Life & Health

THE NATIONAL HEALTH MAGAZINE

February 1916

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SUICIDE AFTER KILLING WIFE

Edward Doran Shoots Self 3 Hours After Murder.

WAS DRINKING HEAVIL[Y]

Borrowed Money With Wh[ich] to Buy Automatic Pistol

DRIVING AUTO WHILE DRUNK

IS CHARGE CHARLES METZCAR FILES AGAINST GEORGE W. TEEGARDEN WHO DRIVES INTO FORMER'S MACHINE, DOING DAMAGE — TELEPHONE POLE CUT OFF BY TEEGARDEN AFTER STRIKING METZCAR.

DRIVER DRUNK, AUTO OVER GRADE

Accident on Blewett Pass Sunday—No Fatalities.

STABBED BY PATIENT, HE FALLS DEAD [A]T OPERATION

FARMER NEAR CITY KILLS HIS WIFE WITH SHOTGUN

In Drunken Rage Because Woman Would Not Heed Commands.

Makes No Attempt to Escape and Shows Keen Remorse.

MINER IS KILLED BY CHARITON MERCHANT

DRUNKEN AUTO DRIVER CRASHES INTO 3 MEN

STRUCK FATAL BLOW IN DRUNKEN QUARREL

MAN INJURED AS TWO CARS CRASH IN ROAD

Owner of Shortsville Automobile Arrested on Charge of Intoxication.

AUTOISTS DRUNK; CRASH OCCURS

SEVERAL HAVE CUTS.

AUTO SMASH; ONE INJURED, ONE ARRESTED

CHATFIELD IS SENTENCED

[I]S INTOXICATED WHEN HE HIT BOY

ALCOHOL'S ACCIDENTS AND CRIMES

Clippings from the dailies

LIFE AND HEALTH

February, 1916

Contents

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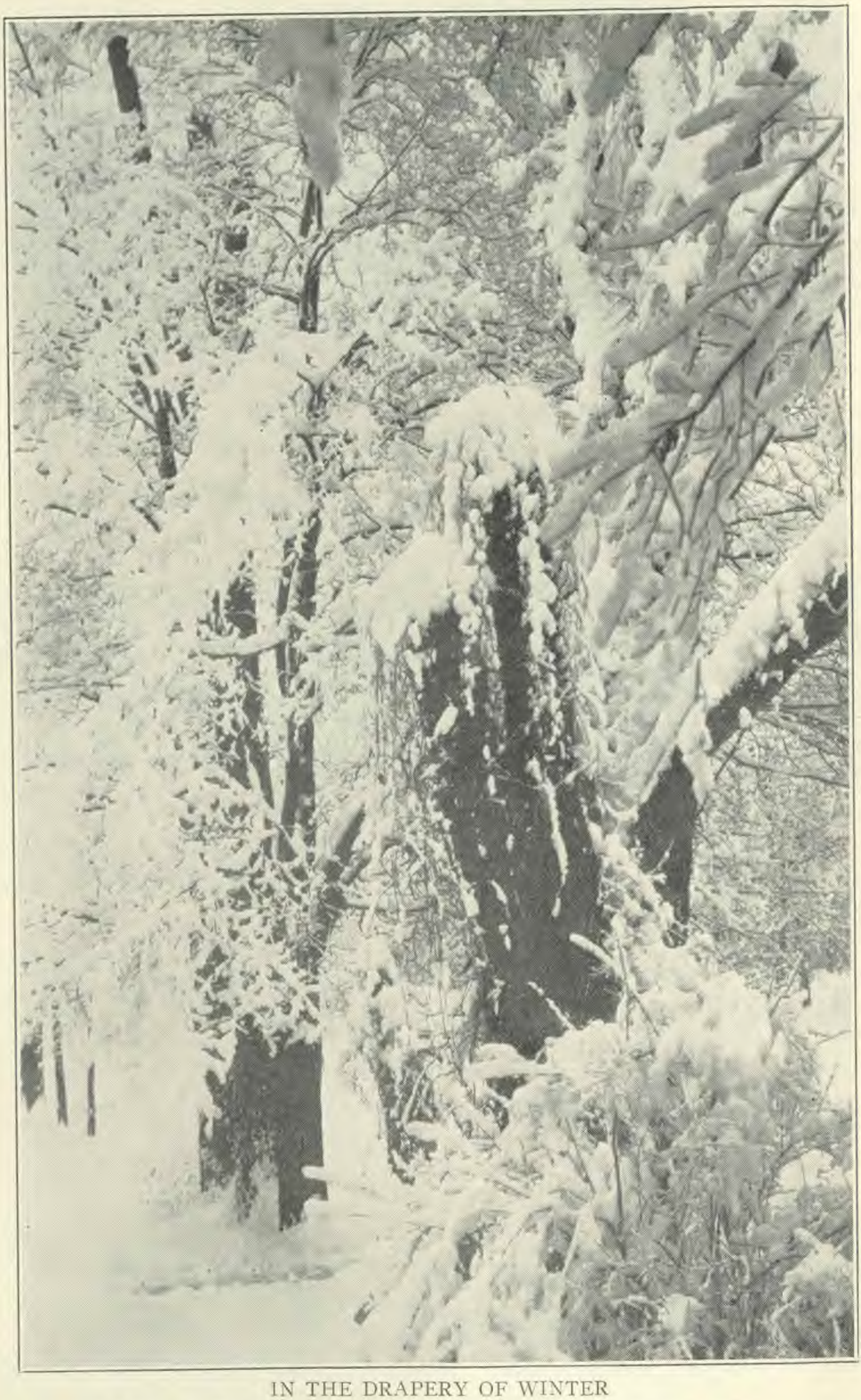

IN THE DRAPERY OF WINTER

A view in South Main Street Park, Rutland, Vt., after a snowstorm.

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Life & Health
THE NATIONAL HEALTH MAGAZINE

FEBRUARY
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

PAIN

PAIN is an unbidden guest, always unwelcome. Sometimes it comes, like a maiden aunt, to make a permanent abode with us, and we, wondering why we should be thus afflicted, seek some escape. Would-be philosophers counsel us to accept it as a curative process, that is, as a friend; and there is doubtless an advantage in thus considering a disagreeable condition which cannot be relieved. If the maiden aunt is to be a permanent inmate of the home, it is best for all concerned if she is made a welcome member of the family. If I must travel through life with an incurable pain, it will be more bearable if I look upon it philosophically as a benefactor. It will be still better if I can become so engrossed in my work as to forget or ignore the pain; for it is possible for one to become so absorbed that for the time all consciousness of the pain vanishes, to return at the completion of the task.

Pain increases or diminishes in accordance with the attention bestowed upon it. Those cults which, by denying the existence of pain, turn the attention away, may remove pain from the consciousness as completely as does an anesthetic. When we see a little child, apparently in agony, suddenly cease crying because of some new interest, and renew the crying when the interest lags, it is natural to suppose that the child is "putting it all on;" but this is not necessarily the case. An adult with a severe toothache may forget it entirely when the house is on fire. Pain is usually more severe at night, when there is nothing else to engage the attention.

There is a great difference in the disposition to bear pain, one person being able to undergo and witness a severe operation on himself without an anesthetic, while another will not submit to the least discomfort. Some persons are silent and self-controlled, even under severe agony; others make an outcry and demonstration under the least provocation. Probably every one can train himself to bear more bravely or to disregard necessary pain.

Now, while pain may be useful in warning us that something is wrong, it in itself is not curative, and in fact, to a certain extent, it retards cure. The use of anesthetics to wounds, by diminishing the pain, is an aid to recovery, provided the anesthetics themselves are not harmful. Abrams tells of abraded surfaces on lips and mucous membranes which resisted treatment for months, and were regarded as malignant, that, is, cancerous. These surfaces, being constantly irritated by caustics and antiseptics, refused to heal until they were protected from irritation by means of a coating of collodion, after which they healed within a few days.

When anesthetics were first introduced, there was a protest against such impiety, for it was thought that pain was an infliction by the Almighty for disciplinary purposes, and that any effort to escape pain was an effort to controvert the will of God. We have got beyond that stage of opinion, but do not yet fully realize that, aside from the warning it may give of danger, pain serves no good purpose, and the more we can do to relieve it, without the use of substances actually injurious, the more we spare the system from useless wrack; and in case of atrocious, excruciating pain, a drug recognized as distinctly injurious may in some cases be the lesser of two evils.

But there are so many physiological ways of relieving pain — by the use of hot or cold applications, or a combination of the two, or by other nondrug processes — that it is rarely necessary to resort to the use of a habit-forming drug. Physicians give more of such drugs than conditions demand, and as a result many persons become habitués, and their last end is worse than the first.

HEALTH AND THE AIR WE LIVE IN

P. Richard Jameson

PURE air is composed of oxygen 21 parts and nitrogen 79 parts, with faint traces of carbon dioxide. When the proportion of carbon dioxide becomes excessive, the air is called " foul," the same as when other offensive gases get in it in too large a proportion.

Oxygen is necessary for life. If we have too little oxygen, great physical distress follows; if too much, a feeling of great exhilaration.

Nature maintains the balance, giving but from three to six parts of carbon dioxide in ten thousand parts of ordinary country air. In cities this proportion is greatly increased, and accounts for the great difference in " town " and " country " air.

Carbon dioxide (carbonic acid gas) consists of one part of carbon and two parts of oxygen, and is best known as the chief poisonous product of respiration. Part of the oxygen which we breathe into the lungs unites with carbon from broken-down tissues. The resulting compound, carbon dioxide, is exhaled with the breath.

Decaying matter, the burning of coal or of gas, the decay of dead animal bodies, and many other things produce this gas.

The temperature of the air we breathe, and the moisture it contains, are of considerable consequence. Air that we exhale is nearly the temperature of the body, and is well-nigh saturated with moisture. It is evident therefore that under normal conditions the act of respiration entails upon the body a loss of heat and water, for the air we inspire is generally cooler than the human body, and comparatively much drier. Breathing, in fact, is a means of regulating the temperature of the body.

Extreme moisture in the air is noticeably oppressive and debilitating, especially on warm days, because the low evaporative power of the very moist atmosphere does not dry up the perspiration thrown off by the body through the skin rapidly enough. This perspiration, or excess of moisture, is nature's effort to reduce its own excessive heat.

With regard to the heat of the body, we can say little. The steady high temperature of a man's frame is still in a great measure a mystery, partly accounted for by the combustion always going on within the frame, but connected with the greatest mystery of all — the life which reigns there.

If the air we breathe is excessive or extreme as regards its humidity or temperature, besides damaging the delicate membranes of the air passages in the lungs, it interferes with the correct functioning of the body, giving additional work elsewhere in its effort to overcome the irregularity.

It is no rare spectacle to see a church or a room in cold weather full of men and women, having every door and window fast shut from dread of the slightest draft. Nervous people are afflicted with an almost morbid horror of moving air, while they are placidly indifferent to poisonous air. This state of things is very strange but very common. To breathe foul, bad, poisonous air, charged with the deadly carbonic acid gas, seriously affects health and energy.

Excessive dryness and excessive moisture have a startling effect upon the lungs and the delicate lining membrane of the air passages. These passages are affected to such an extent that transpiration is impeded, and the tendency to disease developed.

There is a wonderful amount of carelessness among people with regard to fresh air. True, air at every one's command is not always the purest, yet it is a great deal better than none at all.

Windows impossible to open, windows over which creepers have been trained, windows of glass not designed to let in sunlight, windows with transparent, dull,

and dismal pictures on them, are all common sights. Windows are for airing, for ventilation, for the escape of the deadly gases given off by the body, and for life. With a window open we have at least a chance to get some adjustment of humidity in our ridiculous inside manufactured temperature.

But to open the window it is usually too much trouble, or no one thinks of it, or somebody complains of the cold, and the result is the deadly and unhealthful mixture has to be breathed by the unfortunate persons occupying the room.

"Fresh air" demanded by factory inspectors is not supposed to contain over seven parts of carbon dioxide.

A normally healthy person breathes eighteen times a minute, inhaling twenty-five to twenty-eight cubic inches at each breath; this is approximately from fifteen to seventeen cubic feet an hour.

With this a great amount of carbon dioxide is exhaled, and one can easily see that a proper amount of fresh air is necessary to keep the organs of the body in good condition. This end is accomplished when the temperature of the air is normal, if the humidity is right.

There is the whole secret, "If the humidity is right." Air is never perfectly dry. We speak of it at times as "dry air," "very dry air," "damp air," and as "moist air," but these expressions are only comparative. Normal air is never devoid of moisture. The use of the word clearly shows this. If the air were absolutely dry, we should not call it "very dry" any more than we should call a square "very square" instead of simply "square."

When we speak of the air as "very dry," we mean that it approaches more than usual to complete dryness.

Our manufactured climates are "very dry," for the method of heating employed (either hot air shafts or hot water pipes) raises the temperature but lessens the percentage of moisture and leaves us with, roughly, from fifteen to twenty parts of water in the air, instead of about sixty-four parts of water.

So long as we continue to neglect the indoor relative humidity, we shall continue to live in unhygienic surroundings created by any method of heating that is not supplied with means for properly moistening the air.

Steam, hot water, and hot air are beyond criticism if considered from a standpoint of mechanical perfection and their efficiency of heat producing only.

SUGAR MILL, EAST PITTSFORD, VT.

Sugar making is one of Vermont's great industries.

To sum up the whole subject, we are content to live in manufactured temperatures of from 70° to 76° F., with a humidity of 15 to 20 per cent, instead of in a normal temperature of 68°, with a humidity of from 60 to 65 per cent. Nothing else is so frail, so delicate, so wonderful, or so sensitive as our own bodies, and yet we "fool" with them in this manner, and at times have the audacity to wonder why we catch cold, feel cold, feel out of sorts, grumpy, or nervous. We alone are to blame; we need to look to the temperature and to the humidity. It is ridiculous to suppose we can adjust our bodies to a "manufactured climate" without damage. We cannot. The inside climate we demand to live in needs to be as near (comparatively) as possible to that which nature gives us as regards its temperature and humidity.

Why is it that today our rooms at 70° feel warm and comfortable, and tomorrow at 74° decidedly chilly? It is simply a change in the humidity. If we assume 68° or 70° is as warm as a room should ever be allowed to become, why should the outdoor temperature, however low, have an effect on our inside living temperature? It certainly should not; but it is a fact that with an outside temperature of zero and an inside temperature of about 70°, additional "steam" or "hot" air is put on if the temperature *outside* falls! Isn't this most ridiculous when we think it over?

The reason for this chilliness is because the relative humidity is too low in proportion to the temperature.

Moisture in the air is nature's great bed blanket to keep her children warm. Take the "blanket" away, and we all get cold. It is the same as our clothing — it helps us to keep warm.

The slightest motion of overheated air (when it is chilly and dry) causes an immediate search for suggested drafts; but when the temperature and the humidity are correct, most comfortable conditions exist, for the air seems warm and balmy, the feeling of oppressiveness disappears, and an indescribable sense of relaxation and poise takes possession of us.

A VERMONT LUMBER CAMP

This camp, on the top of Mt. Pico, belongs to the Vermont Marble Company.

THE DISEASE OF INTEMPERANCE

Clarence F. Ball, M. D.

This article deals with the physiological rather than with the sociological phase of the temperance question. It considers, not the relation of alcohol to crime, poverty, and feeble-mindedness, but the underlying physiological causes of intemperance. It begins with the cell,[1] and shows the difference between a cell that has been allowed to do its work unhindered by abnormal influence and one that has had to continue its existence under circumstances which tend to its destruction. The article first describes the method by which the smallest single-celled animal lives out its life history normally, taking it as essentially an illustration of the way in which each cell in the human body does its work.

A SINGLE-CELLED organism, in order that it may live and grow, absorbs from the surrounding fluid[2] substances which it can utilize in repair, in growth, and in its other activities. Absorption of these food substances occurs by surface contact only, as the cell rolls around in its nutriment. Having provided itself with a food supply, the cell performs the duties of life imparted to it. Cell activity necessitates tissue waste, and this waste must be cast off at the surface. But if there were no way by which the cell could rid itself of these surrounding waste products, it would soon die. By slow movement from one place to another, it escapes the harmful effects of its waste products. In experimental laboratories, small groups of tissue cells have been kept growing for months in appropriate nutriment, by the simple expedient of washing away the waste products. This washing process has been found to be absolutely necessary to the continued artificial cultivation of living tissue cells. Reproduction is the final act of cellular activity. In this process the tiny cells appear to divide by the formation of a constricting band which cuts them into two equal parts, much as a boy would cut a cake of soap with a string.

In addition to these functions common to single-celled animals, each cell in the human organism bears a certain relation to every other cell in the body. One group of cells cannot carry on its work properly without the cooperation of its associate groups of cells. Injury to one group affects, directly or indirectly, every other group.

Man is composed of millions of various-sized, minute cells, arranged in groups, each group having its own specialized work or function. With the variation in function, there is a variation in the structure or composition of the cells; and there must be some guiding influence that shall at all times keep the structure[3] of each cell constant. This guiding influence has been spoken of by a prominent physiologist as the "habit of growth." "Habit of growth" is the seal of the Master Hand, and remains uninfluenced except when the cell is subjected to a bad environment.

The nutrition of the cell is dependent upon environmental influences; among others, upon the composition of the fluid which bathes the cell. Certain substances, soluble in water or in the fluids of the body, which are very detrimental to cell life, are known as poisons. A

[1] Cell: The structural unit of which all animals and plants are made up. Each cell is a minute particle of living matter capable of taking food, growing, and reproducing other cells. Some minute animals and plants consist of single cells.

[2] All living functions are performed "under water." All living cells are aquatic; in order to live and grow and do their work, they must be in water — not pure water, but water containing substances which the cells can take up as food. Every living cell in animal or plant, and every single-celled animal or plant, unless it is bathed in water, soon dies, or at least ceases activity.

[3] Living matter is made up essentially of a very few elements, but these elements are combined into very complex molecules numbering into the hundreds and thousands of atoms arranged in an almost infinite number of ways. Each kind of cell has its own molecular arrangement. This is what is meant in the article by the "structure" of the cell.

substance to be poisonous to a cell must be capable of entering into composition with one or another of the food elements likely to be of use to the cell, so that, when used, the poison becomes an integral part of the cell, along with the previously normal element. Some poisons kill quickly, others by a slower process. Some may kill if used in too great quantity, but cause permanent chemical change in the cell when used in moderation. Supplying abnormal or poisonous food elements, therefore, either causes the destruction of the cells or permanently impairs their habit of growth and repair.

Food taken into the stomach does not become food to the cells until, through the process of digestion and absorption, it is changed in character and taken into the blood stream. The entire digestive tube is in reality only the outside of the body turned in, with its surface covered with multitudinous secreting glands. These glands produce fluids capable of tearing apart food materials into the tiniest molecules, called by some physiologists "building stones."

The arterial blood stream going to the cells carries the best selection of building materials possible of separation from the food supplied for digestion. The venous blood stream, leaving the tissue cells, washes away the waste products of tissue activity, a process we have already learned is essential to the life of the cell. By this means every cell is simultaneously supplied with nutritive elements and washed of its poisonous waste. In the case of our single-celled illustration, the cell moves to its food supply and away from its cast-off tissue poisons. In man the cell remains stationary, having its food brought to it and its poisonous waste products carried away by the blood.

Cell nutrition being determined by the character of the material brought by the blood stream, is dependent upon the kind of food and drink taken by the individual. The normal environment of the cell is one that supplies a food containing an

CLARENDON GORGE

A winter view near Rutland, Vt.

abundance of all the elements required by the cell, and a minimum of injurious elements. Articles of food taken in response to a perverted appetite are liable to fall short of supplying the natural "building stones" in a proper proportion. Tea and coffee, for instance, not only fail to supply useful building stones, but contain poisonous units to take the place of normal ones. The tissue cells first become overactive in an effort to combat their presence, causing an appearance and sensation of stimulation, which, however, soon gives way to exhaustion, the result of the diminution of normal food materials and the substitution of poisonous units. It cannot be successfully denied that tea, coffee, and highly seasoned foods have created a tendency toward tissue cell deterioration; they not only fail to supply the proper kind of building stones, but they tend to produce building stones that enter into cellular construction as an abnormal and more or less poisonous element. The tissue cells attempt to discard these faulty food units, and, if possible, to make substitution; but usually with more or less permanent deterioration of the cells.

Alcohol and the narcotic drugs produce a much more pronounced effect; but can it be said that the tendency to their use has not been materially increased by the damaging effects produced by the use of tea, coffee, and highly seasoned foods? Some may think that there is no relation, but the fact remains indisputable that tea and coffee are daily wrecking the lives of thousands; and this deterioration of cell habit is being transmitted from parents to children, manifesting itself in an increased appetite for alcohol and narcotics, in criminality, feeble-mindedness, etc.

What is said relative to the use of tea and coffee applies with equal force to the promiscuous use of patent medicines, and to the much-advertised soda fountain drink whose name suggests that it contains coca and cola, but whose stimulating ingredient is the poisonous principle of tea and coffee. These are all injurious in the same way, and no thinking individual should countenance their use. No positive advance can be made in the attack against intemperance until the campaign against alcohol is broadened to include other deleterious habits of eating and drinking.

LOGGING OPERATIONS

Winter industry on the top of Mt. Pico, Vt.

Nature provided the best of all drinks in a free water supply, for the direct purpose of washing away the cell waste as the blood bathes each cell. A portion of the water in the blood is eliminated with the poisonous elements, and must be replaced at frequent intervals. No other fluid can take its place. Water may not always meet the demands of a perverted taste, but it is the only liquid that keeps the cells washed of their poisonous waste products.

Intemperance, then, is a disease, the direct result of the use of unnatural food materials, and consists in the abnormal working of the cells, and in depraved habits of cell growth and repair. Continuance in such digressions not only alters permanently the individual habits of the cells, but causes them to transmit peculiarities to their offspring,[4] thus lowering the quality of the next generation, and giving it a tendency to continue the process of degeneration. Intemperance is a disordered habit of cell growth and nutrition, of which alcoholism is only one form. "The first drink," we are told, leads to drunkenness; but back of that first drink there is already a cell deterioration that makes that first drink fatal.

[4] It has been definitely shown that germinal cells may be injured by poisons, so as to cause the hereditary transmission of acquired defects.

LUMBERING, CHITTENDEN, VT.

The portable mill on the sled is being drawn to a new location.

THE KING OF WINTER SPORTS

Hal Ross

WHEN Jack Frost puts his glittering seal on the ponds and lakes, and hides the flow of rivulet and river beneath translucent masks, and decks hedgerow and forest growth with crystals of fairy luster, then it is that there awakens the vigorous play instinct that is to be found in the nature of every normal man and woman, and sports on the ice are among the results thereof.

Both picturesque and healthful are the majority of these sports. The skater, gliding and circling like a swallow; the ice boat, literally swifter than the wind, that skims as a thing of winged life across the frozen surfaces; the unceasing activity of hockey players; the curlers, with the waving brooms and speeding "stones," have in turn that which attracts the eye while stimulating the imagination. Men and women of vitality and red blood seem to have taxed their ingenuity in inventing cold weather recreations that set the blood circulating, the cheeks glowing, and the spirits bounding. And that they have succeeded in their endeavors, let the long list of such sports attest.

But skating has been well called "the king of winter sports," and seems to be entitled to the honor, for picturesque and hygienic reasons. It calls for nothing in the way of preparation except suitable dress and the "flying steels." It appeals to the tyro who is satisfied to keep his feet and make a little progress, as much as it does to the master of all sorts and descriptions of fancy figures. It does not matter whether you can't do much more than keep your feet and steer a straight course, or whether you are a master of inside and outside and Dutch rolls, figures of eight or spread eagles, and all the rest of the repertoire of the finished skater. It doesn't count a jot whether you are the proud possessor of your first pair of skates, or whether your steels have borne you over the ice of many winters that have left their frost in your hair; it is of no consequence whether you are a boy or a man, a maid or a matron. All there is to it is this: if you have once tasted the delights of skating, you will never forget them; and while the sport itself will quicken the brain and body, its memories will wholesomely thrill you at all times.

WINTER'S MOST INVIGORATING EXERCISE

But there is an important tendency on the part of many, including even those who fully appreciate the pleasure and profit to be gained in life outdoors, to regard the winter season as a period of enforced idleness, and of consequent confinement within four walls. Any one who has ever experienced the keen joy of active exercise in the crisp, oxygen-laden atmosphere, to be enjoyed only on the clear, cold, and invigorating days of midwinter, knows that this season presents greater opportunity of storing up physical and mental energy than any other time of year. And this point is well worth remembering.

However, during the past few winters a great revival has been apparent in the

KILLINGTON ROAD

A snow scene near Mt. Killington, Vt.

fascinating sport of skating. A number of clubs have been formed, instructors engaged, and a deep interest awakened in the science of the sport. This is due largely to the fact that America is gradually developing into an athletic nation, where men and women are learning that indoor work must be offset by wholesome outdoor play. Despite a great indifference shown in this sort of thing, we have begun to appreciate what it means to feel well — to be tingling all over with health produced by judicious exercise in the fresh air.

And there is no more invigorating sport than skating. It must necessarily be cultivated in the cold, bracing atmosphere where rapid movement and deep breathing are necessary to produce warmth. It exercises every muscle in the body and requires deep concentration if real proficiency is to be attained. Herein lies its great value, in that the actions can never become mechanical. The skater must have a clearly definite idea of just what he is going to execute, and what movements it will be necessary for him to go through before he can accomplish it. All physical directors agree that heavy, regular gymnasium work is never so advantageous as exercise which demands brain as well as muscular activity. Skating cultivates concentration, determination, and will power, as well as muscle, and therefore produces very desirable results from the viewpoint of physical welfare.

It is not practical to provide through the printed page any short cut to the mastery of the fundamental principles of skating. Nothing but experience will enable the tyro to pass successfully through the stages of first learning to stand securely on the keen edges of his skates, later to move about and slowly but surely acquire confidence, and finally to speed swiftly and smoothly over the ice in a manner which as nearly approaches the flight of the birds of the air as it is the fortune of most men and women to attain. It goes without saying that the sport is much more readily mastered under a competent instructor, or with the assistance of a friend who is a finished skater, than is possible when alone.

Rather than lay down impracticable rules for those who seek to become pro-

ficient skaters, it is the purpose of this article to point out the pleasures and benefits to be derived from pursuing this sport. Those who are interested should find no trouble in skating, as it is within the reach of nearly every one who possesses the desire to learn.

And now, in conclusion, I wish to state why I think skating is the king of winter sports. All physical directors and instructors repeatedly emphasize the fact that if the "play element" be eliminated from an exercise, the latter is useless, or nearly so, as far as its power of working good is concerned. Conversely, it would seem that the more a recreation is charged with the quality in question, the more beneficial it becomes. This being so, it follows that skating must be an ideal recreation, for it is a mixture of fun and exercise from beginning to end — including the falls and bumps that everybody must expect, even the experts. Flying, they say, is the poetry of motion. But, with due deference to the maxim, it would seem that skating is entitled to the term. For is not the gliding, swooping, curving grace of the expert with the steels a sonnet, a lyric, an idyl of movement?

Boston Photo News Co., Boston, Mass.

A TRAINLOAD OF WAR ORPHANS

The train has just arrived at Lyons, where the children are cared for at the expense of the French government.

THE TEETH OF SCHOOL CHILDREN

Edward F. Brown

The New York Association for Improving the Condition of the Poor has a Bureau of Welfare of School Children. At the head of this bureau is Edward F. Brown, who prepared a paper for the New York State Department of Health on "The Care and Preservation of the Teeth of School Children," which appeared in the monthly bulletin *Health News*. An abbreviation of this paper follows.

THE most common and one of the most serious of the physical defects developed by modern man is decayed teeth. The menace of a filthy or diseased mouth cavity is not merely that it renders the teeth incapable of performing their appointed function properly, but that a general devitalizing effect on the whole system is produced, which may culminate in serious physical and mental disturbances. Irreparable injury to the child may result from the lack of care of the teeth.

A Popular Fallacy Regarding the First Teeth

The first teeth require attention, as do the permanent teeth. There is an unfortunate popular conception that inasmuch as the primary dentition is temporary, little care is necessary. Aching first teeth have on this principle been prematurely and imperfectly extracted, resulting often in the irregular eruption of second molars. This abnormal development impairs the vitality and efficiency of the permanent teeth, while their uneven protrusion causes curious malformations of the jaw and face. This uneven formation of the teeth offers excellent opportunities for the lodgment of food in inaccessible recesses of the mouth, exposing the teeth to rapid decay.

Causes of Dental Decay

When food is hard, the teeth are automatically cleaned by contact with it. The consumption of fibrous food, thoroughly chewed, should therefore be encouraged. We have abandoned many of the hard foods for mushy materials which require no action by the teeth and give them no exercise. These soft, nonfibrous foods leave the surfaces of the teeth thick with food débris, which, when fermentation sets in, causes decay unless effectively washed away.

The three essentials to prevent dental decay are a properly constructed toothbrush, dental floss, and an antiseptic mouth wash. The toothbrush will cleanse bacterial masses from the surface of the tooth; the dental floss serves to dislodge food deposits from between the teeth, where a toothbrush is of no avail; while the mouth wash is a useful precaution against infection. Of these three, the toothbrush is the best known and the worst managed, while the floss silk is the least known, in spite of its essential importance as a defense against tooth decay. Cleansing of the teeth requires not merely the removal of bacterial deposits from the outer surface of the teeth, but the toothbrush should cover the three sides of the teeth which are sufficiently

clear for toothbrush action, while the dental floss reaches the two sides between the teeth.

The Menace of Dental Decay

Indescribable pain, resulting frequently in mental disturbances and facial neuralgias, is caused by the exposure of the pulps through cavities. This condition invites dento-alveolar abscesses, which may result in blood poisoning, serious anemia, and even in death. Indigestion can often be traced to the bolting of food made necessary by a diseased condition of teeth and the consequent inability to masticate properly. A malnourished body which is the result of defective teeth becomes a magnet for such diseases as overcome weakened systems. Chief among these is tuberculosis. Stomatitis, or inflammation of the mucous membrane of the mouth, is frequently the result of unhygienic mouths. Pharyngitis, an inflammation of the rear of the throat, may be due to infection from the mouth, and is often associated with decayed teeth.

Education and Health

The child who suffers from aching teeth cannot concentrate on its lessons. The absences due to a subnormal condition of health affect school progress. Retardation makes it necessary to appropriate money to reeducate the backward! The inability to move on with the class in normal progress often destroys self-confidence, causing the child, discouraged and disheartened, to leave school unprepared to meet the stern realities of life. Even though school work is attacked with the greatest seriousness, it cannot yield the results which it would if the child were not suffering from diseased teeth or other physical defects.

Health and Social Competency

Industrial inefficiency frequently results from physical incompetency. The ills traceable to diseased teeth represent many days away from work. These lapses in production are sometimes the determining factor in a man's becoming dependent.

Boston Photo News Co., Boston, Mass.

CRIPPLES RESTORED TO FORMER OCCUPATIONS

This illustration shows an engraver, blinded in battle, who is again busy at his former trade.

DIET AND THE BLOOD PRESSURE

In a paper read before the College of Physicians of Philadelphia, May 5, 1915 (*Journal A. M. A.*, Sept. 25, 1915), Dr. W. attributed to the diet, especially to overeating, the changes which take place in the heart and blood vessels ("cardiovascular disease"), and which bring on an early old age and shorten life. His attention being called to the relation between diet and blood pressure by his own personal experience, he made the matter a study in the case of others, and gives the results of his observations in his paper, from which the following paragraphs are selected for the readers of LIFE AND HEALTH.

THE decomposition food products are at work from childhood to old age. Together with tobacco, they constitute, I believe, the chief underlying and causal factors in the production of the arterial changes and the hypertension which contribute so actively to the cardiac disease of later years. In babyhood the main influence in their production is usually an oversupply, less often today an unclean or improper form of food. This factor of gross overfeeding and consequent gastrointestinal decomposition is operative, as a rule, throughout childhood and well past puberty. Occasionally it is continued through life. It exerts two influences on the heart, one toxic, the other mechanical.

Beginning with the child's admission to the general diet of the family table, enters still more forcefully the factor of indigestible food, not infrequently taken in unreasonable excess. We all eat too much for our individual needs; we all indulge in many things better calculated to disturb than to further nutrition, and most of us send them on their way toward the stomach and the bowel very imperfectly prepared for assimilation. As a direct result, whether babies or adult working units or old men and women, we have at all times within us digestive tubes much more foul than they should be, from which we absorb the poisonous end products of not only an excess, and of improper pabulum, but also of the altogether suitable foods.

The popular present-day name for this condition is intestinal stasis, and the surgeons are manifesting a cordial interest in Jackson's membranes, Lane's kinks, and similar obstructions as its cause. Our grandparents knew better, and though they stuffed the grandchildren from the breast to puberty, "too much food" was their lay diagnosis, and castor oil their very rational and effective cure. I think it fair to assume that a timely and intelligent and persistent use of the same regimen would relieve by prevention, if not cure, very many of the conditions diagnosed as Lane's kinks today. . . .

I have just finished a nine months' study of a giant tomcat, in which were noted on a single meal per diem a normal pulse rate of about 100, a single formed stool, and an apparently well, lazy, affectionate cat. On two daily meals (one of milk, one of mixed food from the table) the cat ran a distinctly angry cardiac action and rate of about 120, its stools numbered two and three and were exceedingly offensive, and the cat was evidently irritable and ugly when disturbed. On three meals daily, two of them containing a small quantity of meat, the stools became numerous and diarrheic in character, and occasional blood streaking could be noted, the animal manifestly suffering from an intestinal inflammation secondary to the decomposition of food in excess. The cardiac action averaged from 120 to 130. . . .

This series of experiments was carried out repeatedly on various kinds of foods, with identical results in all instances. The excess of animal proteins would poison the animal more promptly than a strictly vegetable diet, but the main factor was manifestly the excess of supply, and not the kind furnished. . . .

I have questioned many intelligent and observant physicians and laymen, and find that my experience [blood pressure symptoms and intestinal decomposition as a result of a slight excess of food at supper] is not an isolated one by any means. As with the cat, the idiosyncrasy is not one of particular classes of foodstuffs. It is usually one of quantity and excess, though I learned long ago that a number of the fruits and vegetables which Mendel and other laboratory authorities believe are fully assimilated as basal and alkaline products, are toxic for me; and as regularly as I venture to use them, just so surely they produce in me an acid toxemia within an hour or two of their ingestion. . . .

It is remarkable how completely incapacitated an individual may be who has ineffectually emptied the rectum and possibly the sigmoid, whereas higher up in the large bowel or in the coils of the small intestine some particle of food is undergoing decomposition, and meanwhile is filling not only the intestine but also the blood and lymph circulations with poisonous gases. These may be retained in the bowel for hours, especially at night, slowly filtering into the blood. Meanwhile the patient suffers all the symptoms of a toxemia and of mechanical discomfort combined. . . .

I have already mentioned my personal experience with certain nonprotein foods, among them the highly acid vegetables, such as tomatoes and rhubarb, and also such fruits as the apple, orange, lemon, peach, and strawberry, and the cantaloupe as perhaps the worst offender of all in producing an identical picture with that which follows either a protein excess or an overindulgence in any kind of food. Shellfish, unless used in the strictest moderation, will also produce toxic effects. . . .

I believe most thoroughly, as the outcome of many experiences such as I have described in myself and others, that when we begin to look to the gastrointestinal tube and its misuse for the origin and cause of hypertension, arteriosclerosis, the myocardial degenerations, and now and again hypotension, just so soon shall we comprehend the fundamental factors inducing premature old age.

WINTER SPORT ON A HARTFORD, CONN., PLAYGROUND

HOME COOKING SCHOOL

FOOD COMBINATIONS

George E. Cornforth

WE consider the combination of foods for two purposes. One, that we may eat at the same meal only foods that digest well together; the other, that we combine foods in such a way as to supply all the needed elements in about the right proportion.

Foods that digest well together are: —

Grains and fruits
Grains and vegetables
Grains and nuts
Grains and milk
Grains and eggs
Grains, fruits, and nuts
Grains, vegetables, and nuts

Foods that do not digest well together are: —

Fruits and coarse vegetables
Milk and sugar in large quantities
Mush and milk and sugar
Foods cooked in fat

A fair combination is milk and fruit.

To combine foods in such a way as to supply all the needed elements, we should choose something from each of the different classes of food elements; that is, some foods supplying building material, some supplying fat, some supplying starch and sugar, and be sure that there is included among these, foods that supply cellulose and mineral elements.

I will write down some poor meals and tell why they are poor meals, that we may understand the more forcibly, by contrast, what a good meal is.

Unbalanced or One-Sided Meals

NO. 1

Lentil Soup
Baked Beans
Cottage Cheese
Custard Pie
Milk

Such a meal would contain too much building food. It is too concentrated. It contains too little bulk and cellulose.

NO. 2

Boiled Rice
Potatoes
Macaroni
White Bread
Butter
Cake

Such a meal would be made up too largely of warmth-and-work food. It lacks building food and bulk and mineral elements.

NO. 3

Vegetable Soup
Carrots
String Beans
Lettuce
Tomatoes
Strawberries and Cream

Such a meal would contain too little building food and too little warmth-and-work food. It is too bulky. It is lacking in nourishment. It also has the bad combination of fruits and vegetables.

Now, to make balanced meals, it would only be necessary to choose something from each of these poor meals. And it is not necessary to choose a large variety in order to supply all the needs of the body. For instance, a breakfast consisting only of oatmeal, milk, and prunes would contain everything a balanced meal needs to contain. The oatmeal and milk would supply the building food. The oatmeal would supply the starch. The milk would supply the fat. The milk and prunes would supply the sugar. The starch, sugar, and fat are the the warmth-and-work foods. The prunes would supply the bulk. The milk and

oatmeal would supply the calcium and phosphorus. The prunes would supply the iron and potassium. The oatmeal would supply the magnesium.

That the reader may see what exactly balanced meals are like, I will write out meals for one day for a medium-sized person at sedentary work. Such a person would require about 2,100 calories of food. Ten per cent of this, or 210 calories, should be building food; twenty-five to thirty per cent, or 525 to 630 calories, should be fat, and the rest carbohydrate, or warmth-and-work food. We will let the dinner contain one half of this, the breakfast one third, and the supper the rest. Then, observing what an exactly balanced meal is like, a person can make other meals, imitating it, that will be sufficiently well-balanced for all practical purposes.

Lest some of the readers should fail to understand the purpose of my giving these balanced meals in figures, I would state that I should not advise being so careful as to go to all the trouble of figuring out the calorific value of every meal eaten. I am only giving these meals in this way that the reader may see what exactly balanced meals are like, and how nearly, perhaps, they are like the meals he is in the habit of eating.

Since one ounce of protein, starch, or sugar produces 116 calories, and one ounce of fat produces 264 calories, the calorific value of foods can be figured from a table of percentage composition of foods,[1] by multiplying the protein and carbohydrate by 1.16, and the fat by 2.64. This will give the number of calories of protein, fat, and carbohydrate which one ounce of the food yields. By adding these together, we obtain the total number of calories yielded by one ounce of the food. In previous lessons on foods we have given the food value of the food under discussion, in calories per ounce.

[1] Bulletin 28, U. S. Department of Agriculture. Sent for five cents coin if ordered from the Superintendent of Documents, Washington, D. C.

Balanced Breakfast, Dinner, and Supper

BREAKFAST

	PRO.	FAT	CAR.	TOT'L
1 ordinary serving of oatmeal, 4½ ounces	14	5	57	76
About ⅓ cup cream, 2½ ounces	6	110	12	128
1 egg	26	53		79
1 medium baked potato, 3 ounces	10	1	86	97
2 slices Graham bread, 2 ounces	20	10	122	152
2 apples, 8 ounces	4	10	132	146
	80	189	409	678

DINNER

	PRO.	FAT	CAR.	TOT'L
1 good-sized serving baked beans, 8 ounces	50	41	137	228
1 large baked potato, 4 ounces	13	2	113	128
4 slices bread, 4 ounces	40	20	244	304
Butter, ½ ounce	1	113		114
Fresh tomato, 5 ounces	5	55	25	35
Apple pie, 3⅛ ounces	13	81	156	250
	122	262	675	1059

SUPPER

	PRO.	FAT	CAR.	TOT'L
2 slices Graham bread, 2 ounces	20	10	122	152
Butter ¼ ounce	0.5	56.5		57
1 glass grape juice, 6½ ounces			154	154
	20.5	66.5	276	363

TOTAL

	PRO.	FAT	CAR.	TOT'L
Breakfast	80	189	409	678
Dinner	122	262	675	1059
Supper	20.5	66.5	276	363
	222.5	517.5	1360	2100

It will be noticed that the breakfast has more protein than is necessary,— that is, more than ten per cent,— even though only one egg is used in the meal. And it has more than enough fat, more than twenty-five per cent, though no butter is included. The dinner also has a little larger proportion of protein than is needed, though it includes no meat, milk, or eggs. Because breakfast and dinner contain so much protein, it is necessary that supper consist of foods low in protein, that the total may not be much too high in protein. With such a supper, the total adds up with a slight excess of protein. The cellulose is supplied in these meals by the fruits, vegetables, oatmeal,

and Graham bread, and all the foods supply mineral elements. If desired, the butter could be replaced by an equal weight of olive oil or nuts, or by three and one-half times the weight of the butter in ripe olives.

We will give another set of breakfast, dinner, and supper menus, equally well balanced, but will omit the figures.

BREAKFAST

1 fresh peach, 4 ounces
Corn flakes, ¾ ounces (1 dish)
Cream, 2½ ounces
2 whole-wheat puffs, 3¼ ounces
1 glass milk, 6½ ounces
1 dish apple sauce, 3½ ounces

DINNER

Bean soup, 4¾ ounces
Pine nuts, 1 ounce
Mashed sweet potatoes, 3½ ounces
Spinach, 3 ounces
Stewed corn, 2¾ ounces
Bread, 2 ounces
Date pudding, 2½ ounces

SUPPER

Stewed figs, 2 ounces
1 pear, 4 ounces
1 glass apple juice, 6 ounces

This breakfast needs no butter, on account of the cream and milk it includes, and the dinner needs no butter, on account of the pine nuts. And the breakfast and dinner include enough protein and fat for the whole day, so that in order to avoid having the total for the day include too much fat and protein, I have made up the supper entirely of fruit.

That the reader may see what a balanced meal of fruits, grains, and nuts is like, I would write down the following dinner, which includes 1,050 calories, of which 114 are protein and 251 fat: —

6 slices bread, 6 ounces
About 5 walnut meats, 1 ounce
About 1 teaspoon pine nuts, ¼ ounce
A little less than one-half package of raisins, 6 ounces

A balanced meal of fruits and nuts alone consists of —

1¾ ounces pine nuts
7 ounces raisins

This meal contains 1,050 calories, of which 102, or about ten per cent, are protein, and 315, or exactly thirty per cent, are fat.

Another approximately well-balanced meal would be —

Split pea soup
Macaroni and cottage cheese
Mashed potatoes
Tomatoes
Bread and butter
Pineapple tapioca

It is designed to follow these lessons that have given fundamental facts about foods — the first thing taught in a series of lessons in cooking — by a series of lessons such as would be given in a cooking school, so that, by following the instructions and directions given, one may have a cooking school at home. These will be lessons, however, not merely in *cooking*, but in the *healthful* preparation of food,— lessons in the preparation of food so that it will be *wholesome* as well as appetizing. It is coming to be recognized more and more that there is a very close relation between diet and health, diet and efficiency, and diet and morals. It has been said, "The soul that would soar has often been fettered by a pork-and-pancake-fed body." It has also been well said, "The woman who thoughtfully selects proper food and drink for husband, father, brother, or little ones, exerts a far-reaching influence toward clean thinking and successful achievement."

And because these will be lessons in healthful cookery, there will be no use made in them of certain substances sometimes called "food adjuncts," that are usually spoken of in connection with the food elements. I mean spices and condiments. These are not foods. They are not nutritious, they do the body no good, but do their little part, along with many other things, in bringing about old age and the early breaking down of the vital organs. A Paris physician has shown that the acid of vinegar is twice as active as alcohol in producing degeneration of the arteries; and pepper, six times.

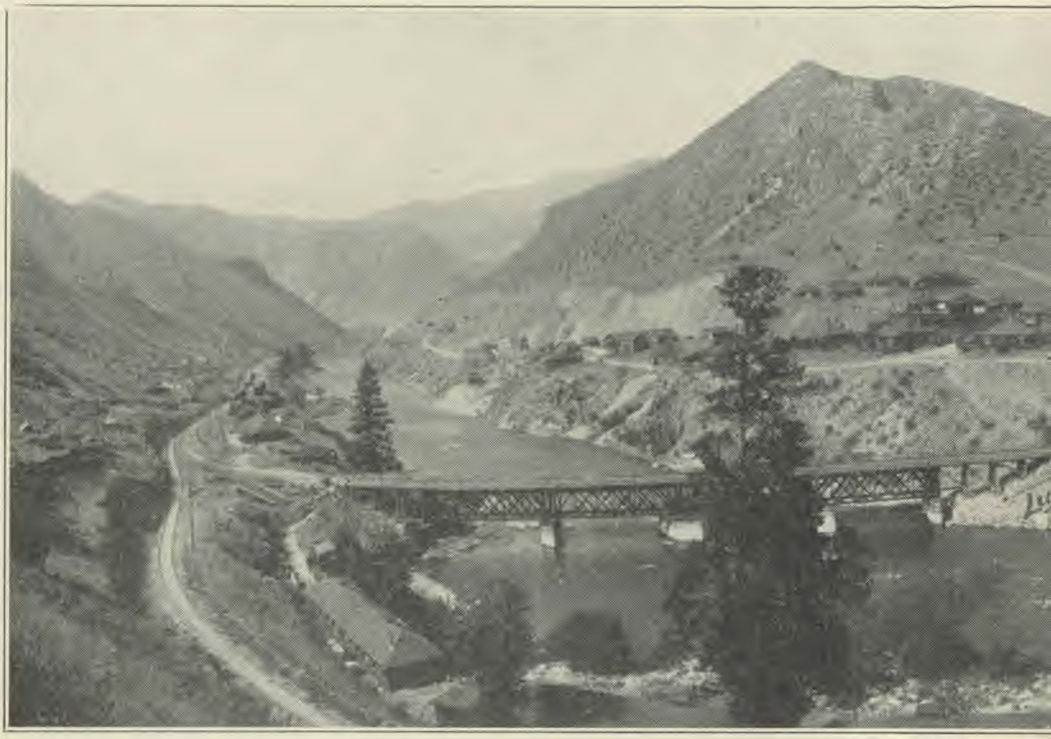
People who eat an abundance of fruit generally find that they do not crave con-

diments and spices. These seem to harmonize better with a flesh diet. And, really, it does seem that something of that kind would be required to cover up or disguise the taste of dead flesh, or oysters, lobsters, crabs, and other such things.

Some little time ago I attended a class for the general public at a cooking school, at which a meal was prepared, designed to teach those present how to prepare what is considered by the best people at the present time to be a good meal. Black pepper and red pepper were used freely in the hearty foods, of which there were three different kinds. And such mixtures! The salad contained one kind of liquor, and the dessert two kinds. After the sample dinner was prepared, the foods were passed around to be sampled, and there was not a single thing in the whole meal that I would put into my mouth. I could not help thinking that the very first place a person would want to get to, after eating such a meal, would be a liquor saloon. I am sure that many mothers are, by the food they are preparing, creating in their children an appetite for liquor and tobacco that will lead them into drunkards' graves. I once heard a minister say that he contracted the tobacco habit when he was seven years old, and that his first chew of tobacco was the sweetest morsel he ever tasted. He attributed his early tobacco appetite to the fact that his mother was a *good* cook, as cooks are usually judged, and had on the table everything that was supposed to make food taste good. Of course, that man had a tremendous struggle, in later life, to get rid of the tobacco habit, and he attributed his emancipation from slavery to the tobacco habit to the grace of God alone.

I believe that food may be prepared in such a way that it will be an aid to us in becoming fit subjects of the kingdom of heaven, rather than lead us into the snares of Satan. And the preparation of food with the health of body, mind, and soul in view, is what we purpose to teach in the lessons that will follow.

DANIEL FROHMAN AND OTIS SKINNER IN A CHALMERS SIX-FORTY ROADSTER



PANORAMIC V

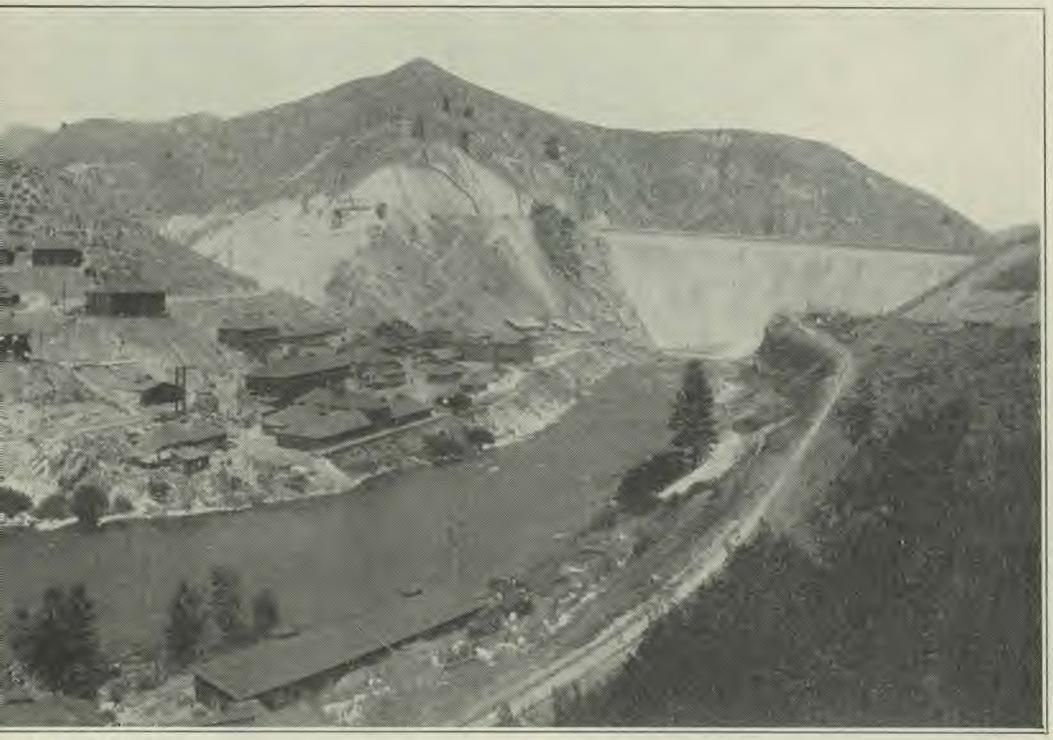
A section of the canyon of the Boise River. The dam is on the right. The camp is down the

SANITATION OF THE ARROWROCK DAM

M. F. Cunningham

ALTHOUGH for four and one-half years the government town of Arrowrock was maintained twenty miles above Boise, Idaho, while construction of the great Arrowrock Dam, the highest dam in the world, was in progress by the United States Reclamation Service, there was not a death from contagious disease. This is a remarkable fact, say health experts, when it is considered that during all that time there were approximately 20,000 men employed. Arrowrock camp had a maximum population of 1,500. But completion of the dam now finds it vanished, like the Arab and his tent. The government has about finished its work there, and the buildings erected to house the superintendents, mechanics, and laborers have been razed and salvaged. What was once a magnetic scene of activity, as men, divided into three shifts, performed the work of wedging a massive, concrete, arch-shaped structure between cañon walls a mile high, across the Boise River channel, blocking the flow of that stream into a reservoir eighteen miles long, is no more. Today the dam stands 348.5 feet above a bed rock of granite to which it is anchored ninety-one feet below the river bed. Impounded back of it is enough water to flood the entire city of New York and its suburbs with a foot of water.

All through work on the dam, both in the excavating for it and on and about its sides as it started to rise above the base, the loss of life was comparatively small during the four years required to build it. Less than a dozen government employees were killed. The government exercised all care possible to safeguard



F ARROWROCK
m the dam. It is regarded as the most sanitary camp ever established by the federal government.

those employed in actual construction, as well as those in the camp or town of Arrowrock itself.

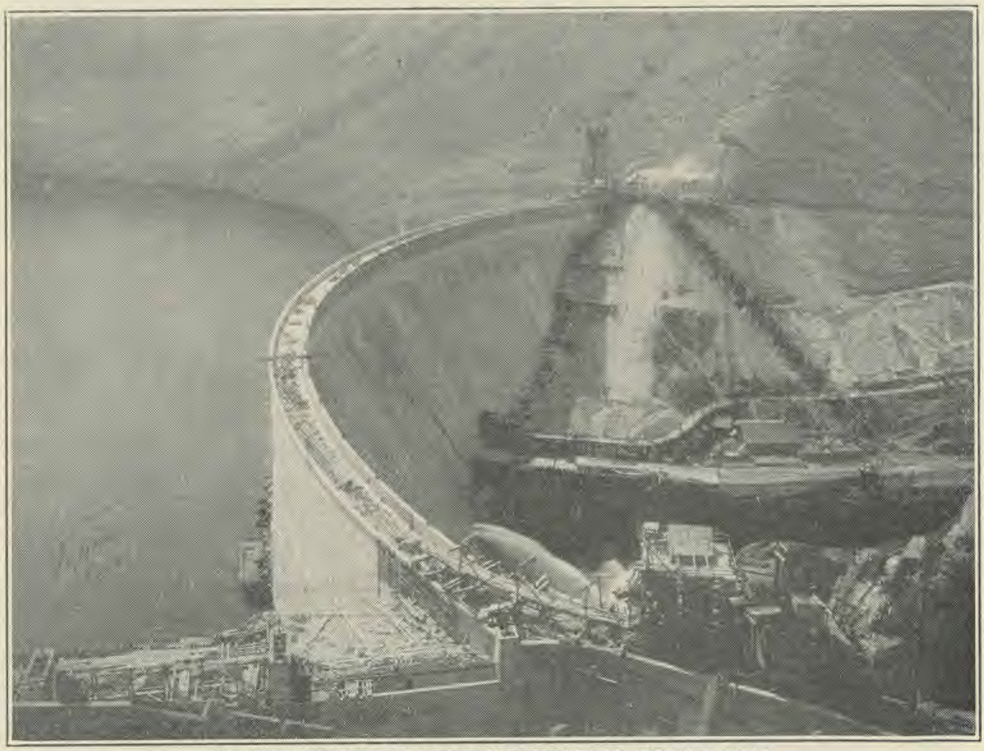
All men before being employed were given a brief physical examination by the resident physician, to determine their physical fitness for the work and to eliminate undesirables. Whenever doubt existed as to a man's condition, a more complete examination was made. A well-equipped hospital was maintained, and a competent physician was on duty to care for cases of sickness or injury. The resident physician was also the chief sanitary officer, and the camp foreman carried out his instructions in all matters pertaining to sanitary conditions or general prophylactic measures.

The maintenance of all camp buildings and grounds in a neat and sanitary condition, was carried out under direction of the camp foreman. All bunk houses, dormitories, and other buildings were swept and cleaned every day by the janitors and camp men. These buildings were scrubbed out about every two weeks, and the bunk houses and dormitories, including the springs and mattresses, were fumigated by spraying with a liquid disinfectant about once in two or three weeks. At frequent intervals all sleeping quarters were fumigated by burning sulphur.[1]

Outside of the main camp were two hundred or more private residences erected by foremen, mechanics, and laborers. In order that the general health and sanitary conditions of the whole community might be kept up to standard, health rules were enforced on all private residences as well. Air-tight metal garbage cans were provided about the camp and the residences. All garbage was deposited in them, collected every few days, and burned. The mess-house refuse was

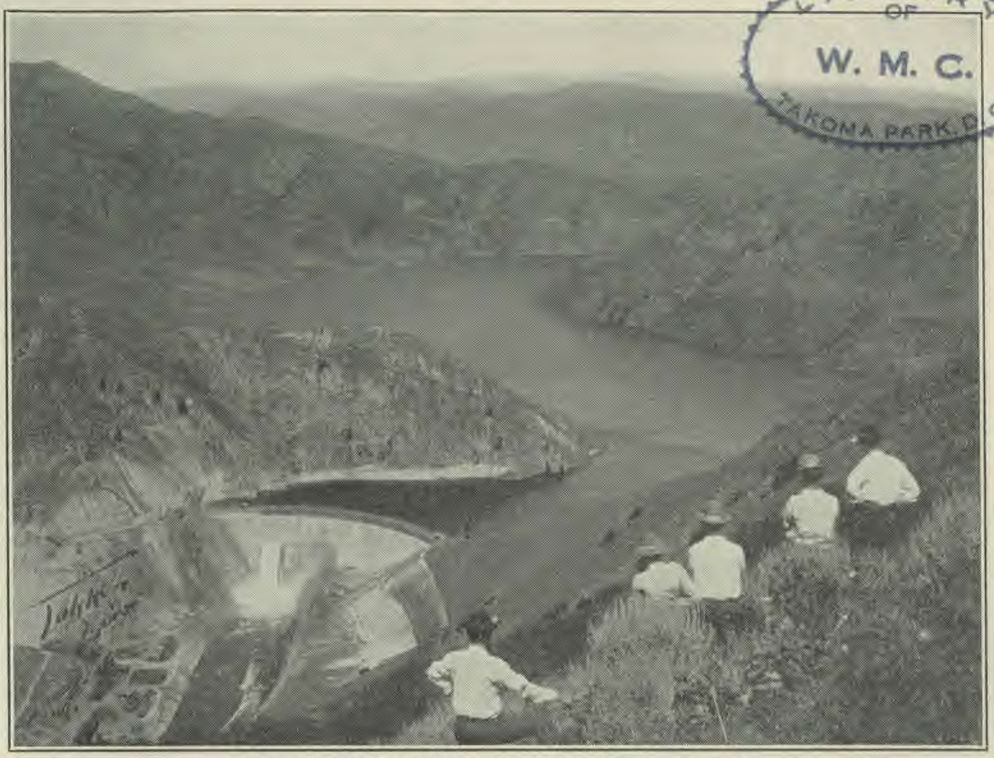
[1] If this was done, it might have been for the stage effect, or in order to afford employment to men who needed it.— Ed.

ARROWROCK DAM NEARING COMPLETION



ARROWROCK DAM PRACTICALLY COMPLETE

The upstream curvature is on a radius of 662 ft. The log carrier is seen on the opposite side, and a small section of the spillway in the foreground.



BIRD'S-EYE VIEW OF ARROWROCK DAM

Beyond it, is a portion of the great reservoir, which extends eighteen miles back into the mountains. A section of the camp can be seen below the dam.

fed to the hogs. The most scrupulous care was exercised in keeping toilets sanitary. All entrances were screened against flies, and these pests were also caught in specially prepared traps. It has been humorously remarked by men who worked there that a fly was once seen.

Pure mountain water from a creek was carried in a flume to a tank at the camp, and piped to practically all buildings. A sewerage system with septic tank was installed, serving all buildings, and discharging into the river below. Sickness was in this way held to the minimum, and there were no epidemics of any kind. There was but one case of typhoid, and it is believed to have originated outside the camp.

The camp had its commissary, its large mess houses serving as many as 60,000 meals a month. It had its club, reading rooms, picture shows, etc., to keep those employed happy. Liquor was banished.

The result was that the building of the dam — considered an engineering masterpiece in irrigation — was done in record time. Work started on it in 1911. It was estimated that five years would be required to complete the dam, and the year following to impound water behind it. It was constructed, however, in four years, and water impounded this season, the fourth year.

It derives its name from the fact that there is a high granite cliff on one side, into which Indians used to shoot their arrows in order to inform other members of the tribe of the direction they were traveling.

The total cost of the dam was $5,000,000. The estimated cost was $7,500,000. The water behind it is used to irrigate lands in the Boise project, in western Idaho, comprising 240,000 acres, all of

which is owned privately, by the State, or under homestead entry by actual settlers. The dam weighs over a million tons. The concrete used in its construction, if placed a ton to a twenty-foot wagon, the wagons would reach from San Francisco to New York and double back to Cleveland; if piled ten feet square, it would reach a height of twenty-nine miles. The water in the reservoir is 200 feet deep. It would submerge Boston under eight feet, Chicago under two feet, and the entire District of Columbia under five feet.

THE BOISE IRRIGATION PROJECT

THE Arrowrock Dam is part of the Boise Irrigation Project, a system which irrigates 234,000 acres in the vicinity of Boise, Idaho. The United States Reclamation Service has invested $12,000,000 in this project, which is to be returned by the farmers in annual rentals. The cost of the dam was $5,500,000, which was $2,000,000 less than the estimate. The dam was completed two years earlier than was planned, and was used the 1915 season. It was dedicated Oct. 5, 1915. It has the distinction of being the highest dam in the world, being 348.5 feet from the low point in the foundation to the top of the parapet. It is 1,100 feet long at the top, and has a sixteen-foot roadway on top, connecting the two sides of the gorge. The dam contains 585,200 yards of concrete. The capacity of the reservoir is 244,300 acre feet, or 79,600,000,000 gallons. This quantity of water will cover one foot deep an area 18 miles square. The reservoir is 18 miles long, and extends up both branches of the river.

Boston Photo News Co., Boston, Mass.

MAKING BUSINESS MEN OF DISABLED SOLDIERS

Mr. Clark of Rochampton House has exhibited fine patriotism in undertaking, at his own expense, to train crippled soldiers for business positions, and to secure positions for them when efficient.

EDITORIAL

THE MIND IS THE MAN

THE most successful sanitariums are the ones that keep their patients so busy thinking about their cure that they have no time to think about their disease. That patient who said he would rather die under Dr. A than be cured by Dr. B, does not belong to the minority. The essential for success in an institution is not that it shall heal disease, but that it shall amuse the patients. Most people require amusement rather than healing.

The neurasthenic has no headache while his house is on fire; there is enough diversion for the time to take away the thought of the headache. But do not jump at the conclusion that I am advising a conflagration cure for the headache; there are simpler remedies.

All cure is, to some extent, "mind cure," that is, if it is successful. No practice can long be successful that does not in a measure impose upon the mind of the patient. Doubtless the most certain form of "mind cure" is that performed by the doctor who has unbounded and superstitious faith in his own remedies. His very acts, his confidence in prescribing, even if he says hardly a word, enter the subconsciousness of the patient and have their effect. The man who deliberately uses a placebo, such as bread pills or colored water, telling his patient that it will produce sleep or cure sciatica, etc., will not be so likely to have success, because the patient subconsciously and instinctively detects the insincerity.

Now do not misunderstand me; I do not mean to say that "mind cure" cures cancer and consumption in the last stages, neither will it repair a leaky heart valve or artery, a damaged kidney, or a hardened liver, or soften chalky arteries; but a man may live a long time with one lung, with a damaged heart, with half a kidney, etc. At the autopsy, sometimes the organs are found so thoroughly disintegrated that the doctors can only wonder why the patient did not die months or years before.

The secret is *vitality*, courage, determination to live. *That* goes farther than intact organs; and, on the other hand, one who gives up completely may lie down and die when his organs are in fairly good condition. Life is more than the working of certain organs.

The Bible makes no distinction between life and soul; the same word *pseuche* (Latin, *anima*), we have sometimes to translate soul, sometimes life, according to the context. That ego in one which we may call the life, or the soul, is more than heart, or lungs, or kidney, or liver.

Now it is that ego, that *life*, that *soul*, which catches, often subconsciously (and when I use the word *subconsciously*, I confess I do not know what it is I am speaking of), from the attitude of others the clues that tell whether to keep on struggling or to give up the battle. In some cases the determination to live is so strong that a discouraging word only makes the person more determined to live, as in one case I have in mind, a very serious case of pneumonia. There had been a consultation, and the doctors, whispering together, said, "It is impos-

sible for the patient to live." The patient, apparently unconscious, heard the words, and spoke out, "I will show you whether it is impossible," and he began immediately to mend.

But many patients are dependent, whether they realize it or not, for their hold on life upon the attitude of the physician, that is, as to whether he is confident that his remedies will cure them.

It is the personality of a man, whether he be of the regular school, the homeopathic, or the eclectic, an osteopath, a chiropractor, an Eddyist, or what not, that goes a long way to cure the patient. The Eddyists work entirely and directly on the mind, ignoring material things. Other healers place their confidence in material agencies; yet, more than they realize, the virtues of their great diversity of remedies are the virtues imparted to them by the faith instilled in the patients.

Now this is not a plea for quackish systems. Because the laws of cure so far transcend our most advanced knowledge that all schools, even the most learned, are to an extent practicing quackery, I would not for an instant advise less learning, less careful preparation, but more.

But before our regular schools are fully in a place to meet the wants of the people, and to fill what is now filled by many of the so-called irregular schools, they must get away from their traditional learning handed down from the Middle Ages, and profit by what the so-called irregulars and quacks are doing.

I have no word against what bacteriology, parasitology, entomology, immunology, and the like are bringing into the profession, for along these lines we have scarcely scratched the surface. It is right that we should realize the interrelation between man and the lower organisms, the biochemical warfare being constantly waged between the species; but while we are doing this, we must not neglect the study of mind, soul,—whatever you want to call it,—that force in the body which often determines whether the organs shall continue the game a while longer or go on a strike and give it up.

Boston Photo News Co., Boston, Mass.

FRENCH CRIPPLES RESTORED TO FORMER ACTIVITY

The cripple to the left has learned to ply his trade of engraving, using an artificial hand. The one to the right, blinded, is learning to read by touch.

Cleanliness Too Expensive

A RECENT issue of the *Journal A. M. A.* has an enlightening article on cleanliness — or the opposite — in restaurants, from which the following is quoted: —

"Among the low-priced restaurants and lunch rooms which are numbered by hundreds in our large cities, there is one (it is but a type — there are dozens like it) whose exterior of white brick and plate glass is as sparkling and bright as a newly frosted cake. Within, an expanse of white enamel, resplendent metal, and spotless linen proclaims a devotion to cleanliness only rivaled by the surgical ward in a hospital. The waitresses are as neat and trim as uniformed nurses. In this stainless temple of alimentation one of the immaculate priestesses has been seen to pick up a glass just used by a departing guest, polish it with the dish towel at her belt, and calmly replace it on the table to be used by the next patron. One might instance even more horrifying infringements on prandial decency in more pretentious establishments; one might expatiate on the possible dangers from infection from such practices. The establishments do not lose custom thereby, probably because the public, while vaguely impressed with the beautiful ideal of asepsis or perfect cleanliness, has a pathetically inadequate idea of what it means."

Any one with his eyes open, going into the spick-and-span public dining room, or into any restaurant, is likely to see under the thin veneering of cleanliness evidence of practices, like that mentioned by the *Journal*, that nullify all the effect of the white tile and the beveled mirrors. But what does the public care? On a principal corner in the city of Washington there was once a soda fountain that attempted to conduct the business after the methods of modern hygiene and decency. All of the used dishes, glasses, and silverware were taken to the basement, scalded, thoroughly washed, and returned to the stand. Any one who patronized this place had the satisfaction of knowing that he was using clean dishes. But this required the employment of one person to wash the dishes, and made it necessary to charge fifteen cents for a sundae that could be obtained for ten cents at the less particular soda fountain just around the corner. The ten-cent place, where the grease was scarcely rinsed off the glass before it was filled for the next customer, was so crowded that one could hardly get up to the counter, while the sanitary stand was almost without patronage, and, falling into the hands of a new manager, was afterwards run on the free-and-easy-rinse-the-glass style. The good people of Washington would rather have three ice creams in dirty dishes than two in clean dishes. The people are so little sensitive in this regard that the caterer hardly finds it pays him to be clean. When the people really become particular, and make it known that they are particular, there will be a change in the attitude of caterers. The presence of porcelain tile and plate glass mirrors gives evidence of a partial change in this respect. But the people have yet to learn that porcelain and plate glass do not in themselves insure cleanliness.

* * *

Newspaper Science

NEWSPAPER editors are specialists in their own line, but they cannot be specialists in all lines. Sometimes they recognize this fact, and procure authoritative aid in the preparation of editorials on specialized subjects. Probably many editors during the present war utilize the knowledge of military experts in preparing their comments on the various campaigns. Some editorials, however, indicate that in some

cases such expert help has not been sought. The Chicago *Tribune* utilizes on its staff the technical skill of a prominent physician, formerly health commissioner of Chicago, and thus what it writes on medical lines may be read by the ordinary physician with respect. But it is not so with all newspapers.

In an article on "The Lost 'Normal' Person," which recently appeared in the Washington *Times*, the editor asserts that our forefathers were less healthy than we are. A survey had been conducted among large groups of supposedly healthy but sedentary persons, which resulted in the statement that "practically one hundred per cent of the supposedly well people of the United States, over thirty years of age, have some physical defect or impairment." To this the *Times* editor seems to take issue in the statement: —

"Despite the adverse reports of the modern hygienists, the death rate is decreasing in practically every large city of the East. We are living longer, despite these 'abnormals,' than our forefathers did."

This editor evidently did not know that the lengthening of average life, as shown in the vital statistics, is almost entirely the result of the prevention of infant deaths. Statistics show that the man of forty now has less chance to live to fifty or sixty than had the man of forty a generation ago; and the life expectancy of those over forty is constantly decreasing. While science is saving the babies, modern habits of life are actually shortening the term of adult life; but so long as this is masked by the saving of baby lives, the editor who contents himself with comparing death rates is likely to think we are better off than our forefathers. The fact is, heart and kidney diseases are taking a much larger toll of those just past the prime of life than formerly, and the cause is, in a word, "high living," and the intense struggle that is necessary nowadays to obtain a living. A matter of great concern with sanitarians is the great increase in fatal disease of heart, blood vessels, and kidneys shortly after the prime of life.

Learning Surgery From Animals

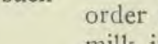
THERE is sound science back of the treatments which animals administer to themselves when wounded. Where do they learn this simple but wonderful art of surgery? Evidently not from their forbears; it is instinctive. A wounded animal licks his wounds, and the wounds heal. This treatment, though practiced by animals from time immemorial, is fully abreast of the very latest surgical practice. It has been discovered during recent years that there is no better treatment for humans than this one that has been practiced by animals for countless generations, so far as we know. As suggested in *American Medicine*, October, 1915, by Dr. Charles H. Duncan, the pioneer of this method, who has published articles on the subject in a number of medical journals during the last four years: —

"The soldier should be instructed to lick or suck his wounds as soon as they are infected, and then every two to four hours afterwards for several days. If this is done, there will be no more deaths from infection, for the wounds apparently heal by first intention. If from anatomical reasons the wound is inaccessible for sucking or licking, infection can be prevented by simply chewing for five minutes, twice daily, the blood-stained cloth covering the wound, swallowing the fluid. This self-treatment should be continued for several days until the danger of infection has passed. Preferably, the gauze should be sterile, but many clinical tests show that nonsterile gauze is better than no gauze."

Dr. Duncan is here giving emergency measures that may be the means of saving a soldier's life if he is unable to obtain surgical aid. He simply advises the soldier to give himself as good treatment as any dog will give itself if wounded. Regarding the use of the principle in hospitals, he says: —

"A convenient hospital method of preventing infection in fresh wounds is to place the stained part of the gauze in a four-ounce bottle of sterile water, shake well, allow to stand for half an hour, and then administer the decanted fluid to the patient. This should be done twice daily until the danger of infection has passed. This treatment is absolutely dependable, and has been verified daily for many years. For this reason it is commended to the army surgeon, with the assurance that the resultant loss of life among the wounded will be reduced to a minimum."

Dr. Duncan and others have for a number of years proved by test on great number of patients that the administration by mouth of the toxins from an infected wound will help the organism to set up a winning fight against the toxins, and the wound will heal. Naturally the method is repugnant to us; and at first it seems as if there might be danger of general dissemination of the infection through the body by this means. But experience shows that there is no such danger.



Immunized Milk

TUBERCULOSIS is transmissible from cow to man, especially to young children, through the milk. In fact, some authorities believe that practically all human tuberculosis is the result of milk-borne infection during childhood, which remains latent for a time and breaks out later in life. Whether or not this is so, we may be quite certain that the milk of tuberculous cows is not free from danger.

Dr. Julius Rosenberg, of New York, in the *Medical Record* of November 27, asserts his belief that it is unsafe to depend on the milk of tuberculin-tested cows, for the reason that a cow may give a negative test, and a few months later be in an advanced stage of tuberculosis. Moreover, he believes that Pasteurization is only a makeshift, destroying approximately half the germs.

He advocates the immunization of cows by the injection of killed cultures of tubercle bacilli. The cow, being immune, says Dr. Rosenberg, is not in danger of contracting tuberculosis, and, what is more important, her milk will confer immunity on those who drink it. He continues: —

"Experience with immunized milk proved it valuable as a prophylactic [preventive] and remedy for tuberculosis. Immunized milk is not heralded as a 'sure cure,' but its properties can and do assist the body to combat the invading host and counteract the destructive effects of the bacterial products upon the organism. The use of immunized milk in various types of tuberculosis has given encouraging results. . . . Several patients who have facilities to keep goats, use the milk of immunized goats with splendid success. This is a simple and inexpensive method, deserving of more extended adoption. Goat's milk is superior to the best cow's milk, and has neither objectionable odor nor taste."

Before immunizing the cow it is important to give the animal a tuberculin test, in order to be certain that she is free from tuberculosis. Then if the immunization is merely for the protection of the cow, three or four subcutaneous injections of vaccine are sufficient. But in order to furnish a strongly immunizing milk, it is necessary to give fifteen weekly injections of vaccine in increasing doses, then a constant dosage once every two weeks.

"When a cow or goat can be kept on or near the premises, the supply of immunized milk is easily obtained at the cost of ordinary milk, except for the first expense of immunization. Every tuberculosis suspect, every victim of consumption at any stage, the sufferer from every type of tuberculosis, should be afforded the advantages of immunized milk; proposed as war measures.

To those who are interested, the editor would say: Remember that this is the unconfirmed report of one man, and pioneers are apt to be overenthusiastic with a new method. Later observers may not report so enthusiastically.

Alcohol and Crime

THE Oklahoma Criminal Court of Appeals has rendered a very important decision to the effect that —

in a prosecution for murder, alcoholic insanity, or mental incapacity produced by voluntary intoxication existing only temporarily at the time of the homicide, is no justification or excuse therefor. Drunkenness is one thing, and the disease of the mind to which drunkenness leads is a different thing. Temporary insanity, occasioned immediately by drunkenness, does not destroy responsibility for crime, where the defendant, when sane and responsible, voluntarily makes himself drunk. To constitute insanity, caused by intoxication, a defense in a trial for murder, it must be insanity caused by chronic alcoholism, and not a mere temporary condition.

This certainly appeals to the layman as sound. To constitute drunkenness an excuse for crime would be to make an easy way for a man with criminal purpose to escape the law.

But what can society do to protect itself against the insanity of the chronic alcoholic? The fact that chronic alcoholic disease renders a man irresponsible for crime should be sufficient warrant for the segregation and control of all alcoholics in the interest of society. At present a large number of persons who are, through alcoholism, irresponsible for their actions, and who are destined, sooner or later, to wipe out a family or to commit some other atrocity, are allowed to go free. To postpone their confinement until the overt act, is like locking the stable door after the horse has been stolen. In accordance with the modern idea of prevention, such persons should be segregated in special institutions and kept under close guard.

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Advice to the Aging

TAYLOR, in a recent article,[1] has given some good advice for those who have reached the summit of life and have started down grade. For instance: —

"During the height of maturity any climate will do for residence or for vacation. The vital point is to break away from the killing effects of continued effort, strained attention, and deadly, monotonous routine. This is obligatory in the day's work. Breaks in continuity are needed by every one, to get away from the desk or bench by any means, to change the point of view, to move about, and if possible to get out into God's open, to lift the weight from off the spirit.

"None may safely neglect a sense of heavy weariness, especially when it is persistent; any one can and should, then, take a short daily rest, lying down. During the middle planes of life, phenomena of decline are always present, origins of decadence invariably exist. To some they come earlier, to others, later. Causes of this variance are both inherent and accidental. If one is wise enough to realize that one is not now 100 per cent, but only 60 or 70 per cent full power, one will then shut down steam to that extent, and readjust plans for work and play. That way lies efficiency, and also competence for a large aggregate of work spread a little thin in spots; but in the end the daily output will be just as large as that of most others; certainly much larger for that individual, and equally satisfactory."

In summing up his climatic advice, Dr. Taylor says: —

"Regional conditions are of secondary significance. The object is to be able to spend days on end outdoors from dawn to eve, and early to bed. While the doing of this is of importance, there should be invitation, not compulsion. Gentle activities are in order, partly active while normal impulse lasts, but mostly passive in some sort of conveyance, of which a boat or canoe far transcends a wheeled vehicle. As languor grows, it should be possible to yield then and there to the blessed impulse to drowse. A mild but not hot climate supplies suitable conditions best."

Undoubtedly the aging would not only live longer, but more useful lives, if they would make it a regular practice to secure gradually increasing daily periods of rest. The "pace that kills" kills most rapidly at that period of life when nature is calling for a gradual slowing of the forces. To whip up with stimulants, paying no attention to the gentle warnings of nature, is suicidal.

[1] "Climatic Inducements for the Overmature or Early Senescent," by J. Madison Taylor, A. B., M. D., Philadelphia, associate professor of nonpharmaceutic therapeutics, medical department, Temple University, in the *New York Medical Journal* of Nov. 27, 1915.

ALCOHOL AND THE WAR

Marr Murray

The following extracts from an article in the fall (1915) issue of the *British Journal of Inebriety* throw some interesting side lights on the booze question in Europe as affected by the war. It appears that it is "the interests," or "the trade," whose influence prevented any important temperance reform until the exigencies of the war compelled a reform, and then in England "the trade" was strong enough to head off even the temperance reform proposed as war measures.

THERE are a number of well-meaning people who assert that the war against Germany is the one supremely important thing in the world of today, and that all other matters and questions are in comparison of such minor significance that they can be indefinitely postponed until after the war. This is a quite natural point of view, but it is a most deplorably restricted one. To the persons involved, a life-and-death struggle is naturally a matter of supreme importance, but to the world at large it is not necessarily of such moment. Dismissing the purely personal point of view, and regarding the war from that of the world at large, it is obvious that the struggle is important only in so far as it will affect the future progress and happiness of the human race. Will the war, no matter what its result may be, confer benefits on the human race in any way commensurate with the vast expenditure of life and wealth involved? This is not the place to discuss that question, but merely to point out that it is more than doubtful whether the war against Germany, regarded from the viewpoint of humanity, is in any way so important as the war against alcohol. Broadly speaking, the result of the war against Germany affects only those peoples immediately involved. The result of the war against alcohol is a matter which affects the happiness and progress not merely of every inhabitant of the globe today, but of generations yet to be. The man who realizes that alcohol is as deadly an enemy of the human race as Germany is of Britain is not merely justified in continuing his warfare against it; he brands himself a traitor to the human race if he calls a truce now, when health, efficiency, and happiness are needed more than at any time previously. He serves his country best who serves humanity as well.

The most gratifying effect of the war has been the way in which the peoples of Europe have been brought to realize that alcohol constitutes a peril as pressing as any foreign army. Public opinion on the subject of alcohol has leaped forward during these past few months. An advance has been made which a year ago the most optimistic would not have believed possible without years of patient educative effort. There is nothing of the miraculous in this advance; it was inevitable. War, with its perils and fears, brought with it a spirit of sacrifice, with the result that the people voluntarily submitted to reforms which in times of peace could only have been forced upon them, and then more likely than not at the cost of a revolution.

This has been most strikingly exemplified in Russia, the most interesting country in the world. Before the war the Russian had the unenviable distinction of being the greatest drunkard in Europe. It is only necessary to read the novels of Maxim Gorky, Dostoyevsky, Tolstoy, and the other great realists, to understand to what an appalling degree the country was literally soaked in alcohol. . . .

The social position in Russia at the time of the outbreak of the war was indeed desperate. Prohibition was impracticable: first, because the imperial exchequer could not afford to lose the huge revenue from vodka; and, second, because the people were so firmly in the grip of alcohol that they would never have submitted to the loss of what was in millions of cases their only available recreation. Then, as a measure of purely military expediency, prohibition in respect to alcohol was imposed at the outset of the war. Russia remembered that in the struggle with Japan hundreds of thousands of lives had been needlessly sacrificed as a result of the chaos caused by the drunken habits of all ranks, and the country was determined to profit by that lesson. The results attending this drastic step have been remarkable. The troops have fought and endured the rigors of a winter campaign in Poland far better without their beloved vodka than many believed possible. But it is among the people themselves that the greatest results have been achieved. The loss to the revenue has been amply made up by the increased prosperity of the people. At the end of 1914, five months after the issue of the ukase proclaiming prohibition, the national savings were just double what they were at the end of 1913, and that in spite of the war.

Absinth was the poison that had become the national drink of France. No less than 53,000,000 gallons were consumed during 1913. The direct result was that whereas lunacy, degeneracy, crime,— especially crimes of violence,— and the number of tuberculous, mentally deficient, and otherwise defective children, were increasing at an alarming rate, the birth rate was fast declining. The problem of checking the evil was rendered well-nigh hopeless by the fact that there were some 1,300,000 people engaged in the distilling industry, forming indeed a guild with great political powers.

But the war has saved France by rendering the prohibition of absinth practicable. The action of the distillers in accepting the measure, and actually helping it forward, was the most patriotic act that the war has seen. The greatest test of patriots is not that of death in the excitement of battle; it is the deliberate and silent sacrifice of profits without any glamour or glory.

It must be confessed that in Great Britain the drink question has not been tackled with anything like the same sanity or determination as has been the case in Russia and France. . . .

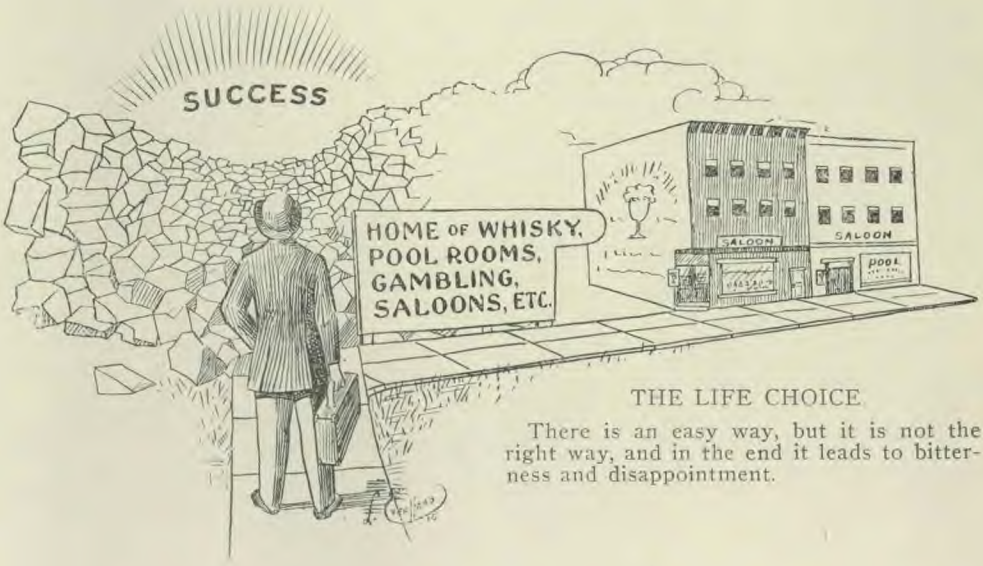
The first blunder of the authorities was to revive the rum ration. This retrograde step was in open defiance of scientific opinion. Alcohol does not "keep the cold out;" in fact, it does just the opposite. Nevertheless, some hundreds of thousands of gallons of rum were shipped across the channel. The results were twofold: In the first place, the men were rendered additionally susceptible to frostbite, pneumonia, and all the other consequences of exposure; in the second place, those who were abstainers were officially encouraged to drink. . . .

Another blunder on the part of the military authorities was in the matter of the provision of canteens. The Canadian and other colonial contingents were abstainers to a man, of at least some months' standing, when they arrived in England. Throughout their training at home and on the voyage to England all alcohol had been rigorously banned. But the first thing the authorities did was to provide them with canteens, and thus encourage them to take up handicapping habits of drinking. Many of the men were unable to resist the temptation thus thrust upon them, and finally a number of them had to be shipped back, disgraced, to their homes.

The war has forced upon the attention of the military authorities the fact that alcohol is responsible for the spread of the greater portion of venereal disease now prevailing in the army and navy. In this matter, of course, alcohol acts in two ways: In the first place, the average decent-minded man has to be more or

less drunk before he will consent to associate with a prostitute; and in the second, a man under the influence of alcohol is probably more susceptible to contagious diseases than the man who is not; at all events, the alcoholic man is robbed of his surest safeguards. . . .

The greatest disappointment of the war was the muddle which the late government made of the question relating to alcohol and the workers. In February it was discovered that the drunken habits of a number of workmen were seriously hindering the progress of the war. The repair of battleships and the manufacture and transport of munitions were shown to be seriously delayed. The speeches of Lord Kitchener and Mr. Lloyd-George on the subject stirred public opinion to such a degree that at the beginning of March there is little doubt that the whole nation was prepared to accept voluntarily the most drastic measures for coping with the evil. But the golden opportunity was allowed to slip by. Mr. Lloyd-George had to rouse not only the nation, but Parliament as well. And Parliament was very much afraid of "the trade." In spite of our show of democracy, the chief power under the present system of government is held by those who contribute to the secret party funds — a fact of which "the trade" has taken the fullest advantage. Parliament dared not rouse the opposition of the brewers and distillers.



THE LIFE CHOICE

There is an easy way, but it is not the right way, and in the end it leads to bitterness and disappointment.

ITEMS OF INTEREST

Homeopaths Favor Prohibition.— The convention of homeopathic physicians held in Chicago indorsed national prohibition.

Chauffeurs Must Be Sober.— A fine of $500 and a year's imprisonment are imposed on chauffeurs who drive their cars in New York while intoxicated.

The Dry Zone.— Colonel Goethals is reported to have said: "I had quite a fight against alcoholism among the employees in the Canal Zone, but I finally stamped it out by firing every man reported for drinking."

Dry Sunday Makes Good Monday.— Marshall Field & Co. are reported to have said that the biggest business in the history of their store followed Chicago's second dry Sunday. What would be the result if every day were dry?

Temperance Japanese Village.— The little village of Morito Mura has been dry for several years, owing to the efforts of the leading villager. At the village entrance is a big sign, "TOTAL ABSTINENCE; NO INTOXICANTS SHALL EVER ENTER THIS VILLAGE."

The Moderate Drinker Unfit.— Stating that "the man who drinks even moderately is unfit to drive an automobile," J. C. Rose, chief claim agent of the Pennsylvania Railroad, urged, before the National Safety Council at Philadelphia, that automobile licenses be issued only to abstainers.

Pneumatic Tires.— Evidently the automobile tires used to smuggle liquor into dry territory in Minnesota might still be called pneumatic; for the word comes from *pneuma,* spirit, and these smugglers had spirits instead of air in their tires, according to the story. Men in dry territory will do queer things in order to get a little fire water.

Labor Leader Against Liquor.— Howard Keating, a representative of the American Federation of Labor, who has been making a study of the liquor question for a number of years, has come out strongly against the liquor traffic. This former advocate of the liquor side admits that it was the fact that his wife and child were the first to be considered that changed his viewpoint.

Will Soon Be Like the Moon.—The world is going dry, says the San Francisco *Recorder;* in Europe for military reasons, in the United States for economic reasons. And the remarkable feature of the movement is that the prohibition fanatics are not responsible. But, friend, why "fanatics"? Those opposed to slavery were "fanatics" until the movement became more popular, and those who saw that slavery actually hurt their own selfish interests joined in the crusade. The man who sees an ideal of better conditions, and works for a reform without hope of personal advantage from it, is a fanatic.

Military Camps Dry.— The commander in chief of the Pennsylvania militia has forbidden the use and the sale of liquor in all camps of the Pennsylvania National Guard.

Drummers Converted.— According to *Home and State,* three fourths of the drummers were probably at one time against prohibition, and now at least three fourths of them are prohibitionists, the reason being that they find better conditions, sell more goods, and make better collections in dry towns than in wet.

Breweries Get Into Legitimate Business.— A number of West Virginia breweries, instead of going to sheriff's sale, have gone into other business. One has become a large meat-packing concern; one a big milk-products concern; one a big chemical and soap factory; one an ice and milk-products plant.

The Great Revenue Getter.— A stock argument against prohibition is, "How shall we make up the revenue?" European nations were never more sorely in need of revenue than just now, and they *know* that they cannot afford to get their revenue from the sale of liquor. Much as they need revenue, they are united in one thing, and that is that soberness without revenue is better than drunkenness with revenue.

Railroad Commissioners Oppose Booze.— The following is from the National Association of Railroad Commissioners, which recently met in San Francisco: "The drinking of intoxicating liquors on railroad trains should be prohibited. Intoxicated persons add greatly to the danger and inconvenience of travel. We recommend for every State in the Union a law prohibiting the drinking of intoxicating liquids on trains. In many States this can be regulated by an order of the railroad commission, but where it cannot be so regulated, then the commissioners should recommend the passage of suitable laws to the legislatures." But what about the man who drinks heavily just before going on the train, or at stations? It will all have to go eventually.

Drink and Automobile Accidents.—Police Judge George S. Richardson of Los Angeles is quoted as saying: "Most of the fatalities caused by speeding at night are due to drinking by the drivers. I would advise that patrolmen be stationed at the cafés to prevent persons who have been drinking from driving a car. If a man takes even one drink, he is not fit to drive a car; if he takes two or three, he wants to step on the throttle and let her out." As the *Liberator* says: "For driving any sort of high-speed machine, whether on the rails or on the road, a man with one drink in him is drunk; a man who had one drink in him yesterday is shaky; and a man who had one drink last week and may take another next week, is risky. The railroads enforce this rule absolutely."

OUR WORK AND WORKERS

REPORT OF MEDICAL MISSIONARY WORK IN MANY FIELDS

The following is an abbreviation from the report of the Medical Missionary Department of the Seventh-day Adventist General Conference,' held November, 1915, at Loma Linda, Cal.: —

THE sanitarium at Skodsborg, Denmark, is prosperous. The patronage suffered a large decrease at the beginning of the war, but has now regained its normal. An addition to the building has been made, including new treatment rooms and about fifty guest rooms. The main building has a capacity of two hundred and fifty guests.

The sanitarium at Friedensau, Germany, has a capacity of seventy-five patients. During the summer its regular patronage was thirty to forty, while in addition it cared for about forty wounded soldiers. In connection with the school, over one hundred wounded soldiers are now being cared for under government pay. About forty student nurses are in training.

There are seventy nurses employed in field work in Germany and Austria. In the early part of the war some of them came under the observation of one of the chief physicians of Berlin. The character of their work impressed him, and he advised them to take the state examination. Before the war the law required that nurses must have spent two years in an accredited state hospital, in order to register. Sixty of our nurses have been enabled to pass the examination on the merits of their class attainments and their practical work.

Since the war began, a number of nurses have joined the Red Cross service. Usually men nurses are in little demand, but these found ready acceptance in this service and in hospitals and hospital trains. Even in some instances men who were not fully trained nurses, escaped military service by offering themselves beforehand to do relief work. Some nurses of both sexes have received honor decorations for their services.

Nurses under conference supervision are working in Russia, Hungary, France, Bulgaria, Greece, Syria, and Egypt. Most of the workers in German East Africa are nurses. The gospel work finds many openings by means of the medical work.

While there is great need for nurses, there is also a need for well-qualified physicians in the mission fields. A skillful surgeon is wanted now. Such workers would find plenty to do where there is such a dearth of medical men, great areas being without a doctor.

The sanitarium at Gland, Switzerland, is fairly well filled. It has room for eighty patients. Its patronage has been good most of the time, and it is making money. Dr. L. E. Conradi is now connected with the institution, holding diplomas in both Germany and Switzerland.

In Europe our candidates for the medical course are selected for their field before they are educated, and they have to pass an examination to determine their physical fitness for their particular field. They enter upon their medical training as a preparation for missionary work. There, as elsewhere, they meet with temptation to turn aside from their aim. One of our doctors was given unusual advantage in a leading hospital, being permitted to assist the chief surgeon at operations, a thing not usually allowed an interne, and to fill the place of the chief surgeon

during a period of his disability. He was offered the prospect of an appointment as surgeon, but devotedly held himself to his original purpose of preparing for a place in the Lord's work.

The Caterham (England) Sanitarium has been successful from its very beginning. The past year has been the best in its history. Dr. A. B. Olsen, the superintendent, writes that the influence of its work is extending, and that even some of the most famous London specialists are giving it support.

Australasia sends a very good account of its medical work. Its principal sanitarium is at Wahroonga, near Sydney. Three smaller institutions are operated at Adelaide and Warburton, Australia, and Christchurch, New Zealand. Taken as a whole, they are self-supporting. One training school for nurses is conducted, graduating from eight to ten nurses a year. This confines the work within bounds that permit of good selection, efficient training, and a profitable use of the output. Student nurses are chosen because of their Christian qualities, and are given to understand that the nurses' course is a missionary training.

In South American our health work has had a good influence. The sanitarium at Diamante, Argentina, is operating successfully. It is held in high esteem in a wide field. Our doctors are called to service outside the institution, at some distance. They are also engaged in public temperance work.

The medical missionary work of Brother F. A. Stahl and his associates, among the Inca Indians, has been a good demonstration of the effectual entrance of the gospel by this means. Through this double ministry, prejudice has given way, and souls have been won. Consecrated nursing and the binding up of sores and wounds, have helped to preach and teach saving truth. L. A. H.

(*To be continued*)

SANITARIUM NEWS NOTES

Dr. C. A. Burrows has developed a substantial practice in eye, ear, nose, and throat work, at Los Angeles, Cal.

In its number of sanitariums, treatment rooms, workers, and facilities, the United States stands at the head of the list.

Dr. B. E. Nicola, superintendent of the Attleboro (Mass.) Sanitarium, took a trip West in November, stopping at Loma Linda for a few days.

Dr. W. E. Clarke is in private practice at Covena, Cal., and is meeting with gratifying success. He attended the general meetings at Loma Linda a few days.

Dr. S. P. S. Edwards is carrying a good share of the teaching at the College of Medical Evangelists, Loma Linda, Cal. His many friends will be glad to know that he has nearly recovered his health.

Mr. and Mrs. J. G. White, of the New England Sanitarium, were in attendance at the Loma Linda, Cal., general meetings. They greatly enjoyed their vacation trip, which included considerable of the scenic portion of our country. Having a call to China to official position, they will be glad they decided to "see America first."

Dr. Henry R. Harrower has settled near Los Angeles, Cal. He is engaged in literary work at present.

Dr. V. L. Fisher, of Mount Vernon, Ohio, attended the Congress of American Surgeons held at Boston, Mass.

Dr. Pearl J. Anderson has connected with the Kansas Sanitarium, at Wichita, Kans., as matron and lady physician.

There are fifty or more treatment rooms reporting a large volume of health work. Some of these institutions are equivalent to small sanitariums.

Eleven health food factories are operated by the denomination, in seven different countries. There are also a good many hygienic restaurants, mostly under private control.

Dr. W. E. Bliss, superintendent of the New England Sanitarium, of Melrose, Mass., was a visitor at Loma Linda, Cal., during a part of the general meetings held there in November.

Dr. H. W. Miller, superintendent of the Washington (D. C.) Sanitarium and medical secretary of the North American Division Conference of Seventh-day Adventists, was an active participant in the proceedings at the Loma Linda meetings.

Drs. P. T. and Lillian Magan, of the Rural Sanitarium, Madison, Tenn., were visitors at the Loma Linda meeting.

Dr. J. F. Morse, now of Ensenada, Porto Rico, made a visit to the States at the time of the Congress of American Surgeons at Boston.

Dr. Mary J. Weber again connects with the Boulder-Colorado Sanitarium as lady physician. She and Dr. Fred Weber find their work and situation very congenial.

Dr. H. A. Green, superintendent of the Boulder-Colorado Sanitarium, spent a little time in the East in postgraduate work, attending also the Congress of American Surgeons.

Drs. P. M. and Florence Keller, of Auckland, New Zealand, are now in this country. She was carrying work in the Loma Linda (Cal.) Sanitarium at the time of our visit there. He had just arrived.

Dr. D. E. Blake and Dr. Lottie Isbell Blake, at one time connected with the Rock City Sanitarium, of Nashville, Tenn., have an extensive practice in the Canal Zone, Panama. He is planning to conduct public health lectures.

Dr. J. E. Froom is conducting a splendid treatment room work in connection with his general practice at Boise, Idaho. Various lines of medical missionary effort are carried on. Marked success is seen in the entire work.

L. M. Bowen, of St. Helena; V. H. Lucas, of Glendale; and Charles E. Rice, of Paradise Valley, all business managers of California sanitariums, broke away from their work long enough to put in a few days at Loma Linda.

Dr. Chas. H. Hayton, formerly of this country, now superintendent of the Stanborough Park Sanitarium, of Watford, Herts, England, is reported to have recently secured his fellowship in surgery. He is on the staff of the Prince of Wales Hospital, London.

Mr. and Mrs. T. S. Dock, who have had years of experience in sanitarium work, are now conducting treatment rooms at 809 Fourteenth St., Physicians' Bldg., Denver, Colo. The place is well-equipped and neatly kept, and any one passing through the city can be assured of satisfactory treatment.

Dr. J. B. Gillis is developing a private practice at Milton, Oregon, and is encouraged by the outlook.

Dr. L. J. Otis, who is now a Californian, made a short visit to Loma Linda at the time of the general meetings.

Dr. W. W. Worster and wife, of Alhambra, Cal., were visitors at Loma Linda at the time of the general gathering.

Mr. Burton Castle, formerly of the Nebraska Sanitarium at College View, is now engaged in secretary's work in the Kansas Conference.

Dr. Owen S. Perrett, from the College of Medical Evangelists at Loma Linda, Cal., is well installed as assistant physician at the Iowa Sanitarium, at Nevada, Iowa. He likes the people there, and they like him.

Dr. H. F. Rand carries as part of his duties the medical responsibility of the Los Angeles treatment room work. In six months' time he sent 275 patients to associated sanitariums, as a result of this work. Dr. Rand is pleasantly located at Glendale, Cal.

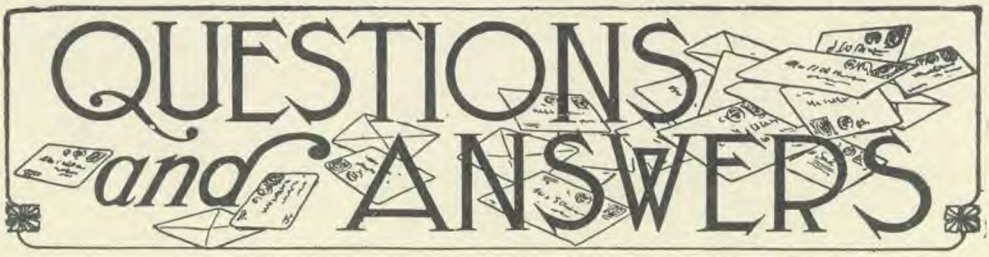
Dr. Lydia Parmele, in company with her husband, president of the Louisiana Conference, took opportunity to visit relatives and friends in California and to spend a little time at Loma Linda, while Elder Parmele was in attendance at the council.

We now have ten health journals, some of which are printed in foreign languages, in addition to a number of house organs for individual sanitariums. Besides the periodical publications, there are a good many health tracts, pamphlets, and bound books.

Dr. D. D. Comstock, superintendent of the Glendale (Cal.) Sanitarium, spent a few weeks in New York City in special work, returning to California in time to present his biennial report as medical secretary of the Pacific Union Conference at the November session of that body.

Miss Clara Larsen, matron of the Kansas Sanitarium, at Wichita, recently resigned her position, preparatory to taking up the matronship of her own home on a Colorado ranch. Miss Emma Larsen, head nurse of the sanitarium, accompanied her sister to help her get well started in her new sphere.

L. A. H.



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.

Bed Wetting.—"My little boy three years of age seems to have had weak kidneys from birth, and is almost constantly wet, night and day; and such a strong odor! At times he seems comparatively well."

Be sure to keep his feet warm, and if the stockings are at all damp, change them. In such cases there is usually digestive trouble, that is, fermentation, and it may be necessary to look after his diet. Limit the amount of drink the boy uses, and let him have nothing to drink after four o'clock. Often such children are hearty eaters — eat too much, and thus disorder their digestion. There is another possibility: perhaps the child has a phimosis, requiring a minor surgical operation. It would be well to take him to a physician for examination.

Ventilation in Winter.—"We are frequently advised to keep the windows open in the coldest weather. Is not this rather extreme advice?"

The questioner is referred to the reply on "Outdoor Sleeping" (see page 93). Theoretically, according to much of the recent experimental work, the principal value of ventilation is to prevent excessive heat and excessive moisture in the air. But practical experience shows that those who ventilate, provided they keep comfortable, are better off physically than those who live in stuffy quarters.

A good hot-air furnace that does not leak, is in itself a good ventilating system, provided that the cold air is taken from the outside; and even with all windows and doors closed, the warm air from the furnace gradually displaces the old air, which finds an outlet in various ways. The fireplace and the stove compel a certain amount of air change. But with steam or hot-water heat, there is comparatively little ventilation to the ordinary home, unless the windows and doors are left open. It is difficult, however, to close any house so as to prevent some ventilation. The air comes in through cracks and around doors and windows, and even through the plaster and bricks.

The fact that a Chinaman will, in order to conserve heat, shut himself up for the night in a box the size of a coffin, pull the cover on tightly, and sleep apparently without air, and keep it up night after night without any observable injury, would indicate that the human organism will put up with a large amount of bad air.

However, the writer has not lost faith in good air, as is testified by the fact that he sleeps out on a porch winter and summer.

Fattening Foods.—"Kindly prescribe a diet that will build me up in flesh. I am underweight, no matter how much I eat. My appetite is good. The doctor finds no tuberculosis."

Sometimes the appetite is better than the digestion, and food is eaten only to be broken up by germ activity, to the detriment of the individual. Some persons seem actually to remain poor in flesh because they eat too much — a rather paradoxical statement, I must admit. Without knowing more about your case, I can only suggest a course for you to pursue experimentally.

Use freely of milk and well-cooked cereals, especially zwieback (bread sliced and slowly dried and toasted in a not-too-hot oven; it should not be very brown), or any of the toasted grain preparations that come in cartons. If baked potato or mashed potato agrees, eat freely of it at least once a day. Use a fairly liberal amount of fat foods, in the form most easily utilized by you — olives, butter, cream, or nuts.

But you may need something besides diet, something that only a most careful examination would reveal. Meantime it is well to remember the old adage, "Laugh and grow fat," which seems to be based on sound experience. The laugher is more apt to have good nutrition, both because the mental state conduces to good digestion and assimilation and because of the actual massage of the abdominal organs by the diaphragm during laughter. The hearty laugh is becoming rare in these

strenuous times. A very ancient and highly esteemed authority says, "A merry heart doeth good like a medicine." Especially bring good cheer to your meals; and if necessary change your associates so that your mealtimes will be times of care-free joy.

Outdoor Sleeping.—"Is there a real advantage in sleeping outdoors, or is it a fad?"

Modern physiological studies would seem to indicate that an increase of carbon dioxide and a diminution of oxygen in the air are not so harmful as was once thought. A prominent physical director went so far as to run a gymnasium all winter with no ventilation from the outside, by keeping up a circulation within the building, and having the temperature and humidity within certain limits; and his classes did as well, seemingly, as those having more outside air.

There can be no question, however, that tuberculosis patients do much better in open air, and the same is true with pneumonia patients. It would seem, however, that patients with bronchitis often do better if kept in warm air.

Notwithstanding anything and everything that the laboratory investigators may say, there is some distinct advantage to be obtained from pure, fresh air, provided this is not obtained at the expense of bodily comfort. It might be even better to be comfortable in a stuffy room than to be shivering all night on a sleeping porch. If one sleeps out, provision should be made for comfort in the way of coverings; and if necessary, artificial heat should be provided by a hot flatiron covered with paper, by a hot water bottle, or by an electric thermophore. Treatment that disregards altogether the comfort of the patient, is too vigorous.

Is Sunshine Beneficial?—"We are told that sunshine is good for the health, and again that sunshine is bad for the health. Which shall we believe?"

Undoubtedly sunshine is beneficial—provided there is not an excess. One may get too much of any good thing—too much water, too much food, too much sleep, etc. Colonel Woodruff taught for years that Americans as a rule get too much sunlight, and that this is the cause of their nervousness.

At one time there was a fad of taking sun baths, but it became apparent to those capable of observing (a faculty which is lacking in faddists), that sunlight is as capable of doing harm as it is of doing good. It is said that there are more suicides in the sunny months than in the darker part of the year. This seems strange in view of the fact that we generally consider dark weather to be "gloomy weather;" and one would naturally believe that the gray weather would be the suicide season.

Sunlight certainly kills germs, and thus is indirectly beneficial to man. It is directly stimulating to higher plant life, and in proper doses, to animal and human life. One who lives largely in the dark is never perfectly healthy. But too much light, or too much of any good thing, ceases to be good.

Tuberculosis of the Bowels.—"What are the symptoms of tuberculosis of the bowels? Is there any cure? Please send list of appropriate foods."

Among the symptoms of tuberculosis of the bowels are loss of strength and weight, night sweats, and perhaps diarrhea. However, disease of this kind cannot be diagnosed by symptoms.

Sometimes "tuberculosis of the bowels" is in reality tuberculous peritonitis. Cases have been recorded where a surgeon opened the abdomen and found so bad a case of tuberculous peritonitis that he would not attempt operation, but sewed up the abdomen, after which the patient improved.

I should say that a diet of milk and eggs, or one consisting of a liberal proportion of these, milk toast, cream toast, the various cereals, etc., with absence of foods that might irritate, with a minimum of vegetable foods, would be best. But the diet should be under the personal oversight of a physician.

Homemade Thermophore.—"The electric heaters used for bed warming are rather expensive. Can you suggest a homemade substitute?"

There are, of course, hot bricks, hot water bottles, and the like, but I suppose you want to know how to make an electric thermophore at small expense. The tin shade of a flexible goosenecked electric lamp, fitted with carbon bulb and cord connection, may have a piece of tin fitted over the opening, so as to inclose the lamp completely. If this is put into a flannel sack and connected with a socket in the nearest fixture, one can have heat at any time in the night by turning the switch. It sometimes happens that one is warm on retiring, and wakes up cold in the small hours of the morning, remaining awake because too uncomfortable to sleep. In such a case this inexpensive thermophore would be invaluable.

Cause of Pellagra.—"What is the cause of pellagra? Is it a disease dependent on the food or on infection?"

Articles have appeared in recent issues of this magazine, showing that the consensus of opinion favors the idea that pellagra is a disease depending on a one-sided diet, in which the proteins are deficient and the carbohydrates are in excess. In plain language, there is too little animal food, peas, beans, nuts, etc., and too much potato, corn and other grains, and the like.

The most important work done along this line is that of Surgeon Goldberger of the United States Public Health Service, and his associates, who cured pellagra by giving a diet rich in animal proteins, and produced pellagra in healthy convicts by giving them a liberal but one-sided diet that was lacking in protein.

The writer, however, is inclined to believe that the diet is only one factor in the causation of the disease, producing a condition favorable to the infective agent, whatever it may be.

War Diminishes Medical Students.— The *British Medical Journal* is authority for the statement that there has been a great falling off in the number of medical students, on account of the war.

To Live a Century.— Dr. Jabez Fisher, an active farmer of Fitchburg, Mass., lacks less than a year of being a centenarian. According to the *Forecast*, he sees, hears, thinks, walks, and laughs as well as fifty years ago. His formula for remaining youthful is: "Don't wear tight clothes — breathe all you can; drink lots of water, except at meals; sleep regularly, on an empty stomach; eat only when hungry; don't eat for four hours before or after sleeping; use no tea, coffee, liquor, or tobacco; eat no meat." Pretty good advice.

The Bubble Fountain Insanitary.— An inspector of the U. S. Public Health Service took time to observe in a railway station the manner in which drinkers use the fountain. Of forty-seven persons who drank during the period of his observation, nearly all placed the lips completely around the metal ball from which the water issued. Several of the men were chewing tobacco, four were colored, three seemed to have tuberculosis, and three had an eruption of the face, possibly contagious. It should be borne in mind that the bubble fountain is intended to be used without touching the lips to the fixture. The stream of water will not wash away the filth from one mouth before another drinks, and a fountain used in this way is no better than a public drinking cup. Any one drinking by bringing the lips into contact with the metal, runs the risk of contracting any one of a number of contagious diseases which may be transmitted in this way.

Dogs Carry Disease to Stock.— The United States Department of Agriculture, having made a number of investigations, reports that disease may be carried to stock by means of dogs. Even the foot-and-mouth disease may be carried by dogs running over infected ground and carrying the infection to other ground. What is a farm without a dog? But if the farmers are once convinced that the dog is instrumental in transmitting cattle disease, the dog will have to go, or at least be confined so it can do no harm.

Health Education by Pictures.— The United States Public Health Service has established a "stereopticon loan library," and will send out to those desiring to deliver lectures on health topics, slides showing various phases of the subject. Descriptive catalogues have been prepared, so that any one interested may be able to order such slides as he may need for his topics. The library covers a wide series of subjects, including yellow fever, diseases of children, hookworm disease, malaria, milk production, mouth hygiene, pellagra, rural schools, smallpox, tropical diseases, tuberculosis, and typhoid fever.

Marriage of Tuberculous Persons.— A man knowing that he had tuberculosis, concealed the fact from his fiancée, explaining to her that he was suffering from a cold. After the marriage the wife discovered the real nature of the illness, and sued for an annulment of the marriage. The supreme court of the State of New York handed down the opinion that, in view of the possible serious consequences of such a marriage to the wife and any probable children and to the community, the marriage should be annulled, the legal basis of the decision being the fraud of the defendant in concealing and misrepresenting the condition of his health.

Dr. Goldwater Resigns.— November 1, the mayor of New York accepted the resignation of Dr. Goldwater as commissioner of health. Dr. Goldwater had left another position temporarily in order to fill the vacancy in the health department. In the comparatively short time he held the office he has shown himself to be a very efficient administrator. It was he who first used the health department as a means of educating the people regarding the danger of alcoholic indulgence. Another innovation during Dr. Goldwater's administration was the war against nostrums, it being required that all proprietary remedies sold in the city must have the composition on the package, or else register with the health department a statement of the exact contents of the nostrum.

Scarlet Fever From Milk.— An epidemic of scarlet fever in several towns in New York, resulting in forty cases and one death, was traced to a dairy in Westtown, N. Y. Those who boiled the milk of course escaped.

New York's Fight Against Patent Medicines.— The New York Health Department announced, November 4, its first conviction in the campaign against nostrums and falsely advertised remedies. The manufacturer of "Holman's Ague, Liver, and Stomach Pads" pleaded guilty to a charge of misleading, and was fined $100.

Drinking and Digestion.— From some recent experiments reported in one of the German journals of physiological chemistry, the following results were noted: "Pure water left the stomach more rapidly than bread and water mixtures. Bread eaten five minutes after drinking a moderate amount of water, required twice the time for leaving the stomach as did water alone. When water was taken five minutes after eating bread, the time required for it to leave the stomach was shorter than for bread eaten alone. A mixture of bread and water remained in the stomach a longer time than did bread and water taken separately."

Snake-Bite Antidote.— The United States Bureau of Foreign and Domestic Commerce has recently published a "Handbook of British India," which describes a successful treatment for snake bite. At the Parel Laboratories, Bombay, venom is obtained from live cobras, and injected in gradually increasing doses into horses. The process continues for about two years, when the horses are found to have acquired a high degree of immunity against snake venom. Serum from these immune horses, when injected into a person who has recently been bitten by a cobra, is said to be an infallible cure. This remedy is the same in principle as the diphtheria antitoxin. In both cases, the poison itself is made to induce in an animal the production of an antidote.

The Enemy of the Malarial Mosquito.— The bat is a most useful little creature, being a persistent devourer of one of man's worst insect enemies, the malarial mosquito. Mitchell's Lake, about ten miles from San Antonio, Tex., formerly one of the worst breeding places in the world for malarial mosquitoes, has been rendered free from these pests by the bats which have been encouraged to make a home on the shores of the lake. Near the lake have been erected a number of huge bat dormitories, looking like windmill towers sided in, but with slat work on two sides for the entrance and exit of the bats. In these structures thousands of bats sleep during the day, and from them they sally forth at night in search of insect food. It is said that the bat is guided by sound in capturing its prey, taking no insects that give a tone lower than middle C. The tones of a mosquito range from D to G or even higher. Charles H. R. Campbell, M. D., who has made a careful study of the bats, has an interesting article on the subject in the *Scientific American* of November 13.

Fresh-Air Cars.— The Chicago Elevated decided to operate during the winter, for the benefit of the fresh-air "fiends," a certain number of windowless and unheated cars, which will be labeled fresh-air cars. Some one has suggested that they be labeled private sanitariums.

Injurious Substance in Beverage.— The supreme court of the State of Tennessee, in a suit brought against the Coca-Cola Bottling Works, for the reason that an employee had negligently left a cigar stump in one of the bottles while filling it, to the injury of the complainant, has decided that the defendant was liable to the consumer for injury caused by a poisonous substance contained in a beverage sold by a retail dealer in a package sealed by the defendant.

Bacterial Cause of Pellagra.— B. W. Page, A. B., M. D., of Lumberton, N. C., claims to have made a study of 600 stools from 158 pellagrins, and to have observed in all these a peculiar bacillus which is pathogenic to mice. This germ seems to be present in the stools in all cases in which there are symptoms of pellagra. The serum of pellagrins has some agglutinating effect upon the organism. A healthy person previously free from evidence of the presence of the germs, developed, after an accidental exposure in the laboratory, the typical symptoms of pellagra, and had the organisms in his stools.

Lime for Diabetes.— Max and Morris Kahn, in the *Medical Record* of Oct. 30, 1915, state that diabetes is accompanied by loss of lime, and that acidosis, which is probably due to this loss, may be prevented by the administration of lime salts.

Dirty Dairy Goes Out of Business.— One Brooklyn dairy, for persistent violation of the law, has been fined since 1910 a total of more than $2,200, $1,500 of this being imposed Nov. 11, 1915. The company, rather than mend its ways, has decided to go out of business.

Dangerous Cosmetics.— A recent number of *Public Health Reports,* issued by the United States Public Health Service, calls attention to the fact that the pure food laws are not broad enough to control the manufacture of cosmetics, and that a large proportion of these preparations are unsafe to use. Calling attention to a statement made in the *Medical Record* in 1884 ("It is a reproach to modern civilization that one should find occasion, in this day of enlightenment, to raise his voice against the use of cosmetics"), Wilbert in this article says that this statement is even more applicable today than when it was written. In 1879 we were using a little more than two million dollars' worth of cosmetics. In 1909, with a population less than twice as much, we were using more than fourteen million dollars' worth of cosmetics.

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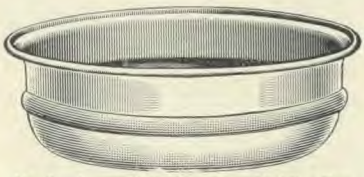

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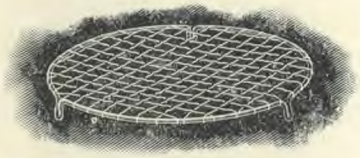

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Christchurch Sanitarium, Papanui, Christchurch, New Zealand.

Christiania Health Home, Akersgaden 74, Christiania, Norway.

Friedensau Sanitarium, Friedensau, Post Crabow, Bez. Magdeburg, Germany.

Kimberley Baths, 7 Cheapside, Kimberley, South Africa.

Lake Geneva Sanitarium (Sanatorium du Leman), Gland, Ct. Vaud, Switzerland.

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

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

Skodsborg Sanatorium, Skodsborg, Denmark.

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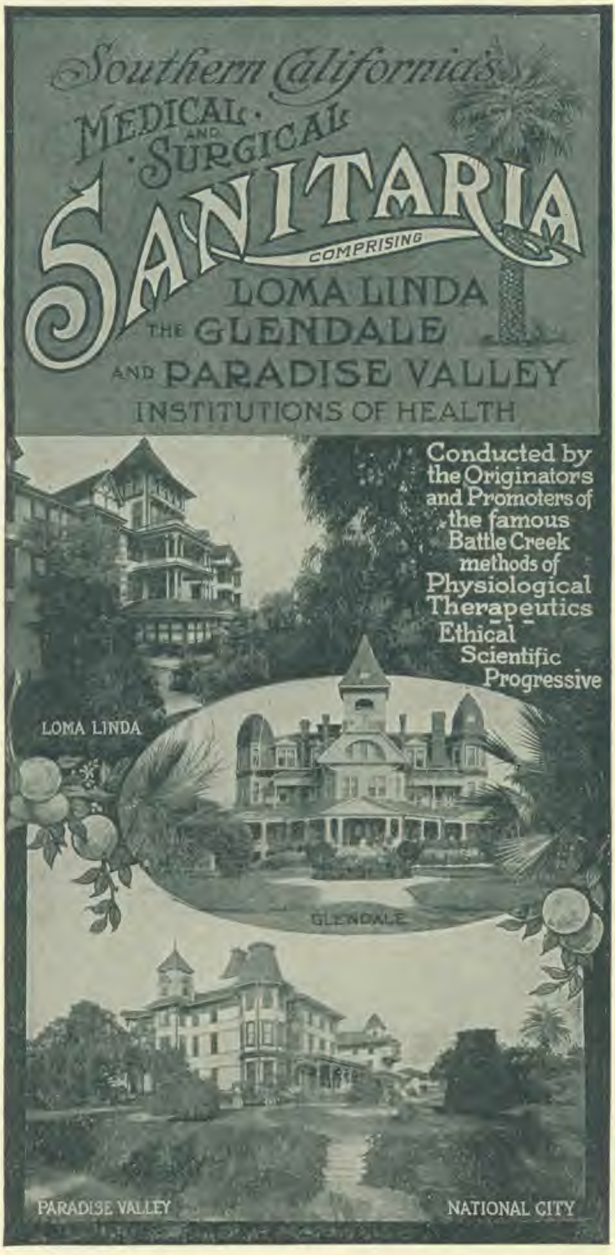

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