the old family doctor is, if possible, still more irresistibly funny. Here it is:—

"By the time I attained to long trousers, people in our town mainly had outgrown the unlicensed expert, and were depending more and more upon the old-fashioned family doctor,—the one with the whisker jungle,—who drove about in a gig, accompanied by a haunting aroma of iodoform and carrying his calomel with him in bulk.

"He probably owned a secret calomel mine of his own. He must have; otherwise he could never have afforded to be so generous with it. He also had other medicines with him, all of them being selected on the principle that unless a drug tasted like the very dickens it couldn't possibly do you any good. At all hours of the day and night he was to be seen going to and fro, distributing nuggets from his private lode. He went to bed with his trousers and his hat on, I think, and there was a general belief that his old mare slept between the shafts of the gig, with the bridle shoved up on her forehead."

And Mr. Cobb does not fail to have his fun at the expense of the modern specialist. It is good for us once in a while to see ourselves as others see us.

[1] "Speaking of Operations——," by Irvin S. Cobb, illustrated by Tony Sarg. George H. Doran Company, New York.

TOBACCO AS A DRUG

A. B. Olsen, M. Sc., M. D., D. P. H.

The following is part of a lecture recently delivered by Dr. Olsen. Tobacco is in great demand in the trenches, but it is because it is a drug, and, like the bromides, paralyzes sensibilities.

TOBACCO is a poison, and the same is true of alcohol, opium, and cocaine. Furthermore, like alcohol, opium, and cocaine, tobacco is a drug, and its resemblance to these other drugs is still further emphasized by the fact that it, too, is distinctly and emphatically a *habit* drug. Tobacco is always a poison; its influence on the human body is always poisonous, the toxic effect differing only in proportion to the amount taken and the susceptibility of the user. But the influence of the drug upon the brain, nervous system, heart, blood vessels, lungs, and other organs of the body, is so insidious and deceptive, after the preliminary acute poisoning, that the victim may for a long time, even for years, not realize the mischief that is being done to him until it is too late to prevent serious or even permanent damage.

No one can honestly claim that the habitual use of tobacco in any quantity, small or large, benefits health, increases strength, prolongs life, or in any other way exerts a healing influence on the human body. Neither is tobacco a mere neutral agent and indifferent in its effects, for it does have a decided effect upon the human system, and its influence is always more or less injurious, even though the harm may not be perceptible in the earlier stages. Nicotine is preeminently a nerve poison, and sooner or later the nerve cells and the nerve fibers of the brain, as well as other organs of the body, including the special senses, come under its evil influence.

The Craving for Tobacco

Any craving for that which is neither food nor drink nor in any other way helpful to the body, is unnatural and morbid. The very craving itself is evidence of a perverted appetite, and must be looked upon as a sign that health is in some way disturbed or enfeebled. The craving for a narcotic drug, such as tobacco or alcohol, is quite unlike the normal craving for food when one is hungry. One is the expression of a natural appetite for something necessary for the sustenance and the recuperation of life, while the other is the expression of a perverted or morbid appetite for something which is neither wholesome nor useful for the body, nor in any way required for its nutrition, something taken solely to impart certain stimulating and narcotizing effects, which benumb the finer sensibilities of the brain and mask the real sensations and feelings. The craving itself is essentially the same, whether it is for a hypodermic of morphine, a glass of whisky, or a pipe of tobacco. Just as one glass of beer, wine, or brandy calls for another, so one pipe of tobacco calls for another, one cigar for another cigar, and one cigarette for more cigarettes; and the demand is often both loud and insistent. This of itself ought to be ample evidence of the pernicious working of these drugs upon the brain and the nervous system. While it is true that a man who has a reasonable amount of will-power remaining is able to stifle the craving to some extent and to keep himself within certain bounds, still the tendency in the vast majority of

cases is toward a gradual and steady increase in the dosage of the drug, as the habit becomes more and more fixed. Men are seldom satisfied with a single smoke, but crave another and still another; and when it comes to cigarettes, I have seen those who could scarcely light them fast enough to satisfy the intense craving.

The Medicinal Use of Tobacco

Tobacco was first introduced as a remedy for dyspepsia, and very soon it came to be looked upon as a sort of panacea by physician and layman alike. Although there was a great deal of quackery about tobacco in those early days, still it appears that the doctors later used it as a medicine, and for a while, that is, until the deadly nature of the poison was more fully understood, it seems to have been freely prescribed and widely used in medical practice. But experience, always our best though dearest teacher, soon taught the medical profession that tobacco was altogether too dangerous a drug to be prescribed indiscriminately or even at all, and for many years it has not been regarded as a medical preparation, or been used by doctors of repute.

It may be interesting to note what some of the older medical authorities thought of tobacco. In 1737 a chemist, Dr. Boyle Godfrey, wrote of tobacco as follows: —

"I must own I wonder more at the use of this than all other things; for nature startles at first at it; it occasions a violent sickness and vomiting; it contains a fetid oil that is next to poisonous; I have known very ill effects from chewing it, and am sure a man is better without the use of it any way."

Dr. Grimshaw, alive to the dangers associated with its use, said: —

"It is believed by all judicious practitioners too dangerous to be employed as a medicine. The benefits as a remedy do not counterbalance the risk of using it. Yet so *insidious* are its effects that few have regarded it as swelling the bills of mortality. It is, nevertheless, true that multitudes are carried to the grave every year by tobacco alone."

If tobacco is too poisonous and too dangerous to be employed as a medicine, then what about its daily use as a habit drug? Surely that must be equally if not more dangerous to life and health. Tobacco is no longer listed in the pharmacopœia, and there is no excuse for using it medicinally, for the stomach's sake or as a stimulant.

Worthless to the Human Body

It seems that a few ignorant men actually look upon tobacco as possessing some sort of food value, and therefore they believe that it imparts in one way or another a certain amount of strength and endurance. It ought not to be necessary to say that the drug contains no food material of any kind whatever, and therefore it does not and cannot in any sense act as an article of nutrition. From the standpoint of a food, tobacco is entirely valueless, for it is not capable of conferring either strength or vitality, or any real or permanent benefit. Its influence is quite the contrary, and as every one must know, its use is followed by a disturbing and depressing influence upon the nervous system, not to mention its mischievous effects upon other organs of the body.

HALEWA HOTEL

ITEMS OF INTEREST

Youthful Tobacco Users Fined.— St. Peter, Minn., has a new ordinance providing that minors who buy cigars and tobacco or enter a place where intoxicating liquors are sold, shall be fined.

Prohibition for Missouri. — State-wide prohibition is the goal of the temperance people of Missouri, who have inaugurated a campaign to urge the enactment of a State prohibitory law at the coming legislature.

Prohibition versus Prison.—In Los Gatos, Cal., a prohibition town with a population of 3,500, the expenditure for prison charges for four months was seventy-five cents! What would it have been if liquor had flowed freely?

Railways Dry.— Four railways which operate in West Virginia have, in conformance with a recent court rule, issued a general order prohibiting the acceptance of liquor as personal baggage of passengers in that State.

Liquor Craving Causes Death.— In order to satisfy his craving for liquor, a Baltimore man, aged thirty, smashed a quarter-in-the-slot gas meter. Being unable to get out into the fresh air, he was overcome by the escaping gas, and was dead when discovered.

Alcohol Not a Food.— So says Prof. Winfield Scott Hall, of the medical department, Northwestern University, who has expressed in vigorous language his opposition to the theory that alcohol is a food, and has cited many authorities to confirm his view.

Wilbur Wright an Abstainer.— Wilbur Wright, when asked how much alcohol he could carry, replied indignantly that he would not dare to mar the body and brain with which the Creator had endowed him, by swallowing any alcohol. He said he did not know the difference between the taste of beer, whisky, and wine.

Liquor Not Necessary to Good Business. — The seven seacoast places in New Jersey which are free from saloons are reported to be commercially successful. Why not? The bogy about prohibition destroying business, started and kept up by the liquor interests, has been proved all over the country to be false. Prohibition makes for cleaner towns and better business. There are some businesses, however, that do not flourish, such, for instance, as that of the police court lawyer and of the pawnbroker.

Liquor by Parcel Post.— As prohibition territory has increased, the liquor interests have made use, more and more, of the postal department to convey their wet goods into dry territory. Five hundred firms do an exclusive mail-order liquor business, and two thousand other firms conduct a mail-order liquor business as a "side line." Uncle Sam licenses these firms to do such work, and then affords the facilities of the postal department to help it along. National prohibition would quickly put a stop to such work.

College Courses on Liquor Problem.— Courses on the liquor problem, for which credit is allowed, are offered by sixty-five universities and colleges.

Remington Factories Dry. — The two Remington factories at Bridgeport, Conn., one making cartridges and the other firearms, have adopted the significant rule, "No man with a smell of intoxicating liquor upon his breath, or a staggering gait, can remain upon the work." Big business has come to recognize alcohol as an enemy.

Baltimore & Ohio Anti-Drink Campaign. — Detectives with cameras are taking pictures of B. & O. employees who drink, and habitual drinkers are discharged. The road is determined to reduce drinking among employees to a minimum. The chief medical examiner of the company has prohibited the use of liquor in first-aid treatment.

Engineers and Prohibition.— The Brotherhood of Locomotive Engineers has indorsed both State and national prohibition. A member of the order recently said, in explanation of this action, "Engineers of North America have been taught for years that drink and efficiency do not run hand in hand. If any one needs a clear head, it is the man in the cab."

Treating Banned in London.— The London military authorities have decided that it is essential to prohibit the treating of troops within the metropolitan police district, containing seven hundred square miles. The order as proposed applies to clubs and restaurants as well as to saloons, and any one paying for another's drink or giving him money to pay for it, or any one serving a drink except to the person who pays for it, is liable to punishment.

Liquor Consumption Decreasing.— Heretofore, notwithstanding the increase in dry territory, the returns from the internal revenue collectors showed a gradual but constant per capita increase in the consumption of liquor; but the figures for the past year, for the first time show a substantial decrease in the per capita consumption of liquor. The "withdrawals for consumption" show a reduction of 2.15 gallons for every man, woman, and child in this country for the fiscal year of 1915 as compared with 1914.

Liquor Transformed into a More Rapid Destroyer.— Alcohol is needed in the manufacture of guncotton, one of the high explosives much used in the present war. Owing to the shortage of alcohol, a French distillery has been buying up absinth, and converting it into alcohol. The French believe that the alcohol is put to better use in destroying Germans than in destroying Frenchmen. California grapes, which, on account of the increased tax, could not be profitably made into wine, have been used for the manufacture of alcohol, to be used in Canada in making explosives.

OUR WORK AND WORKERS

AIDS TO HEALTH RESTORATION

D. H. Kress, M. D.

The following is from a sanitarium parlor lecture given by Dr. Kress to the patients. The function of the sanitarium is not only to assist in the restoration of health, but to teach the patients how they may best preserve their health after leaving the institution.

PATIENTS in coming to an institution of this character are anxious to get well just as rapidly as possible. Sometimes they think it is to the interest of an institution to keep them as long as possible. That is a mistake. Every one who leaves restored to health, unconsciously helps to advertise the sanitarium, and is therefore instrumental in sending others. The faster the patients are turned out, the better it is for the institution as well as the patients.

The Irishman who missed his train, when asked why he was late replied, "Sure, I took the short cut." The reason why so many fail to get well is because, like the Irishman, they are trying the many advertised short-cut routes to health.

When a person has a pair of shoes that need repairing, he may take them to a cobbler, and say, I want you to repair these shoes so I can have them by Wednesday morning. There are those who bring their diseased stomachs, livers, and nerves to the sanitarium in much the same way. They say, "Doctor, I cannot stay longer than two weeks or a month; if you cannot fix me up in that time, I will go elsewhere." Men and women want to feel well even if they are not well, and anything that will bring about a feeling of well-being is welcomed by them. This leads to the use of patent medicines and habit-forming drugs.

Several years ago, while riding with a gentleman, I noticed that his horse was short-winded and moved with difficulty. He told me that he had purchased the animal the day before, and that it had then looked well, and appeared full of life. He discovered, however, that the horse had been drugged. I learned that it was not uncommon to doctor up animals for the purpose of making sales. Drugging does for patients what it does for sick horses.

Patent Medicines and Drugs are Deceptive

A person out in the cold, after taking a drink of whisky thinks he is warmer; but he is not. He is really colder. He is simply narcotized, and cannot feel nor appreciate his condition or danger. His internal temperature may be two or three degrees lower than normal at the very time when he is feeling so comfortable.

There are a great many drugs which relieve headache, but leave the person in a more serious condition. Such treatment is merely symptomatic. It is unwise to pull down nature's signals of danger so long as danger exists. Yet this is what is being done every time that headache powder is taken. Drugs which bring about immediate results are dangerous, as a rule, and should be avoided.

There are many chronic invalids who are constantly taking some drug, believing it to be the only thing that keeps them up. They think their very existence depends on it. And yet that which they depend on to keep them up, is in fact keeping them down.

There are many drinks sold at soda fountains which contain habit-forming drugs. People who become accustomed to taking these cannot get along without them.

Health getting is a work requiring

time. Health cannot be acquired in a few minutes. If a gardener has a sickly plant, he cannot build that plant up in a day. He does not saturate its roots with alcohol or patent medicines. He places it where it can have the benefit of sunshine and rain, and he digs about it. In time the pale leaves take on color, and the plant gives evidence of being restored to health. The gardener goes about the work of restoring sickly plants with all confidence, and he is seldom disappointed. He gets results.

Physicians may go about the work of restoring sick bodies to health with just as much confidence as the gardener goes about the work of restoring sickly plants. When plants are sick, we recognize that there is a cause for it. They may not have had the benefit of the sunshine, or possibly the soil is deficient in some needed element. If the causes are not known, the gardener cannot expect results. Ill-ventilated rooms, insufficient exercise, lack of air and sunlight, and unwholesome food and drink are the chief causes of ill health. When sickness comes, nature says, "You are doing something you ought not to do." By continuing in a wrong course, and then taking something to conceal the symptoms, we merely hush the warning voice of nature.

Sanitarium treatments are designed to aid nature in health restoration. Massage, electricity, and hydrotherapy are of value chiefly because they improve the circulation of the blood through the diseased parts, thus hastening repair by supplying the needed nutriment and removing the accumulated wastes. We are informed that every six weeks the blood undergoes a complete change, that the average life of a corpuscle is only six weeks. The cells of the liver, we are told, undergo a complete change every three months. By careful living, the man with impure blood and a diseased liver may have new and better blood and a healthy liver in three months' time.

An injury to the hand heals in a short time, provided no dirt or other irritants are permitted to get into the wound. Should we exercise the same care in protecting the injured stomach as we do in protecting the injured hand, nature would be as faithful in making stomach repairs as she is in repairing injured hands. Irritants, such as pepper, mustard, and highly seasoned foods, when placed in the stomach, interfere with nature's friendly efforts. Doctors cannot patch sick stomachs, livers, and nerves as the cobbler patches shoes. More depends on the patient than on the physician.

Men differ from animals in that they are responsible beings. Man has a conscience; the animal has none, and is irresponsible. Man is capable of reasoning from cause to effect, the animal is not. When an animal is sick, it does not worry about its sickness nor about the outcome. It does not, like man, take a mental attitude which resists nature's healing processes. When a patient has rheumatism in one joint, he expects other joints to become affected. He worries about the future. This mental attitude retards restoration. The sick animal goes out into the sunshine on the rest-cure, and abstains from food for a time, perhaps, and recovers more rapidly than the average patient does. An animal cannot exercise faith. For the reason that man can, his recovery should be more rapid than that of the lower animal. To exercise faith, it is necessary to study the restorative methods employed.

A good sea bath is stimulating, and yet two persons may go to the beach at the same time, and the results be very different. One who is informed knows the effect that the cold water will have on his circulation. He plunges into it, expecting results, and when he comes out he takes a vigorous towel rub. The blood bounds through his body, and imparts new life and vigor to every organ. The other, being doubtful about the benefit of the bath, comes out with blue lips. The circulation is practically at a standstill. Reaction is prevented by his mental attitude, and the bath is an injury.

Man should study what is best for him to eat, and then eat it and expect good results. Eating mechanically will not

bring the best results. The children of Israel were given the best food that heaven could provide for them, but it did not benefit them because it was unappreciated. They said, "Our soul loatheth this light bread." Two men eat the same kind of food: one receives benefit, while the other does not. It depends on the mental attitude assumed toward the food. In order to get good out of the best food, it must appeal to the mind. This mental attitude can come only from study and an intelligent knowledge of food values.

The mind has much to do with health restoration. There may be discouragement because of slow progress. It is not wise to permit discouraged feelings to get the mastery. Courage may be cultivated by refusing to talk about disagreeable symptoms. The more we talk about them, the worse they become.

Patients sometimes form the habit of talking with others about their symptoms and their troubles. By a comparison of notes, each soon develops the symptoms of all the others. A young man I once had as a patient, in trying to forget his symptoms, hit upon a bright idea. He had cards printed. On one end of them were the words, "I have troubles of my own; don't tell me yours." These cards were handed to all the patients. When one began to talk about his symptoms, each of the others would simply pull up the card in his vest pocket, and call the attention of the complaining one to the words. This helped to bring about quite a reform among my patients, and it was helpful to them all.

We should cultivate the habit of looking for the bright spots in life's experiences. From every experience we may gather that which will be a blessing. Two persons may pass through a garden, one saying, "Look at the beautiful roses and pinks;" the other, "See the ugly thorns." Of two men looking out of their prison bars one will see the mud, the other the stars. What we see depends upon how and where we look.

I am aware that it requires some effort at times to look on the bright side. But if our cruse of comfort is failing, our only hope lies in sharing it with some one more needy. Giving is living, denying is dying. He who determines never to cast a cloud on the pathway of another, but lives to encourage and help the unfortunate, has a most valuable aid in health restoration.

We cannot expect to be at our best every day, for we all have infirmities. We cannot expect to feel just as we should like day after day. Sometimes, however, when we are feeling the worst, nature is actually doing the most for us.

It is true, a person who is perfectly well should feel well, but with a person who is regaining his health, it is different. When the most is being done for him by nature, he sometimes feels the worst. This is on account of changes which are taking place within the body. The whisky drinker feels worse for a few days after giving up drink, but he is not actually worse, he has just entered the pathway to health. So with the tobacco user, the tea drinker, and the drug fiend.

Another aid in health getting is morning worship. The promises of God bring rest and quietness to troubled hearts as nothing else can; and when we are doing our part, we may expect God to do his part. We ought to sing when we feel least like it, and enter into the real spirit of the worship. I know of no exercise better for the health than singing. It has a good mental effect, and it improves the circulation of the blood through the vital organs of the body, upon whose functions health restoration depends.

SANITARIUM NEWS AND PERSONALS

THE Portland (Oregon) Sanitarium reports a good houseful of patients.

Dr. Pearl J. Anderson has connected with the Kansas Sanitarium, Wichita, Kans., and is doing her share in that busy institution.

We recently called on Dr. J. H. Neall, of Atlanta, Ga., and found him enjoying a fair degree of prosperity in his private sanitarium work.

The treatment rooms conducted by R. B. Craig at Decatur, Ill., are working overtime most of the time. A strong business has been built up.

Dr. L. L. Andrews, formerly superintendent of the old Atlanta Sanitarium, is located at Ft. Myers, Fla., and is developing a strong private practice.

Dr. Anna B. Durrie has again connected with the Wabash Valley Sanitarium as house physician, and is busy. The sanitarium has had a prosperous year.

The graduate nurses of the Nebraska Sanitarium at Hastings, Nebr., recently took the State Board examination, and now all of them can write R. N. after their names.

The Sanitarium Treatment Parlors, of 106 North Bluff St., Joliet, Ill., is a recently established enterprise under the direction of Mr. and Mrs. C. A. Stebbens.

Dr. Lauretta Kress, who recently connected with the Washington Sanitarium, is already busy with her share of work. A strong local practice is fast developing.

Dr. John A. Pines, who has been engaged in private practice in Iowa, has recently connected with the New England Sanitarium, at Melrose, Mass., as assistant physician.

Dr. Lydia Parmele has moved from New Orleans, La., to eastern Tennessee, as her husband, Pastor R. W. Parmele, has taken the presidency of the Cumberland Conference.

C. E. Kimlin has taken the business management of the Glendale (Cal.) Sanitarium. Mr. Kimlin was formerly employed in the business office of the Battle Creek (Mich.) Sanitarium, and more recently engaged in business for himself in California.

Dr. L. A. Sutter, superintendent of the sanitarium at Wichita, Kans., is interested in studying at close range the numerous birds of the vicinity, and has secured many interesting photographs of them. He has found that "shooting" the birds with the camera does not drive them away, and the grounds of the sanitarium are well populated with the beautiful feathered songsters.

A letter from Pastor J. N. Loughborough, a pioneer minister connected with the earliest beginning of our sanitarium work, informs us that according to his personal diary the date of the beginning of our first health institution should be given as 1866 instead of 1867, as some of us have been placing it. The early files of the *Review and Herald* also show that the opening of the first Health Institute was Sept. 5, 1866.

Dr. George Covey, of Lincoln, Nebr., is rendering assistance at the Nebraska Sanitarium located at College View.

Dr. C. F. Curtis, of Decatur, Ga., a small town near Atlanta, operates the East Lake Health Home, and reports a growing business.

Mr. and Mrs. Frank L. Williman, formerly of the Pontiac (Ill.) Treatment Rooms, are now in Washington, D. C. He is taking the medical course, and she is doing private nursing.

Miss Nellie Waddell, one time head nurse of the Tri-City Sanitarium, at Moline, Ill., has returned to Washington, D. C., to do private nursing, after an absence of a few months in other States.

L. M. Bowen, former business manager of the St. Helena (Cal.) Sanitarium, has connected with the Loma Linda (Cal.) Sanitarium as general manager of this large institution and its allied interests.

Two or three city treatment rooms are offered for sale or rent. Information regarding the same may be obtained by addressing the Medical Department of the General Conference, Takoma Park, D. C.

Miss Ethel Fankhouser, a recent graduate of the Washington Sanitarium Training School for Nurses, has taken work with the Mount Vernon Medical and Surgical Sanitarium, filling a place of some responsibility.

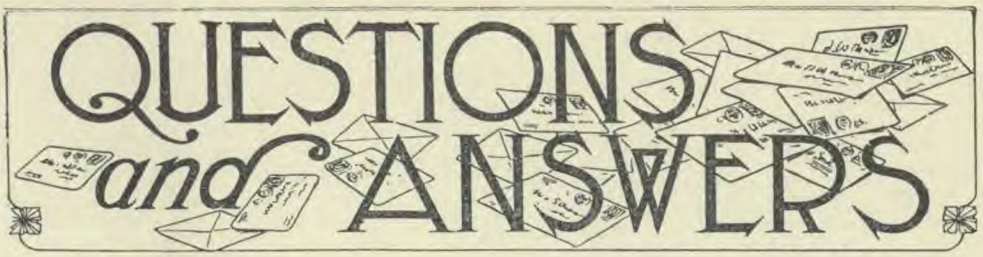
Dr. C. C. Patch has assumed the responsibility of the Graysville (Tenn.) Sanitarium, which had been closed for a time, pending change of ownership. The doctor and his wife are hopefully seeking to make the work of the institution successful.

Mr. O. C. Warner, for many years connected with the Washington Sanitarium and the Washington Training College, and more recently of Melrose, Mass., has connected with the Florida Sanitarium, at Orlando, for a time, taking up office work.

C. L. Burlingame, an old-time nurse, is associated with D. T. Strickler in operating the men's side of the Whiteis Baths, located at 112 East Broad St., Columbus, Ohio. A strong business is being built up, based largely on the advertising given the enterprise by its well-satisfied patrons.

Miss Etta Reeder, superintendent of the Nurses' Training School of the Oakwood Sanitarium, Huntsville, Ala., keeps fairly well occupied with her work as a member of the school faculty, and in looking after various accidents and emergencies that occur in the large industrial school family.

The Florida Sanitarium, Orlando, Fla., reports a thriving business, with plans in progress looking to a continuous busy season for the entire year. The city of Orlando is rapidly developing as a popular wintering place. It offers many attractive features. The sanitarium is located in one of the prettiest parts of the lake region of central Florida, with an equable climate both summer and winter.



Questions accompanied by return postage will receive prompt reply by mail.

It should be remembered, however, that it is impossible to diagnose or to treat disease at a distance or by mail. All serious conditions require the care of a physician who can examine the case in person.

Such questions as are considered of general interest will be answered in this column; but as, in any case, reply in this column will be delayed, and as the query may not be considered appropriate for this column, correspondents should always inclose postage for reply.

Is It a Case of Worms?—"Our baby boy, who is two and a half years old, grits his teeth when asleep. Being told he has worms, we have tried three different kinds of worm medicine, but find no signs of that being the trouble. After we give him castor oil, he stops gritting his teeth for a short time. He has been bothered more or less all through his life with his stomach and bowels. He takes cold easily."

There is doubtless some trouble with the child's digestion, perhaps more or less fermentation. This would cause the symptoms you mention. Perhaps you are feeding him pretty nearly everything on the table. It would be better to confine him to certain foods, such as well-cooked cereals and milk. This milk should be some that you know for a certainty is clean and healthy, or else it should be Pasteurized, or at least brought to a boil. It would be an advantage to the child if he were given every day one-half cup of vegetable broth, made by stewing beets, carrots, celery, etc., and drawing off the water. Do not give him any of the solid part.

He would also do well to have the juice of half an orange, but do not give him the pulp. Should you give him the orange to suck, he would probably swallow enough of the solid material to cause trouble. For the bowels it is better to use something else than castor oil, because of the secondary effect of the castor oil to constipate.

Pharyngitis; Constipation.—"Although for more than twenty years I have been careful in regard to my health, I am suffering from chronic pharyngitis, which three months' treatment has not relieved. During the last five years I have suffered considerably from one-sided headache and constipation."

Your pharyngitis and one-sided headache are probably closely connected. You should avoid white flour and grains that have been processed, and use only the whole-grain preparations. You should also use an abundance of coarse vegetables. It is also well to swallow two or three tablespoonfuls of bran in water before breakfast, or you might use one of the agar preparations or mineral oils (that is, liquid paraffin), to relieve your constipation. This might also relieve your headache.

For the pharyngitis you might try a wet compress around your neck. Wet a handkerchief or cloth that will just about go around the neck. Apply it, and surround it with a flannel or something that will retain the heat, not allowing any air to get in. The purpose is to cause the neck to steam all night. Take the compress off in the morning, and rub the neck with a hard towel wrung out of very cold water. If the skin is a little sensitive, rub in a little oil or vaseline.

Spinal Treatment.—"What is the difference between osteopathy and chiropractic, and what is your opinion regarding the last-mentioned system for a case of neuritis of long standing?"

Osteopathy seems to be a stimulation or sedation of the spinal nerves at their exit from the spinal column. Chiropractic claims to be an adjustment of the bones of the spinal column by what is called a "spinal thrust."

My opinion is that a course that can be given in six months by mail is not one that can fit a person to deal with the complicated mechanism of the human body. Medical men find four or five years altogether too short for such a study.

A Change of Climate.—"I have catarrh of the head, and at the beginning of cold weather it involves stomach, bowels, and air passages, which become very sensitive. I use no coffee, tea, meat, or pastry, but a large quantity of water, olive oil, and Graham biscuit. I have two movements daily. Would dry air relieve this condition, and what States would be the best to live in?"

The question of climate is a rather difficult one. A Southern or Southwestern climate might be better for your condition, but there may be something in the way you live that has much to do with your catarrhal condition. Possibly on the approach of cold weather you have the house a little overheated or too dry. There may be too sudden changes between house and street temperature, or it may be that you are not clothed properly for the change of weather.

If you have chronic catarrh of the head, there may be some condition which would be permanently relieved by an operation. Some persons who have been troubled all their lives with conditions of this kind, are entirely free from them after a slight operation on the nose. You might find this less expensive than a change of climate.

As to what climate might be best suited to your condition, I could not tell in advance. Doubtless in Colorado, Arizona, Southern California, New Mexico, North Carolina, Florida, or many other places, you might find a climate that would make your condition more endurable.

Symptoms of Old Age.—"I am nearing seventy years of age. Have had stomach trouble for many years. Am under weight fifty pounds. Have to use a physic, although I eat plenty of fruit and Graham bread. At night I cannot get enough cover to keep my back from chilling. In summer I have loss of appetite, and lose flesh, but gain a little in winter. I am very wakeful."

After the age of fifty it is natural for a person, unless he is gaining flesh, to lose flesh, and it is safer to lose a little flesh than it is to take on flesh. It is a very common thing for persons of this age to be incapable of keeping so warm as one who is younger.

The chills in the back are caused by not drawing the covers tightly around the shoulders. If the bedclothes lie loosely, so that there is an air space between the bedding and the back, there is enough radiation to cause a feeling of chilliness. This may be remedied by wearing heavy garments at night, or by rolling up in your blanket so that there is no chance for the air to get between the covers and the back.

For constipation, buy two pounds of clean bran, and take one or two tablespoonfuls in water every morning. Or you may use agar or liquid paraffin. It is better to use some mechanical laxative than to take medicine.

It would be better for you to go to a colder region during the summer.

Persistent Cough.—"Can you suggest a remedy for a persistent cough?"

Very often in such cases the ventilation is poor. You do not need cold air, but you do need fresh air. The best way to obtain this without a draft is to have a frame made for the lower part of your window, with muslin instead of glass. Sleeping in a room ventilated in this way will probably make a marked difference in your condition.

Mineral oil in repeated small doses, according to Dr. Todd, in the *New York Medical Journal* of January 15, relieves a cough. He suggests the following prescription:—

Mineral oil	6 drams
Oil of anise	5 minims
Sirup of citric acid	2 ounces
Sirup of tolu	4 ounces

Shake, and take one-half teaspoonful every hour.

"Life and Health" FREE SERVICE DEPARTMENT

KNOWING that many LIFE AND HEALTH readers need standard books on hygiene and allied topics, but are unable to secure them at regular subscription prices, we have made arrangements whereby we are enabled to offer a number of excellent health books at a very low rate, when ordered in connection with subscriptions for LIFE AND HEALTH, or when secured as premiums for LIFE AND HEALTH subscriptions.

As the supplying of these books at rates quoted is donated service without profit to any one except to the individual customer, there can be no commissions given nor any credit granted. Every deal must be cash.

In the following list we quote three prices for each book:—

1. Our cash retail price, postpaid. The book can be obtained from us at this cash price.

2. Combination price of the book and a year's subscription for LIFE AND HEALTH. This combination effects a decided saving in every case.

3. The amount in cash subscriptions that will earn a copy of the book for those who desire to earn the book free of all cost.

For instance, "The Laurel Health Cookery," $2.25, $2.50, $4.00, means that a copy of the book will be sent postpaid for $2.25 cash, or with a year's subscription for LIFE AND HEALTH it will be sent postpaid for $2.50, a saving of 75 cents to the subscriber; or it will be sent *free* of all charge on receipt of $4.00 worth of subscriptions at the regular rates,—$1.00 a year, 50 cents for six months.

We also offer to supply *a ten weeks'* subscription for *Harper's Weekly* with LIFE AND HEALTH for one year for $1.45, a net saving of 55 cents on the deal. In time we shall have other periodicals and magazines to offer at reduced rates.

WHEN TO SEND FOR THE DOCTOR AND WHAT TO DO BEFORE THE DOCTOR COMES, by Frieda E. Lippert, M. D., and Arthur Holmes, Ph. D.

A most valuable book for any family.

$1.33, $1.75, $2.50.

FOODS AND THEIR ADULTERATION, by Harvey W. Wiley.

A valuable book on a most important subject, by one generally recognized as an authority.

$4.00, $4.20, $8.00.

Stone in Kidneys.—"I have what is called gallstones in the kidneys. Kindly give instruction regarding treatment."

Gallstones are never found in the kidneys. Stones form in the kidneys, and for this the treatment is probably surgical. I know of no medical or dietetic treatment that will relieve this condition.

Quitting Morphine.—"Mother has been using morphine for thirty years, and is breaking off the habit, but has severe diarrhea. Can you suggest anything that will give relief?"

It is not very easy to overcome the effects of a habit of thirty years, and it is possible that this diarrhea may be rather persistent. Your mother might take fluid extract of coto bark in one-to-ten-drop doses, dilute, beginning with a small dose and gradually increasing. She should use white bread, rice, milk, eggs, and foods of that nature, including cheese, and should avoid fruits and vegetables.

It is possible that gallic acid in pill form, given in five-grain doses, may afford some relief.

Tobacco.—"I have always been subject to colds. Some time ago I read an article giving the effects of the cigarette habit, which described my symptoms better than I could describe them myself. My husband is a user of tobacco, and smokes and chews. It seemed to me that perhaps this was the cause of my colds, and for this reason I began sleeping out of doors, and immediately improved. Going back to the room with my husband afterward, I again began to suffer the same symptoms; my throat gets sore, and I have the old experience. When I am in the room where there is smoking or chewing, my heart flutters and beats very rapidly, and I sometimes have smothering spells. I should like to know whether tobacco has this effect."

There is no doubt that tobacco-laden air or impure air of any kind will cause irritation of the throat and air passages, and keep up the condition known as "chronic cold." I do not know whether chewing tobacco would affect the air, but doubtless tobacco smoke would do so; and if the air of a sleeping room is close, and the windows and doors are closed, this would also have a bad influence.

Your fluttering, rapid heart is probably a direct result of tobacco poisoning.

I think you do right to sleep in the fresh air, and I trust that your husband will see from the condition of your health that this is the best for you.

Pemphigus.—"My baby died with pemphigus after an illness of six days. He was only twenty-four days old. It started on his face and went all over his body. I should like information concerning this condition."

There are a score of different varieties of the disease called pemphigus, and they are probably caused in different ways. Just which one of these might be the one that caused your son's death, I could not say.

Insomnia.—"If I write just before retiring I cannot sleep; but crocheting, studying, etc., have no effect. I have an uneasy feeling between the shoulders after writing. I cannot sleep until my roommate is asleep, even though she lies still. I have tried osteopathy, with no result."

It is possible that, when writing, you assume some position that is trying to your eyes or a strain on your muscles. The most obvious thing is to avoid writing before you intend to retire.

You might sleep better in a room by yourself. Evidently your mind is very sensitive to small disturbances. There is a possibility that you have some eyestrain and need glasses.

One thing is certain, and that is that almost every one, even one who is supposed to be in good health, has disabilities to combat. There may be a tendency to wakefulness or some other condition which a person gets along with and says nothing about. But if one is determined that all his symptoms shall be overcome, and starts to hunting up doctors, the symptoms seem to grow larger, the purse smaller, and the person more hopeless, and eventually he may become a confirmed invalid. Many who have a slight tendency to wakefulness or some other condition, take it as a matter of course, and try to "forget it."

Acute Indigestion.—"Kindly give instruction what to do in a case of extreme acute indigestion."

A case of acute indigestion is probably caused by some poisonous or very unwholesome food, oftentimes by food that has undergone chemical changes and produced poisons,—ice cream, cheese, corned beef; and even fresh meats may produce substances of this nature of germ action. The first thing to do is to empty the stomach, either by means of a stomach tube or an emetic. And it may be necessary also, if considerable time has elapsed, to use a cathartic, such as castor oil. Acute indigestion may give serious trouble, and if it is possible to have skilled medical help it should be had, by all means. It would be impossible to give directions to meet every case. One form of poisoning would require one treatment; another would require some other treatment.

There is a form of acute indigestion which recurs at intervals. In such cases there is more or less chronic trouble, caused by overeating or by the use of some food for which the patient has an idiosyncrasy. Some persons are poisoned by eating eggs. Others have a very bad time after eating strawberries, bananas, or perhaps some other food. In such cases the food should be gotten rid of as soon as possible and the patient should be placed at rest, and perhaps given some soothing drink, like flaxseed tea or tea made of slippery elm bark in case there is irritation of the throat or stomach. In case there is considerable prostration and the extremities are cold, it would be best to apply heat. In a case of acute indigestion it is well, if possible, to have medical aid.

Persons subject to recurrent indigestion should determine if possible what foods are responsible, and avoid them.

"Life and Health" FREE SERVICE DEPARTMENT

EATING TO LIVE, by John Janvier Black, M. D. With some advice to the gouty, rheumatic, and diabetic.

$1.63, $2.00, $3.00.

BACTERIAL FOOD POISONING, translated by C. F. Bolduan.

Meat poisoning. Poisoning through fish and mollusks. Poisoning through cheese. Poisoning through ice cream and puddings. Potato poisoning. Poisoning through canned goods. Metallic poisoning. Many cases of obscure food poisoning are the result of ignorance of the facts brought out in this book.

$1.00, $1.35, $1.50.

THE WORKING PEOPLE: THEIR HEALTH, AND HOW TO PROTECT IT, by M. G. Overlock, M. D.

A plain book, written in a plain way by a plain man for plain people,—the toilers, whose health is their principal asset, and who cannot afford to be sick.

$1.62, $1.75, $2.50.

THE REDUCTION OF DOMESTIC FLIES, by Edward H. Ross.

Considers the house fly as a cause of disease, and describes practical methods for its extermination. Recognizes that fly extermination must be a community work. Illustrated.

$1.60, $2.00, $3.00.

NOSTRUMS AND QUACKERY.

For years the government has been putting out of commission one medical fraud after another; but no sooner is one dislodged by the difficult processes of the law, than another springs up to take its place; and before it can be controlled, it has succeeded in swindling a large number of needy persons. This book explains the methods of these different frauds, so that the reader may be on his guard.

$1.50, $1.75, $2.50.

Chlorinated Alcohol.—A powerful antiseptic may be made by passing chlorine gas through alcohol until saturation is complete. This should be corked securely and kept in a dark and cool place. It may be used in full strength instead of tincture of iodine for sterilizing the skin in surgical operations. It neither stains nor irritates the skin.

Living Without Worry. by J. R. Miller, D. D. Price, $1.25 net. George H. Doran Company, publishers, New York.

How seldom one meets a person who lives without worry! Yet how powerful such a life for good! Though Dr. Miller was one of the busiest of men, who accomplished a vast amount of work, he never hurried, and he never worried; and he believed that one could not be his best while subject to worry. There are books and books that tell us not to worry, but this does more; and many a poor soul who is working with a maladjusted machine that heats here and chafes there and knocks at another place, will find in this book just how to make the adjustments necessary to smooth running.

What God Hath Joined Together, by Malcolm James MacLeod. Price, $1.00 net. George H. Doran Company, publishers, New York.

One picks up this book expecting a dissertation on the evils of divorce; but we are informed that it is not a "whom," but a "what," that God hath joined together. The book considers various things joined together in the providence of God, beginning in the first chapter with "Seed and Harvest." The opening chapter deals with the underlying unity in nature, showing that wherever the far-reaching law of "seed and harvest" operates, the results have made for the building up of Christian character. The remaining chapters consider various aspects of the divine harmonies which come into lives in fellowship with God.

Keeping Physically Fit; Common-Sense Exercises for the Whole Family, by William J. Cromie. Illustrated. Price, $1. The Macmillan Company, publishers, New York.

Mr. Cromie certainly gives some very excellent advice, for instance: "Every mental or sedentary worker should have the steady influence of some harmless fad or sport dissociated from business or profession, and I can suggest none better than some kind of pleasurable activity. This may take the form of walking, playing golf or tennis, gardening, raising chickens, or performing exercises such as are described in this book. Whatever it is, seek it as a pleasant recreation; put your whole heart into it, and make of it a hobby."

One is attracted to the book by the fact that it is not published to advance some particular "system" of exercises which is better than all others, but to get those not accustomed to exercising to take some form of exercise. The exercises illustrated and described in the book are good ones.

Many LIFE AND HEALTH readers may remember Mr. Cromie as a former contributor to this magazine. He is instructor in physical education at the University of Pennsylvania gymnasium, and instructor of the summer school classes in physical education, University of Pennsylvania; he has also written quite extensively on physical culture subjects. The book is one of the sane physical culture books.

The following are chapter headings:—

"Exercise for the Busy Man," "Exercise for the Nervous Woman," "Exercise for the Growing Child," "Deep-Breathing Exercises," "Additional Methods for Keeping Fit," "Mind versus Body."

How to Live — Rules for Healthful Living Based on Modern Science, by Irving Fisher and Eugene Lyman Fisk, M. D. Funk & Wagnalls Co., publishers, New York.

This work, containing the pith of the combined wisdom of the best authorities on personal hygiene, has been prepared for use in connection with the Life Extension Institute. Its purpose is more than to avoid illness. As stated in the preface, "The objects of the manual are positive rather than negative. It aims to include every practical procedure that, according to the present state of our knowledge, an athlete needs in order to make himself superbly 'fit,' or that a mental worker needs in order to keep his wits sharpened to a razor edge. For this reason some suggestions, which might otherwise be regarded as of minor importance, have been included and emphasized. While it is true that a moderate infraction of some of the minor rules of health is not inconsistent with maintaining good health in the sense of keeping out of a sick bed, such infraction, be it ever so moderate, is utterly inconsistent with good health in the sense of attaining the highest physical and mental efficiency and power."

The following paragraph is a sample of the positive and progressive teaching of the book:—

"Among the poisons which must be kept out of the body should be mentioned habit-forming drugs, such as opium, morphine, cocaine, heroine, chloral, acetanelide, alcohol, caffeine, and nicotine. The best rule for those who wish to attain the highest physical and mental efficiency is total abstinence from all substances which contain poisons, including spirits, wine, beer, tobacco, many much-advertised patent drinks served at soda water fountains, most patent medicines, and even coffee and tea. Many so-called patent or proprietary medicines contain habit-forming drugs, especially morphine, coal tar preparations, caffeine, and alcohol, and depend largely for their sale upon the effects of these harmful substances. Harmful preservatives and adulterants in foods, such as saccharine, should also be avoided."

Constitution or Pope, by Gilbert O. Nations. Standard Publishing Company, Cincinnati.

The purpose of this little book of forty-four pages is well set forth in this statement from the preface, evidently by the publishers: "In briefing the case against the naturalization of foreign-born Roman Catholics who seek to become citizens of the United States, Judge Nations has established his contentions so completely, and has stated his arguments in language so chaste and forceful and yet so simple, that not only will lawyers and jurists be able to follow him, but every unprejudiced citizen who can read must concur in his conclusions."

As indicated by this paragraph, the book is an argument against the naturalization of Roman Catholics, on the ground that they are subjects of the Pope, a foreign prince, whose allegiance they do not, in the very nature of the case can not, renounce, as can the subjects of merely temporal rulers. As also intimated in the preface, the language of the book is chaste and its tone dignified. Each reader must judge for himself as to the justice and correctness of the author's conclusions.

C. P. B.

Painless Childbirth; Eutocia and Nitrous Oxide-Oxygen Analgesia, by Dr. Carl Henry Davis. Price, $1. Forbes & Co., Chicago, publishers.

This is said to be the first book by a physician that discusses various methods used in the attempt to secure painless childbirth. The author shows that in "twilight sleep" the pain is not relieved; the drugs cause the patient to forget the pain after recovery. The patients "often cry out as loudly during the uterine contraction and complain of as much pain as those who have no anesthetic, but in the successful cases they will not remember this after the delivery of the child."

The author gives the results of varied experiences with nitrous oxide-oxygen analgesia, which he believes prove that this is the safest and best method.

The International Series, edited by Cora Frances Stoddard and Emma L. Transeau, of the Scientific Temperance Federation of Boston, Mass., is a series of monographs on the effects of alcohol, prepared by a number of eminent European physicians and scientists. Following is the list: —

1. The Alcohol Question, by Dr. G. von Bunge, professor of physiological chemistry, University of Basel.

2. The University Student and the Alcohol Question, by Dr. Emil Kraepelin, director of the clinic for psychiatry, University of Munich.

3. Alcohol and Mental Work, by Dr. A. Smith, hospital medical director, Marbach on Lake Constance.

4. The Attitude of the Socialist Party toward the Alcohol Question, by Dr. Emile Vandervelde, professor of law in the New University, Brussels; premier of Belgium.

5. The Influence of Alcohol upon the Functions of the Brain, by Dr. Rudolf Wlassak, Vienna.

6. The Influence of Alcohol upon the Race, by Dr. Alfred Ploetz, editor of *Archiv. für Rassen-und-Gesellschafts Biologie,* Berlin.

7. Race Welfare, by Dr. Max Gruber, president of the Royal Hygienic Institute, Munich.

8. Experimental Tests of the Influence of Alcohol on Offspring, by Dr. Taav. Laitinen, director of the medical department, University of Helsingfors.

9. The Alcohol Question in the Light of Social Ethics, by Dr. B. Strehler, Neisse, Germany.

10. Industrial Phases of the Alcohol Question, by Alfred H. Stehr, M. D., doctor of political economy, Magdeburg.

11. The Causes of Alcoholism, by Dr. A. Cramer, Gottingen; and Prof. H. Vogt, Frankfort.

12. Alcohol and Crime, by Dr. J. Gonser, secretary of the German Union Against the Misuse of Alcoholic Drinks, Berlin.

Price, 10 cents a copy. The American Issue Publishing Company, Westerville, Ohio.

Sanitarium News Items

Dr. I. A. Dunlap is doing well in his private practice at Washtucna, Wash.

Chas. E. Rice has left the Paradise Valley Sanitarium to accept the position of business manager at the St. Helena institution. His experience has been a progressive one, and will enable him to do good work in his new field.

O. B. Kuhn, for a long time connected with the Washington (D. C.) Sanitarium, has been doing field evangelistic work the past year. He and his wife have offered themselves as missionaries to China, and are preparing to leave in the early fall.

Dr. L. E. Elliott, who has charge of the Washington (D. C.) Sanitarium Hospital and Dispensary, being too busy to make a formal report, gave a verbal statement at a recent Washington constituency meeting, regarding the work of the hospital.

Mr. G. A. Roberts, who for a number of years operated the Phœnix Rest Home at Phœnix, Ariz., has, with his family, gone to Kingston, Jamaica, to engage in evangelical missionary work. Being a trained nurse, he will be enabled to render double service.

The Glendale (Cal.) Sanitarium recently graduated a class of sixteen nurses. Before entering special fields of work, these nurses will do city missionary work in and about Los Angeles, under the auspices of the Sanitarium Association of Missionary Nurses, an organization of the Glendale Sanitarium. Through this organization effective missionary work of considerable extent is being done.

A recent constituency meeting of the Washington (D. C.) Sanitarium was one of the best in the history of that institution, the financial report showing a remarkable gain in business, and the various other reports indicating that the work of the institution is rapidly growing in favor and influence. From persons of prominence we frequently hear words appreciative of the Sanitarium and its work.

NEWS NOTES

The Cause of Pellagra.— An Italian journal contains the results of studies by two investigators who experimented by feeding mice in order to determine the effects of sterilized maize, maize infected with disease germs, and maize containing some of the poisonous products of germs not usually counted as disease germs. In their opinion, as the result of their experiment, poisonous substances in the maize produce pellagra. Another experimenter, reporting in a French journal the result of feeding dogs during a three months' period, arrived at the conclusion that the insufficiency of maize diet, and intoxication with zein, are among the principal causes of pellagra. These investigations were made in 1914. We are yet far from a final solution of the question as to the cause of pellagra.

Relation of Pellagra to Foods and Habitat.— Siler and others made a statistical study in six cotton-mill villages in Spartanburg, S. C., in which records were obtained of the frequency of the use of certain elements of diet, of the sanitary conditions of the houses, and of the association with pellagra in the inhabitants. The authors arrived at the following conclusion: "Pellagra spread from a preexisting case as a center in six villages here studied. It was transmitted to new victims only through very short distances, chiefly those immediately associated in the home with the preexisting case of the disease. Frequent use of corn meal as an article of diet was not a factor in the causation of the disease, and there was no evidence that canned goods were involved in its causation. The frequent, even daily, use of fresh meat and eggs offered no relative protection."

Gasoline Explosions.— The internal combustion engine, the motive power of the modern automobile and of motor boats and air craft, derives its power from the explosion of a mixture of gasoline and air. The explosive force is almost equal to that of a charge of gunpowder; in fact, a battery of gasoline engines might properly be called a battery of gasoline guns. A very small quantity of gasoline, if allowed to evaporate, will form an explosive mixture with air, whereas a large can full of gasoline, if opened and lighted before there is opportunity for a mixture of gasoline vapor and air to form, may burn steadily until all is consumed. In the United States, an average of more than twenty persons a week, more than one thousand a year, are killed by exploding gasoline. Every such case, with care and a knowledge of the principles involved, might be prevented. It is always dangerous to have a light or fire in a room where a vessel containing gasoline is opened.

Influence of Fat upon the Digestion of Milk.— An Italian, as the result of a number of digestion experiments, concludes that the presence of fat aids rather than hinders the digestion of milk protein in the stomach.

Effect of Stuffy Air upon the Appetite.— Winslow and Palmer, having noted that vitiated air apparently causes diminished appetite for food, placed in an observation room men and women, who were supplied with fresh air on certain days and on other days no fresh air was supplied, and the products of respiration were allowed to accumulate. The temperature and humidity, however, were so regulated as to be the same on days when the rooms were ventilated as when they were not ventilated. On each experimental day a meal was served to the subjects after they had been in the chamber from two to three hours, the meal consisting of definite weighed amounts of food, and the amount actually eaten was determined. As a result of these experiments, the investigators concluded that there are substances present in the air of unventilated occupied rooms which in some way, and without producing discomfort or detectable symptoms, diminish the appetite for food. It would seem from this that there is at least one good reason why good ventilation is an advantage.

Fraudulent Bladder and Kidney Remedies.— Action against several so-called "kidney cures" has recently been taken under the Food and Drugs Act by the United States Department of Agriculture. In one case the shippers of a preparation labeled "A Sure Cure for Bladder and Kidney Trouble," were prosecuted on the charge of falsely and fraudulently misbranding the product. They pleaded guilty, and were fined $25 and costs by the court. This particular kidney "cure" was found to contain over forty-one per cent of alcohol. It was labeled "Old Jim Fields' Phosphate Dill and Gin; Mankind's Greatest Friend; a Sure Cure for Bladder and Kidney Trouble; It is also a Great Aid in Case of Urinary Trouble. Allenberg & Meister, Sole Agents, Memphis, Tenn." An analysis of the product showed that it contained no material amount of either dill or phosphate. In another case, forty-eight bottles of "Stuart's Buchu and Juniper Compound," prepared by the Stuart Manufacturing Company, Atlanta, Ga., were seized. The court issued a decree of condemnation, forfeiture, and destruction, on the ground that the claims upon the label were misleading, false, and fraudulent. On this label the manufacturers recommended their product as a remedy for a great variety of kidney and bladder diseases, and stated that the medicine contained sixteen per cent alcohol.

Tin in Canned Foods.— Two investigators have reported in a German medical publication results of their investigations. They find that canned vegetables contain traces of tin, and that the amount is larger when the vegetables are left for some time in the can after it has been opened. The authors, however, state that since the dissolved tin forms with the vegetables insoluble substances which are not redissolved by the digestive juices, these small amounts of tin are not injurious to the body.

Oil of Chenopodium.— One physician instances more than 50,000 cases of hookworm disease in the Straits Settlements and surrounding islands, treated with oil of chenopodium with better results than are obtained by the use of oil of thyme, and with no bad aftereffects. The method of administration was as follows: "A liquid diet is given for the evening meal, breakfast is omitted, and 16 minims of the oil of chenopodium are placed on sugar, divided into three equal parts, and given at intervals of one hour. Two hours after the third dose, 17 grams of castor oil and 3 grams of chloroform are administered; but even this may be omitted if thought advisable."

Dangerous Kidney Remedies.— According to the medical experts of the Department of Agriculture, alcohol is a kidney irritant, and is dangerous in many cases of kidney disease. For this reason many physicians advise their patients who suffer from any kind of kidney or bladder trouble to abstain from the use of alcohol even in moderate quantities. Some manufacturers of kidney medicines which contain considerable quantities of alcohol, also advise their customers to abstain from all alcoholic drinks, showing in this way that they know the harmfulness of alcohol in kidney diseases, even though they use it in their own preparations. It is the opinion of the medical experts of the Department of Agriculture that such so-called "kidney remedies" as those recently seized are not only worthless, but actually harmful, because of the amount of alcohol which they contain.

Picric Acid for Burns.— One authority states that picric acid is the most widely used moist dressing for burns. It is best used in a saturated aqueous solution. Its value seems to depend on the fact that it is a powerful antiseptic, and that it coagulates albumin and thus forms a scab over the denuded surface. The method recommended is to apply a number of thicknesses of sterile gauze over the burn, and then to saturate it thoroughly with picric acid solution; cover with oiled silk, and bandage over all. Such a dressing will ordinarily afford prompt relief to pain. Should the pain return, the oiled silk may be removed and the bandage again saturated with the solution. On the third day the dressing may be removed, the vesicles punctured, the bandage reapplied as above, and the procedure repeated every four or five days until the healing is complete. Inasmuch as there is an opportunity for the absorption of picric acid in dangerous quantities, this treatment should not be applied to extensive surfaces except under the instruction of a physician.

Influence of Starch on Infant Digestion. — Southworth, in the *Journal A. M. A.*, some time ago gave the results of clinical experiences from which he draws the inference that with infants suffering from disturbances of digestion and nutrition, the addition of starch not only helps to nourish the infant, but renders the milk more digestible.

Whey in Infant Feeding.— Bosworth and others described in the *American Journal of the Diseases of Children,* feeding experiments with an infant, in which the child received an abundance of fat and sugar and protein, with the addition of variable amounts of whey constituents. The results indicated that a ration composed of pure fat, carbohydrates, and protein needs the addition of substances such as whey salts to promote the growth of the young.

Administration of Bacterial Products by the Mouth.— Dr. Solomon Solis-Cohen of Philadelphia, reports his five years' experience with the administration of bacterial vaccines, including tuberculin, by the mouth. He adds the desired dose to an ounce of saline solution or beef juice, and gives it on an empty stomach at intervals of three to seven days. He regulates the dose by the effects, gradually increasing as the progress of the case may indicate. He obtains as good results as by the hypodermic method, and experiences no digestive disorders.

Dogs as Carriers of Parasites.— The United States Bureau of Animal Industry has published a bulletin in which Dr. M. C. Hall asserts that the destruction of all superfluous dogs, including those whose owners do not keep them at home and in a sanitary condition, would mean the saving annually of hundreds of lives, and of millions of dollars in the wealth of the nation. To allow a dog to lick a child's face or its candy is to subject the child to chances of dangerous parasitic disease. Among the diseases which may be transmitted from the dog to man and to other domestic animals are: rabies (hydrophobia), hydatid (liver abscesses), gid "measles" (of sheep), tapeworm and roundworm in man, and tongue worm in man and stock.

May Become Cancer.— Dr. Dyer gives the following as a list of growths which should be observed with suspicion: All moles or warts which grow in size; all moles which change their color and grow dark brown or black; all small scaling spots which grow thicker and scab or bleed easily; all scaling warts, especially on the lips, the ears, the eyelids, the cheeks, or the hands. He asserts that "perhaps the most frequent excitant of all, so far as skin cancer is concerned, is dandruff. It falls from the scalp and lights on the ear, eyelids, nose, neck, lips, and face, and if there is already a scaling spot, or a thickening, or a wart, a mole, or a gland ready to receive the dandruff scale, it sets this spot alive with activity, and it goes on to form a skin cancer. Probably sixty per cent of skin cancers are due to this cause, and many a cancer has been prevented and may be prevented by curing the dandruff or by preventing it."

Atropine for Seasickness.— Nemrich, in a German medical periodical, reports that atropine is a serviceable remedy in seasickness. If the attack has begun, it may require eight hours for relief, but if given in time it will act as a preventive. The unpleasant effects are dilation of the pupils and dryness of the mouth. There seems to be no tendency to form a drug habit from the use of the drug in this way.

They are Always Careless.— While Josephine Marks, seven years old, was playing in front of her home in Reading, Pa., a careless stranger unwittingly tossed a lighted match into her clothing after he had lighted a cigar. The little girl was soon enveloped in flames, and she received such serious burns that her life was despaired of. The time will come when smoking will be in as little favor as drinking is now, and, like drinking, it will have to go.— *The Pathfinder.*

Federal Quarantine for Port of New York. — The temporary transfer of the quarantine station in New York harbor to the Federal Bureau, by Governor Whitman, will probably be made permanent by act of the New York Legislature. There is no rational argument in favor of ports of entry being in the hands of State quarantine officers, and every argument in favor of this function being federal. The function of all international quarantine stations is to protect not the State but the entire nation from infection from other countries. New York and Baltimore were the last ports remaining under the control of State quarantine officers.

Value of Raw Food.— Dr. Toulouse (French) discusses some of the advantages and disadvantages of raw foods. While salads, radishes, and fruits cause more work to the digestive organs, on account of the cellulose, they afford ferments which greatly aid digestion. Raw food is essential for the preservation of life. When no raw foods are eaten, diseases of the scurvy type are likely to appear, especially in children. The drawback is that with raw food one may be infected with disease germs [and parasites]. Moreover, cooking develops certain flavors which stimulate the secretion of digestive juices. The doctor concludes that eating entirely of raw food is not warranted.

Food Poisoning.— It was once supposed that food poisoning by the products of Bacillus botulinus was confined to users of meat products. But cases of botulism have occurred after using canned vegetables, and laboratory experts have shown that the Bacillus botulinus may grow readily in canned vegetables. This germ is one that grows freely in the absence of air and at a temperature of from 72° to 82° F. It will stand a temperature of 185° for nearly one-half hour; hence the necessity of securing a thorough sterilization of canned vegetables as well as of meats. This is especially true in home canning, for in commercial canning the high temperature employed is more apt to destroy the germs.

Chief Causes of Death.— The United States Census report gives the following as the nine chief causes of death in the registration area: Tuberculosis, 93,421 deaths; heart diseases, 93,142; pneumonia, 83,778; kidney diseases, 65,106; diarrhea and enteritis, 57,080; cancer, 49,928; cerebral hemorrhage, 47,220; diphtheria, 11,920; typhoid fever, 11,323.

Tar in Chronic Moist Eczema.— A German physician advises application of tar preparations to dry up moist eczema. He favors the use of anthracite tar in acetone, applied direct to the affected surface and covered with a thin layer of gauze. No water or soap should be used. The surface will begin to dry in twenty-four hours, and in three or four days a dry crust will have formed. This may be softened by the application of an ointment containing two per cent of salicylic acid. About the seventh day, the scab may be removed with the aid of a bland soap containing an excess of fat.

Pyorrhea. — Observations have shown that long-continued use of emetine is not without bad effects, though the single dose seems to be harmless; and now Barrs (*Medical Review of Reviews*, December, 1915) asserts that the important measure in pyorrhea is the cleansing of the teeth and gums. When emetine or vaccines have been successful, they have been accompanied by energetic cleansing of the teeth and gums of tartar and food remnants; and this cleansing, with the addition of an antiseptic mouth wash, and without the use of emetine or vaccines, is often followed by subsidence of infection.

Concentrated Foods Not Satisfactory.— Professor Jaffa, of Berkeley, Cal., as the result of a series of experiments, takes issue with scientists who assert that the world will eventually subsist entirely on condensed foods. He is convinced that concentrated foods cannot be eaten as a steady diet without serious digestive disturbances. Nutrition might be supplied in this manner, but there must be a certain amount of bulk to the food in order that digestion may proceed properly. Moreover, unless there is a variety in flavors, the appetite will soon fail, and thus digestion will be interfered with.

The Heart of the Athlete.— As quoted by the *Scientific American Supplement* of January 22, Dr. Robert N. Willson, of Philadelphia, in an address before the Medical Society of the State of Pennsylvania, discussing schoolboy competitive athletics, referred to the many deaths in recent years among former athletes, and stated that he knew of no instance of recovery from a major infectious disease in an athlete, except in the typhoid epidemic of Easton, where a number of undergraduates — possibly not then shorn of their resisting forces — had made a successful fight and recovered. He believes that the normal heart will not tolerate insults without loss of recuperative powers, and that latent athletic injuries explain the tendency of the strong and robust to die, while the less powerful win out against infectious disease.

Mexican Typhus.— Reports from Mexico indicate that typhus fever in that country rivals the last year's epidemic in Serbia. In Mexico City, in December, it is reported that there were from thirty to fifty thousand cases. It is possible that this report is an exaggeration.

Permission to Sell Horseflesh.— Beginning January 1, the sale of horseflesh for food was permitted in New York City. The members of the board of health state that though they do not recommend such meat for food, they see no harm in its use by those who choose to eat it.

Emetine Recommended in Typhoid Fever. — Remarkable success has been reported in the use of emetine in the abortion and treatment of typhoid fever. It is claimed that emetine hypodermically given in one-half- to one-grain doses daily will cut short an attack in from three to six days.

Rabies in England.— England, in order to prevent the introduction of rabies into the country, enforces a six months' quarantine on all imported dogs. Recently one of these dogs in quarantine contracted rabies. It was the first case of the disease in the island since 1902, so it is said.

Aeroplanes as Ambulances.— During the retreat from Serbia, the French army utilized aeroplanes to transport a number of wounded soldiers who were just behind the line of retreat, making it impossible to carry them on stretchers to a point of safety. Six aeroplanes accomplished the work successfully.

A Substitute for Mustard Plaster.— In cases where counterirritation is desired, the following is recommended to give immediate action: Make a mixture of equal parts of chloroform, camphor, and sweet oil. Fold a piece of muslin three or four times. Saturate this with the mixture, apply to the skin, and cover with a warm, dry flannel. The skin will blister in three minutes, so it is said.

Bacillus Bulgaricus for Diphtheria.— A prominent physician calls attention to the value of Bacillus bulgaricus as a local remedy to clear up diphtheria organisms from the walls of the throat. Sometimes, after a case of diphtheria has recovered, the germs continue to infest the throat of the patient, who is thus a diphtheria "carrier." The use of an occasional gargle of Bacillus bulgaricus will destroy the remaining diphtheria germs without any ill effects to the patient.

Rabbit Stew from Cats and Dogs.— There has been a rigid investigation by the police and health departments of Bridgeport, Conn., owing to the fact that several catskins were found in the rear of a restaurant, following reports to the police of missing pet cats and dogs. The proprietor of the restaurant could not account for the presence of the catskins. Employees of the Remington Arms Company, as well as policemen, are patrons of this restaurant, and it is said that rabbit stew has been a favorite dish with them.

Treatment of Diphtheria Carriers.— Wherry, in the *Western Medical Review*, January, 1916, gives an account of three diphtheria carriers, with the infection in the tonsils. Treatment with Bacillus bulgaricus, silver nitrate, and even with galvanocautery failed to cause the diphtheria organisms to disappear. In view of the fact that other surgeons have used other agents locally without effect, it would seem that the eradication of the diphtheria germ by medical means is a failure. In the three cases Wherry removed the tonsils, and the condition was at once cured.

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Christiania Health Home, Akersgaden 74, Christiania, Norway.

Friedensau Sanitarium, Friedensau, Post Grabow, Bez. Magdeburg, Cermany.

Kimberley Baths, 7 Cheapside, Kimberley, South Africa.

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Natal Health Institute, 126 Longmarket St., Pietermaritzburg, Natal, South Africa.

River Plate Sanitarium, Diamante, Entre Rios, Argentina, South America.

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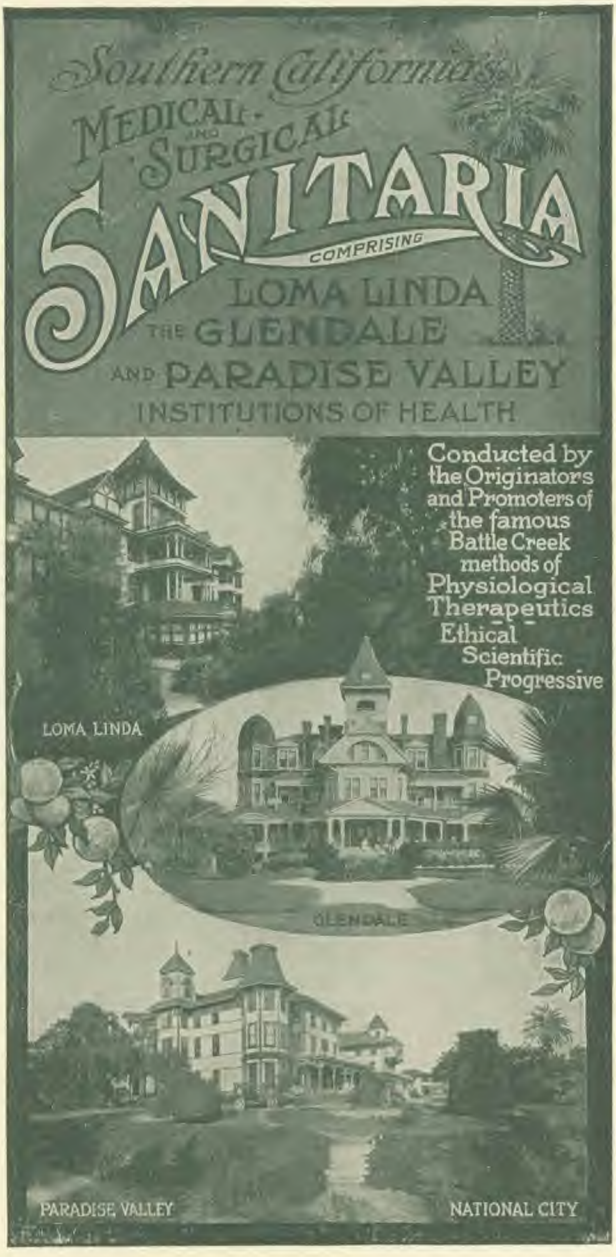

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