Life & Health

THE NATIONAL HEALTH MAGAZINE

May, 1915

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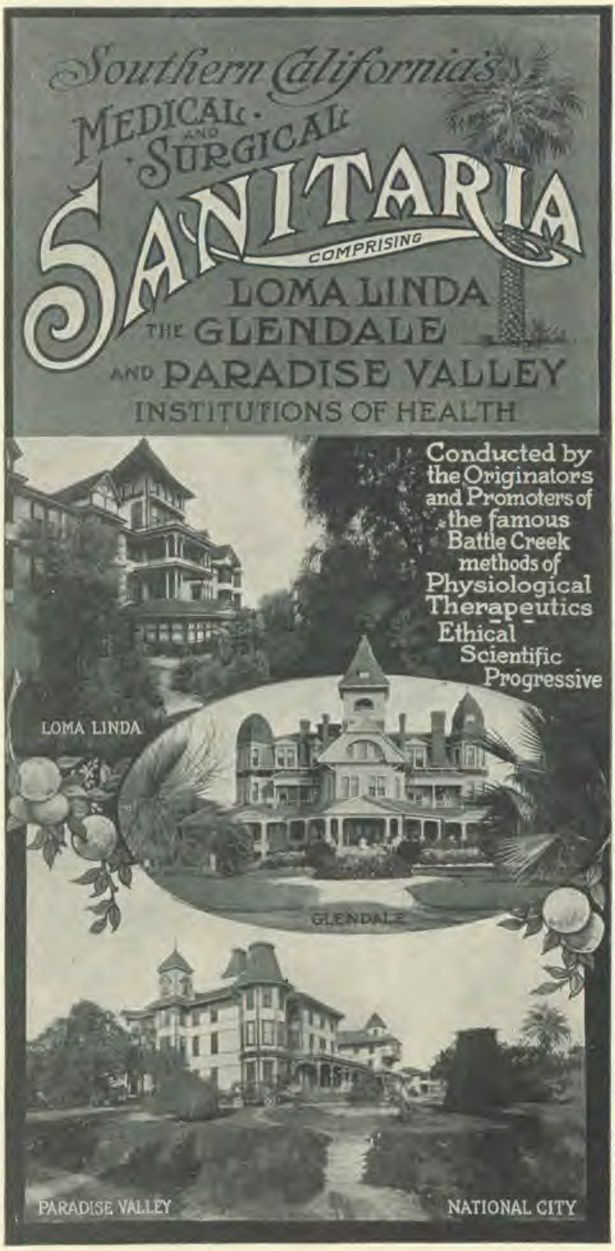

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LIFE AND HEALTH

MAY, 1915

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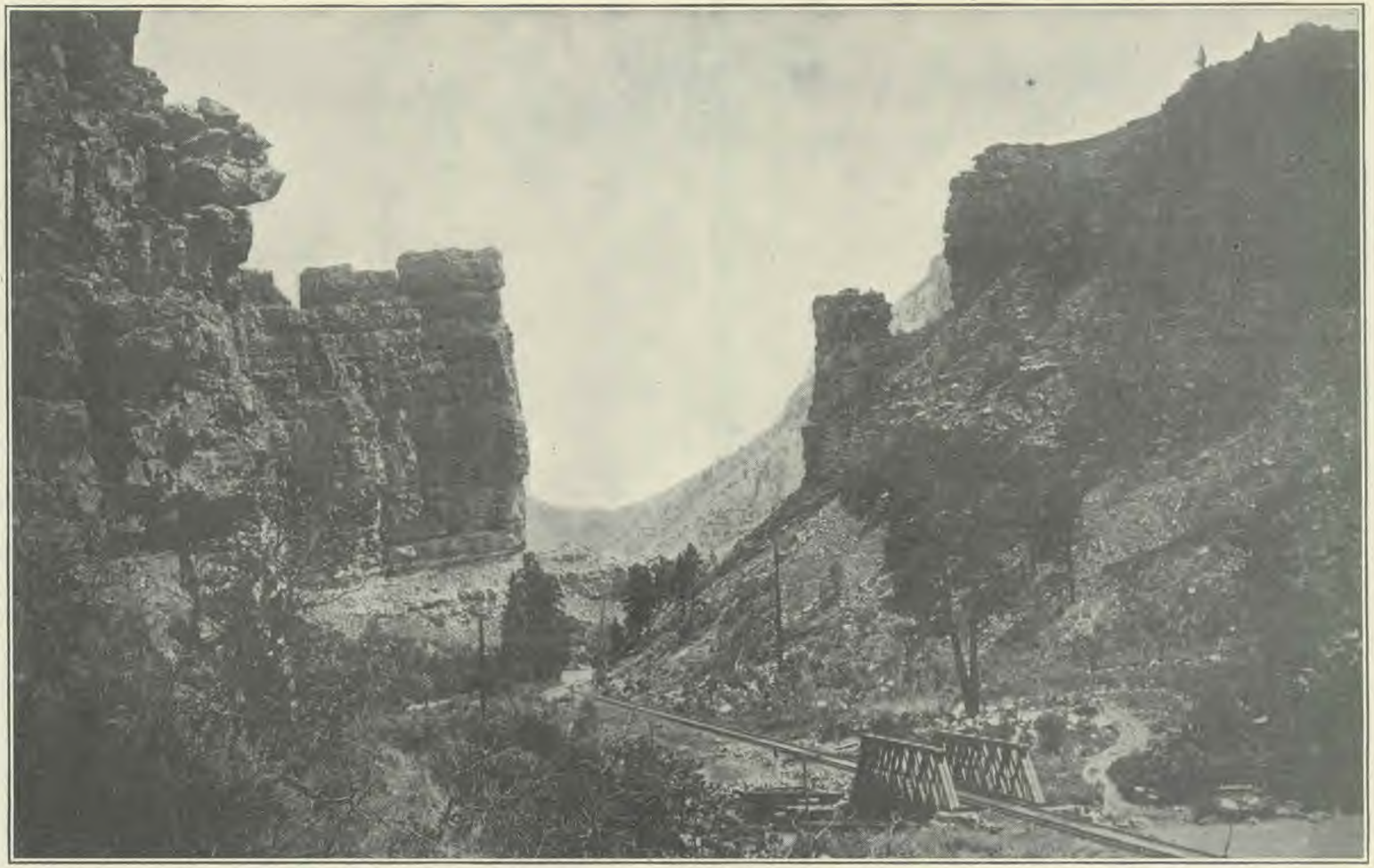

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Life & Health
THE NATIONAL HEALTH MAGAZINE

MAY
1915

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

Editor, GEORGE HENRY HEALD, M. D. Associate Editors { H. W. MILLER, M. D. / L. A. HANSEN

CHANGE OF NAME

THE present is the last issue of this magazine under the name by which it is so well known. With the June issue the name will be changed to —

Health and Temperance

Some have already expressed regret at the proposed change. It is hoped, however, that the improvements in content and make-up will endear the new name to old friends of the magazine. Below are some of the principles for which HEALTH AND TEMPERANCE will stand: —

PRINCIPLES OF CHRISTIAN TEMPERANCE

Disease is commonly the result of faulty living.

Unless the human body has been weakened by excess or indiscretion, it usually withstands the inroads of disease germs.

Temperance in eating, drinking, exercise, clothing,— in fact, in all the activities of life,— with cleanliness of body, mind, and soul, makes for better health and longer life.

The highest efficiency and spirituality are possible only to a person who is "temperate in all things."

True temperance signifies a moderate use of that which is wholesome, and entire abstinence from all that is harmful, such as alcoholic liquor, tobacco, and narcotic drugs.

Many conscientious Christians habitually use flesh foods and the caffeine drinks, tea and coffee. It shall be the province of "Health and Temperance" to show that the use of these is not conducive to the highest type of health, efficiency, or spirituality, and that true temperance includes abstinence from these stimulant foods and drinks.

For every temptation to yield to unlawful desire and thus injure the body, the gospel of Jesus offers a way of escape.

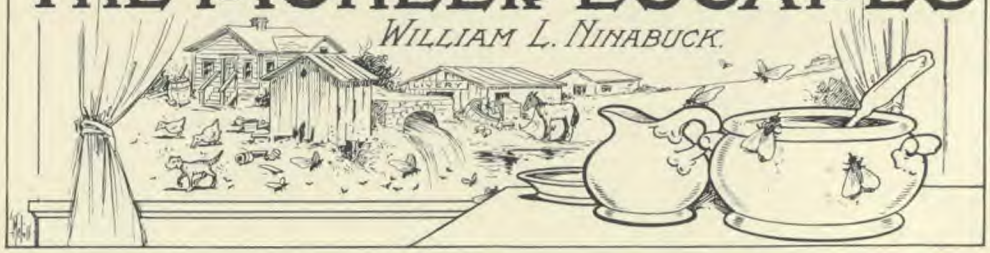
Prominent features will be "Christian Temperance," "Bible Hygiene," "The Temperance Movement," "School of Health" (Diet, Dress, General Hygiene, Home Treatments, Nursing, etc.), "Cooking School." Each issue will contain something of practical value to every one interested in health and efficiency.

PUBLISHERS HEALTH AND TEMPERANCE.

Takoma Park, Washington, D. C.

THE PIONEER ESCAPES

WILLIAM L. NINABUCK.



THIS day I am steadily troubled in conscience. In the midst of activities that distract, that ordinarily gain the easy concentration of my thoughts, I find my unwilling mind returning to dwell on a neglect, small but of inevitably vast import and consequence, that was mine but a few hours ago.

I had no sooner seated myself at the breakfast table this morning than my punctilious eye chanced to fall upon a black and roving speck ascending the white slope of the sugar bowl. A quick suspicion darted in my mind; I leaned over alertly in the half light and peered at it. Yes, it *was* a fly.

Instantly my blood was up, and I have no doubt that the quality of mercy was not strained in my eye, for, be it known, I know the fly, his filthy origin, his infamous career, his crimes. My meetings with him are dedicated to his swift destruction. Is it to be marveled at, then, that this sudden encounter, after months of buzzless silence, should have pricked my desire for combat? I caught myself gripping my table fork, eager to set forth upon him.

HE WOULD WALLOW IN THE MOST INDESCRIBABLE FILTH

"Aha!" said I, "so you are the summer's first fly. Well, you shall reckon with me for your presumption, for I shall crush your low life out!" and I pointed him out to those who were breaking the night's fast with me. The fly was calm in the face of my threats; brazenly he continued dragging his vile person up the white slope of the sugar bowl.

LADEN WITH THE HIDEOUS FOULNESS OF STABLES

He was small and looked innocent, but I shuddered, thinking what a disgustingly horrible little monster he really was, as I had so often seen him under the microscope. And even today he would fly out into the world, into the most indescribable filth, which is his natural habitat, and wallow in it, get himself covered with it, and bring it back to the white slope of the —— O, he would?— Never, so long as *I* was here to crush him before his detestable career began!

But alas, how shall I continue? I have a thousand regrets; but when all is said and done, I must confess that that was an idle boast. After all, I did not kill the fly. I can scarcely imagine how it happened, for the whole proceeding lived in not a minute's time.

I think it was the fact that the fly was young and feeble, moving slowly and erratically up the white slope of the sugar bowl, that caused me foolishly to dally and to waste a precious moment. I could have reached out a firm, deadly hand, and with a thumb and finger snapped his yet unsteady, evil life at once into oblivion.

But in my false security I chose first to pluck my napkin from its ring and to bandy a remark or two across the table, and when I had suited my foolish convenience the fly was not there. Frantically my eyes followed the white slope around the sugar bowl and dipped over into the dark interior — but the fly was not there.

BOUND INEVITABLY TO CRAWL UPON THE FOOD WE EAT

So today I am a victim of my conscience, and no one shall blame me for so being, but doubly for the reason of my being so. By this time that fly has long winged his nauseating way out to desecrate the bright sunshine. Strength and confidence have replaced his feebleness, and I cannot evade the thought of what will be the fearful fruit of my failing to improve the golden moment.

Do I not know that in the course of a few rapid weeks this hair-legged thing will breed a thousand more; that by the middle of the summer the evil progeny of this one early fly will number in the countless millions, swarming through all the air, laden with the hideous foulness of the gutters, stables, sewers, bound inevitably to crawl upon the food we eat? Sickening thought, away! or else I shall be overcome. Do I not know that in this summer there will be disease, — typhoid and cholera and other diseases,— that thousands of these flies will come and load themselves with filth and carry disease and death to precious lives that swelter in the slums or that live in false security in more favorable localities.

CARRY DISEASE AND DEATH TO PRECIOUS LIVES

But what have I done? I could have snapped that feeble fly to nothingness with my first finger and my thumb; and yet I let it buzz away from the white slope of the sugar bowl — into the world!

WHEN AND HOW TO REST

ANNE GUILBERT MAHON

"I NEVER rest in the daytime," boasted a busy woman.

Every winter that woman had a "nervous collapse," as she called it, and spent from two weeks to a month confined to her room, absolutely unfit for any kind of work. She rested then, incurring the expense of extra help, nursing, physician's attendance, and druggist's bills. She could not be convinced, however, that by not working so constantly or so hard she could have saved herself the fit of illness.

How many women of the present day follow a like strenuous mode of living, never allowing themselves a moment's rest or relaxation until they are forced to take it in a sick room?

If sparing fifteen minutes or half an hour each day to rest and recuperate will keep a woman's nerves strong and enable her to continue work without undue fatigue, is she not unwise deliberately to disregard this necessity and go on until she is forced by illness to rest?

There are times when a woman's whole system is crying out for needed rest and relaxation, but she will not heed it. Perhaps she may not feel actual bodily fatigue at first, but she is using up more energy than she can afford; and in time the breakdown will come, suddenly it will seem then, but, as the doctor told one woman, "It has been coming on you for months;" and it usually takes months to recover.

There are danger signals before this period of utter prostration, which every woman who wishes to keep healthy and strong and be able to go on with her work should heed.

When she finds she is speaking irritably and impatiently at the slightest provocation, she should stop and take as long a rest as possible. Continued and uncalled-for irritability shows that the woman is unconsciously battling with weakness, and her nerves are all on edge.

When a woman finds that she is nervously rushing from one task to another, working sometimes out of breath, worried over the mountain of work before her, when everything seems to go wrong and life is nothing but a series of petty annoyances and tribulations, she should call a big halt, and, no matter how much work there is for her to do, she should try to go about it slowly and calmly, breathing deeply and evenly all the while, and, as soon as she can, go off and take a big rest. She should retire early, and should take as many short rests in the day as she can manage.

Neuralgic pain is another signal to warn a woman that she needs rest. One writer on health matters states that she has never known a case of neuralgia which could not be cured by rest alone. Neuralgia is usually a sign of depleted nerve force, and the remedy is — rest.

Depression without due cause is another evidence that, nine times out of ten, one is worn out and has not the energy to conquer either the real trouble or the imagined one. A remedy for an unaccountable fit of the blues is to retire to

Half the spiritual difficulties that men and women suffer arise from a morbid state of health.— *Henry Ward Beecher.*

one's room, lie prone and relax, taking long, deep breaths. This is guaranteed to effect a cure of the worst case of blues, especially if it is followed by brisk exercise in the fresh air, a good walk, or the accomplishment of some useful work.

When a woman feels as if she must "scream" or as if she was "going all to pieces," this is one of the most important of the danger signals; and no matter what duties press, she should drop everything and rest until she is entirely free from these distressful feelings. If she does not heed this warning but goes on working, serious results are likely to follow.

The woman who drops everything, say, for a half hour or so after the noonday meal, and gives herself up to rest, relaxation, and recuperation in a darkened, well-ventilated room, will almost invariably feel fresher and be able to accomplish more work in the afternoon than the one who goes on working without interruption, unrested, unrefreshed, plodding wearily along from the beginning to the end of the day. It is not a waste of time to stop and rest. In reality, it saves time, for one is able to accomplish work so much better and faster when strong and well rested.

If every woman would observe this period of rest after the noonday meal, even if only for ten minutes, there would be less friction in the household, fewer worn-out women dragging themselves through days of labor, fewer cases of nervous prostration, and fewer incurable invalids.

To rest, one must relax. This is not easy at first, especially if one is in a nervous, tense condition, but it can be acquired with a little practice, and will make such a difference in the effect of even a short rest, that it is worth every woman's while to master it.

Lying flat on the bed, in loose clothing, in a darkened, well-ventilated room, one should begin by taking several deep, long breaths, inhaling slowly, retaining for a second, then exhaling as slowly and evenly as possible. This exercise is in itself a wonderful means of relaxation, and will do much to overcome the tense, nervous condition, which is a main cause of nerve exhaustion.

After taking the long breaths, begin with the right hand and arm. Raise the arm slowly at the side, then drop it suddenly, making it as limp as a rag. Take the left hand and arm next, then the legs, then try to make the whole body feel as limp and relaxed as possible. After a short time this can be accomplished, and then one will rest in a really relaxed way which will afford untold refreshment and strength.

Cheerfulness, good humor, and peace of mind are powerful elements of health.— *Lord Avebury.*

Never should a woman allow her thoughts to dwell on unpleasant subjects, or on any worrying details of work ahead, while she rests. She should guard well her thoughts, trying not to think too strenuously of anything; but if the mind must be occupied, then let her think of all the pleasant things she can — attractive bits of scenery, beautiful pictures, anything which will serve to divert and refresh her.

If a woman takes this period of rest each day, relaxing and allowing herself to rest and recuperate, she will find that it not only fits her for better work during the rest of the day, but that it builds up new strength and actually wards off illness and nervous breakdown. Is it not worth while, then, to "rest in the daytime"?

FIGHTING DISEASE WITH ITS OWN WEAPON

JAMES FREDERICK ROGERS, M.D.

IT was a most ingenious and happy idea of medical men, that of preventing and curing disease by making germs war against germs.

In the infancy of science, when sickness seemed the result of the presence in the body of an evil and spiteful spirit, the apparent though unseen cause was attacked by the medicine man with the pounding of tom-toms, the shaking of rattles, and the shouting of incantations. The evil spirit was often driven from his prey, or so it seemed; for as frequently as not the sick man recovered.

Later, as the belief in possession of the body by demons ceased to be a satisfactory explanation, disease was attacked on the seemingly rational principle that one evil ought to counteract another evil, that foul might overcome foul, and the vilest thinkable concoctions of frogs' eyes, bats' wings, snails' slime, nail parings, dung, and the like filth were poured down the throat of the sick man.

With increase of knowledge came the more rational use of drugs, a few of which, it was found by experience, produced some special effect upon the organs of the body, and so might help them in their struggle against the something which produced fever, pain, delirium, and prostration.

Lastly, and very lately, with the discovery of the true cause of infectious diseases, the scientist has hit upon the brilliant and brilliantly successful idea of making this cause, the bacterium, fight itself; has actually breathed its own noxious breath back into its face with fatal effect; and has, besides, thrown the dead bodies of these minute but mighty destroyers, by the billion, into their own camp, producing dismay and rout among their kin by the presence of their decaying carcasses.

It was observed a good many years ago that persons suffering from certain forms of cancer, who happened to contract erysipelas and survived the erysipelas, were often spontaneously cured of the malignant tumor and restored to their usual health.

It was little dreamed of by those who first observed this phenomenon that medical men would one day make use of this hint that the cause of disease might be pitted against itself in the treatment not only of these tumors but of other more common bodily afflictions, and apply the hint with such method and such precision that there would be no danger that the cure would prove as bad as the disease or worse. It was, of course, only after the finding of the definite thing which causes a particular disease — the microbe — and after thorough study of its domestic habits and ways of doing business that such a system of treatment could be thought out.

In 1883 it was discovered that erysipelas was always caused by the presence in the affected part of a chain-forming microbe. This organism, which, like most of its disease-producing fellows, is

> The physical is the substratum of the spiritual; and this fact ought to give to the food we eat and the air we breathe, a transcendent significance.— *Tyndale.*

a half-plant, half-animal mite, was soon cultivated in the laboratories, just as onions or potatoes are cultivated, only a field of millions of microbes is not larger than a finger nail, possibly not larger than a pinhead, and can be grown overnight. A microbe contains within its body, and gives off, while alive and multiplying, materials characteristic of itself, which in the case of some microbes are extremely poisonous to other organisms; and it is these poisons, which, more than the germs themselves, are injurious and destructive to the body in which they find a lodging place. When this was learned, scientists hit at once upon the idea of destroying the germs by heat or chemicals, after a considerable colony of them had been grown, and of injecting into the diseased person their dead bodies, or definite and harmless amounts of the poisons which they form — instead of inoculating the living germ, which might grow in overwhelming numbers and manufacture a deadly amount of poison. Though extremely minute, the germs were counted by the thousand or million, and their poisons accurately measured as to their potency. The indispensable aid in determining the fighting power, that is, the strength of these poisons, was the rat, rabbit, or guinea pig. When the results obtained by inoculating various amounts into such animals were learned, the dosage was easily determined for man; for the human body is, in its reaction, or response to bacteria or their poisons, equal to just so many guinea pigs, proportionate to their respective weights.

Dr. Coley, of New York, prepared such a serum from the poisons of the germ of erysipelas, and it has been used with much success for several years in the treatment of malignant tumors.

But this was but a beginning, and a rather haphazard one at that; for physicians, with all their most strenuous searching, are not yet certain that a cancer or other tumor is caused by microbes, although from the evidence we have just cited these are under strong suspicion.

One other fact, besides its bacterial origin, was necessary before the method of fighting disease with its own tools could be more definitely and certainly applied. For ages it had been noticed that after one attack of some diseases the person was no longer in danger of the same affection. The why of this was revealed in the discovery that during an attack upon the body by bacteria, the body defends itself against the invaders by manufacturing, and afterward keeping on hand, certain materials which act as chemical antidotes, neutralizing or destroying the effect of the poisons given out by the germs, and certain other substances which destroy the germs themselves. The symptoms of an infectious disease are nothing more nor less than the effect of the presence of certain bacteria and their peculiar poisons, plus the special activity of the body in manufacturing materials to counteract these. If the body succeeds in making such antigerm and antitoxin substances in sufficient amount for the occasion, the invading bacteria are routed, and the person recovers. If the bacteria are very vicious, or if they are present in overwhelming numbers, the body succumbs.

After studying step by step the things which we have recounted, the student of disease figured out that since the human body can and, in fact, must develop these protective substances within itself on the occasion of the presence of the living and multiplying germs, these same

What medicine will procure digestion? — Exercise. What will recruit strength? — Sleep. What will alleviate incurable evils? — Patience.— *Voltaire.*

antagonistic substances may be produced in other animals, and used to help the human body in such emergency.

In diphtheria the body has to deal with the poisons produced by the germs rather than with the organisms themselves, for the latter do not find their way inside the body, but remain in the nose or throat, where their poisons are readily absorbed. Working along this line, the experiment was made of injecting into the horse such an amount of the poison from the germs as it was known beforehand that he could safely handle; in other words, could develop enough antitoxin fully to combat. After a few days a larger amount of the poison was injected. Another dose was given, and then another, in increasing strength, until the blood of the horse as tested carefully in the laboratory was found to contain so much of the poison-fighting substance that a definite measure of this antitoxin thus prepared would save a guinea pig which had received a dose of the diphtheria poison one hundred times the amount usually sufficient to kill him. A thousand or so of these units was found, by calculation, to be a protective dose for man.

We all know how immensely successful the use of this antitoxin has been, and how it has not only robbed the disease of its terror, but has served to protect the well against infection by the germs.

A similar advantage has been taken of the drumstick-shaped germ of lockjaw. Here again it is the poison formed by the mite, and not the mite itself, which is so dangerous; and this poison is so extremely potent that 1-250 of a drop will kill a rabbit, and 1-25 of a drop a dog, in twenty-four hours. It is about two hundred times stronger than strychnine. The protective serum prepared for this disease has proved very successful, as it seldom fails to effect a cure if given before symptoms of the disease appear. After this stage it has not proved very effective, for it would seem that when the poison has increased in the body to this extent, it has damaged the organs beyond assistance of any kind.

In the case of spinal meningitis the body must deal especially with the microbes, though also with their excretions. The scientists of the Rockefeller Institute proceeded to work out a protective substance for this disease by inoculating the horse with increasing doses of dead meningitis germs, and, finally, after many weeks, with the living bacteria. By such a procedure the horse became able to protect itself, and its blood, of course, contained very powerful chemicals to combat the germs. The serum so prepared, when given early in the disease, has proved very effective,— much more so than any other means of treatment,— although, as in lockjaw, when the germs have had time to work in the body, its beneficial effects are diminished.

On the problem of the terrible plague of tuberculosis the scientists have been toiling with might and main, and in this disease the germ has been used against itself directly. Both the dead and pulverized tubercle germ and its poisons, in carefully graded doses, are injected into the human body for the purpose of increasing its antagonism to the living germs of the disease which have found lodgment. Since the resident germs become more or less walled off in the lungs, bones, or elsewhere, from the immediate reach of the antagonizing substances in the blood, the effect of such

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The way we take the small things of life, the impression we let them make on us, counts greatly for health or against.— *A. K. Fallows.*

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treatment is relatively poor, but it can be said for it that it is one of the best helps we have toward producing a cure.[1]

But if this germ-fight-germ method of cure is of little effect in this chronic disease, it is more successful in such slow-going afflictions as boils, acne, and Rigg's disease of the gums. Fairly brilliant results are often obtained through stirring up the body from a sluggish state to a more active warfare against the resident germs, by the injection of large numbers of dead germs of the same kinds that produce these diseases.

"Rheumatism" is, in many of its forms, a germ disease; and for this stubborn affection the germ and its poisons are being turned against itself with good effect.

But prophylaxis is always better than cure, and it is here that the germ is practically annihilated through the use of preventive doses of the characteristic germs. These are grown in glass and destroyed by heat or chemicals. Five hundred millions of the dead germs are injected under the skin, followed in a few days by a second and a third injection of about a billion germs each. This preventive treatment has been tried very thoroughly and successfully in the armies of this and other countries and among the nurses of hospitals. The city of New York now offers free preventive inoculation for the disease, in the hope of eradicating it from the city.[2]

The searchers into the secrets of germ life are hard on the track of the fellow that produces infantile paralysis and cripples so many little ones for life. They already have him in bulk, though there is no microscope powerful enough to show the individual separate from his fellows. They know many of his habits, and they have been able to prevent his causing any trouble in monkeys and other animals. It seems only a question of time and of more thinking and experimenting before a protective serum will be ready for use in case of epidemics of this disease.

Of scarlet fever, measles, and a few other infectious diseases, we do not yet know the specific germ, but we can look forward with hope to a time when the causes of these will be made operative as cures.

Still another way in which the germs have been made to fight disease, is by the clever ruse of using them as detectives in discovering the hidden presence of their fellows in the body. Where

> The building of a perfect body crowned by a perfect brain is at once the greatest earthly problem and grandest hope of the race.— *Lewis.*

most certainly made to bring about its own ruin.

In lockjaw the serum just mentioned is a sure prevention if given before or at the time of the injury. The diphtheria antitoxin also prevents the germs from getting a foothold. Cholera has been one of the dread modern scourges, but after two injections under the skin,— one of the germs of cholera in an enfeebled condition, one of the germs in a virulent state,— a man can go about in the presence of that foul plague without danger.

One of the latest diseases to be treated after this fashion is typhoid fever. This disease has already been greatly reduced in frequency by the purification of water and milk supplies, but it can now be

[1] The fact is fairly well established that a very large proportion of persons contract tuberculosis in early life, and the body defends itself by elaborating certain substances antagonistic to the germ or its poison.— Ed.

[2] The antityphoid inoculation has not proved to be harmless in all cases, but it has certainly lessened in a marked degree the prevalence of typhoid where it has been used.— Ed.

tuberculosis is suspected, but the lurking place of the germ cannot be made out, a drop of a preparation made of tubercle germs is rubbed into the skin. Within a few hours, if the germs are present, the skin at this point presents a different appearance than would be produced by the use of any other substance. If the germs are not in the body, there is no such response. This method is of great value also in that it can be applied to cattle for the detection of tuberculosis, and this test [the tuberculin test.— ED.] is now used extensively for that purpose. Such a test has been used by a somewhat different method in some other chronic diseases, and it is of great good in that it gives opportunity for treatment of the disease to be begun long before it has advanced so far as to produce perceivable or permanent damage.

The immediate effect of the inoculation of the germs or their poisons for prevention or cure, is some general bodily discomfort, which, however, lasts but a few hours. Such a trifling inconvenience is not to be compared to weeks or months of suffering from the disease itself, and, perhaps, a lasting impairment of the body. For even if one recovers from a disease, he is likely to be crippled in some way for life.

Prevention is better than cure even if the cure be a certain one. We can all help science prevent disease, by living temperate, clean, well-balanced lives, and helping others to live such lives; by keeping clean cities, clean water, clean milk, and pure food supplies; by the use of screens and the destruction of germ-carrying insects; and by the protection of the laborer against unnecessary conditions which war against health.

All this brilliant work in pitting germ against germ has been accomplished within about a quarter of a century.[3] Every step has been gone over with infinite pains by many highly skilled and patient workers in many laboratories in many countries. Not a few scientists have sacrificed their lives to this end, and the lower animals have lent their invaluable help in the experiments which have led to these great results in the saving of life. We owe the animals a profound debt of gratitude, and future generations will owe them a greater if they will take a glance backward at what was accomplished in medicine in the latter end of the nineteenth century and the beginning of the twentieth.

Take care of your health; you have no right to neglect it, and thus become a burden to yourself and perhaps to others.— *W. Hall.*

[3] It should be remembered, however, that vaccination against smallpox, which is in reality fighting germs with germs, is very much older.— ED.

UNNECESSARY FOOD WASTE

E. CON O'MIST.

There is a costly waste of food in the interim between the sale of bulk foods in the store and their use in the home. This waste, which occurs largely in the absorption or leakage of packages in which the retailer delivers the food, could be almost eliminated if housewives would return to the obsolete practice of taking a dish with them to the store to receive the food which they buy. Such a method, however, is impossible in our modern commercial organization, and for this reason a study of containers may enable the discerning consumer to prevent a loss of valuable and high-priced foodstuff.

THE increased cost of a commodity packed in a sanitary manner in retail quantities at factories will always constrain the consumer to buy bulk commodities, which are always lower priced, qualities being equal. Another important consideration is the possible shrinkage of the factory-wrapped package. Inasmuch as these are dispensed without weighing in most cases, and sold for what they are generally supposed to contain, both the retailer and the consumer are often victims of a short weight, which, however unintentional on the part of the packer, operates to make the purchaser pay for a quantity which he does not receive. The inevitable shrinkage of factory-wrapped goods is recognized by all food-control officials, and the amounts of such shrinkage which shall be regarded as legal are published by food-control departments of our government bureaus.

Contrasted with this is the very excellent statute which provides for the sale of net weight only, excluding the dish or container of all foods dispensed in bulk. Hence the probability of receiving full measure is much greater in the purchase of the bulk commodity, it being weighed out at the moment of purchase and not subjected to shrinkage in storage prior to retail sale. An example of shrinkage of package goods factory-wrapped is that of print butter. Louis Fischer, of the United States Bureau of Standards, announces as the result of a very thorough and comprehensive investigation of the print butter situation in the United States, that consumers annually pay about eight and a quarter million dollars for print butter which they do not receive. He found the shrinkage of butter in prints to be a widespread defect in the distribution of this food, and one which creameries under present methods are not always able to overcome. Some prints of butter were very short in weight because of conditions the retailer could not control. The dispensing of all butter in packages made up at moment of purchase from bulk stocks of the commodity, would insure the full weight to all purchasers.

These facts have operated to keep before the public a very large line of bulk foodstuffs which are quite generally dispensed in dishes made from wood and other materials. It is with the effect of these containers on the food and the economy of their use that a recent and very timely investigation has to deal. That the dish is an important and useful part of the retailers' service is admitted. Many foods cannot be dispensed in any other container. Inasmuch as these dishes are firmly established as containers and are in constant use in all parts of the United States and will probably continue for an indefinite time to be in use, consumers should study carefully the effect of such method of delivery, and govern purchases accordingly. At an investigation which has just been completed by the Tri-State Laboratories — a Middle West scientific institution which is recognized as competent and impartial in its work, and which stands ready to demonstrate any number of times which may be necessary the truth

of its findings relative to dishes — the physical, chemical, and bacteriological characteristics of dishes in common use were carefully investigated.

The first tests took the form of experiments intended to determine the absorption of foods by the dish, the big source of waste in such methods of distribution. Other investigations dealt with the texture and durability of such dishes, their utility as permanent containers of food after its delivery to the home, and the very important item of possible contamination of foods by the materials out of which the dishes were fashioned.

Original packages of dishes as shipped from the factory were purchased in wholesale establishments jobbing such containers to the retailer who uses dishes. Four kinds of dishes were found in common use. One dish was fashioned from sugar maple veneer. The others were paper or pulp composition. These dishes were weighed on tested scientific instruments before use. They were then immersed in water, thoroughly drained, and weighed again. This gave the maximum absorption possible. The four kinds of dishes were then subjected to the usual operations of actual use. Sets of each kind were weighed one at a time, and taken to retail food establishments where such foodstuffs as are commonly sold in dishes were placed in them. The dishes were then delivered in the usual way to the laboratory. A graduate of domestic science removed the food from the dishes in the manner approved by such institutions; that is, all the food which could be removed without scraping off particles of the dish, was taken out. The dish was then weighed again. The difference showed the total loss of the food purchased. In the wooden dish the absorption was of course much less, owing to the close texture of the material from which it was made. Its general appearance was better than that of the dishes made from soft material. The absorption of some of these other dishes was very heavy, great quantities of the oils or juices of food being eagerly absorbed by the spongy material from which the dish was fashioned. Some of the dishes were coated with paraffin. This did not operate to prevent the dish from absorbing food in almost the same proportion in which the uncoated pulp dish absorbed it. None of these dishes were impervious. Some collapsed and fell to pieces under the weight of juices they had absorbed. Butter and lard especially were wasted by absorption in the soft containers. Hamburg steak, which is representative of all chopped meat, lost a very heavy percentage of its juice in the soft dish. Removal of all the food from the soft dishes was impossible because of the softening of the fibers of the dish and the readiness with which they detached from the dish and followed the food out of it. The lining of these dishes with paper before the food was put into them did not operate to retard the absorption of the food by the dish to any appreciable extent. It resulted in a still greater loss, as the paper lining took up large quantities of the food and then permitted more to soak through into the dish. Tests showed that the dishes made from soft material did not have any appreciable tensile strength when moist. They were weakened and destroyed by the weight and composition of the food they were designed to hold. Of course the maple dish lost nothing in strength or durability by reason of being subjected to moisture. It even acquired a greater flexibility.

The report of the laboratory follows. The chief, C. S. Rex, is a member of the American Public Health Association, and is a scientist who has had a large and successful experience in food investigation cases. There is every reason to believe that his investigation has been fair and thorough. His report on the extent of contamination of foods by dishes in common use will follow the report which is presented herewith: —

Appearance of Typical Dishes A, B, C, and D in Actual Use

Dish C
Containing Peanut Butter

Dish A
Containing Peanut Butter

Dish D
Containing Peanut Butter

Dish C
Containing Baked Beans

Dish D
Containing Baked Beans

Dish B
Containing Baked Beans

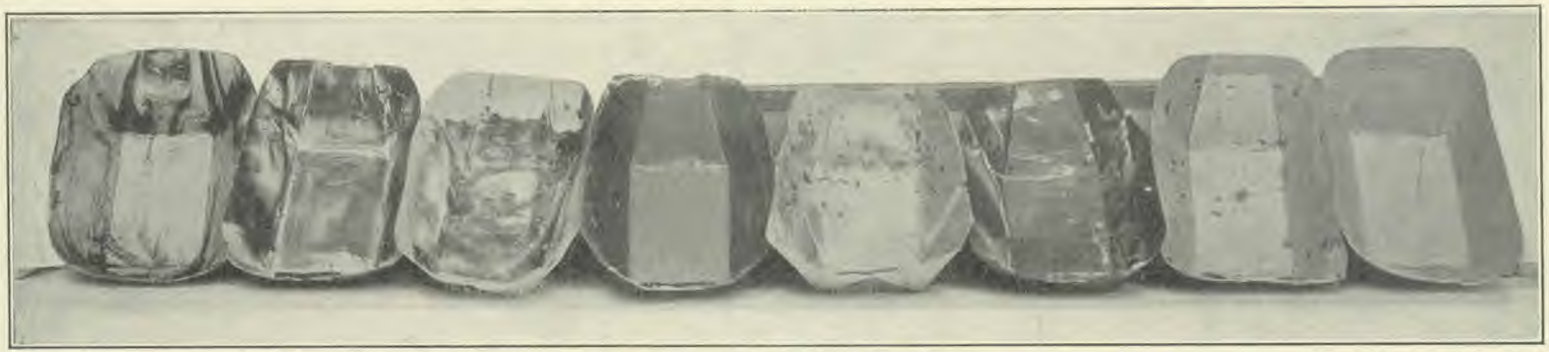
Dish B
Containing Apple Butter

Dish D
Containing Apple Butter

Dish C
Containing Apple Butter

Appearance of Dishes A and B After Removal of Food

Showing Visible Evidence of Absorption of Food Juices and Oils



Dish A. Contents and Net Absorption, right to left as follows:

	Apple Butter	Butter	Baked Beans	Peanut Butter	Potato Salad	Lard	Relish	Hamburg Steak
Grams:	12.723	14.406	11.820	8.526	12.041	11.723	14.705	10.991

Dish B. Contents and Net Absorption, right to left as follows:

	Butter	Apple Butter	Baked Beans	Peanut Butter	Potato Salad	Lard	Relish	Hamburg Steak
Grams:	20.694	16.183	14.642	11.655	11.494	12.991	19.606	10.663

Appearance of Dish D After Removal of Food

Dish D. Contents and Net Absorption, right to left as follows:

	Butter	Apple Butter	Baked Beans	Peanut Butter	Potato Salad	Lard	Relish	Hamburg Steak
Grams:	6.233	7.685	6.606	3.748	6.490	6.418	8.040	5.483

The big facts in the foregoing charts are clearly seen. It is easy at once to figure the immense waste of foods dispensed in some of these containers. Multiply your own consumption of these foods per annum in pounds by the loss per pound shown in the figures. You have then one item that will figure large in the high cost of living. It is impossible to do without the dish. Neither does lining it with paper suffice to save the food. It is within the province of the consumer, however, to insist that foods be dispensed in containers which do not waste nor contaminate it. It is the right of the consumer to demand a container that shall be fit to hold the food for a greater or shorter time as may be expedient after the food reaches the home. The consumer ultimately pays the cost of all these packages. He has the privilege to ask that one be used which is sanitary, attractive, and least absorbent.

Boards of health have long been active in the scrutiny of foodstuffs and their care in stores. Weight-and-measure officials have been active in a commendable way in insisting that foods shall be sold at net weights, and in condemning and destroying dishonest scales. Retailers who are progressive and public-spirited have joined with the officials in working toward ideal conditions. But none of them has given a thought, apparently, to the character of the container that carries the food to the user. The city sealer who condemns the practice of " weighing in " the dish with the food overlooks the much more important matter of absorption of food by the dish, a larger item in every case than the weight of the dish. The health officer forgets the possibility of contamination from the surfaces of certain dishes which are said to be made of the beaten pulp of waste paper and refuse from ragpickers' sacks, with no attempt at purification in the process of manufacture. The food inspector who compels the screening of exposed foods overlooks the danger to that food in process of delivery.

BUILT FOR SERVICE

SUBSTANTIAL CONSTRUCTION

THE illustration on the opposite page shows a type of building construction in the Alps, which, because of its oddity, will repay careful study. In its solidity and in its rough-and-ready make-up, it comports well with its rugged surroundings.

The body of the building is about as substantial as could be made with wood; and doubtless the fierce storms and heavy snows postulate such a heavy construction.

A first glance gives the appearance of a rough-board construction, but a closer examination reveals the fact that the building is made of squared logs. The ends of the logs, about six by eight inches in section, can be seen at the corners and near the center of the building. The rafters are supported on larger logs only partly squared. Ends of the timbers on which the floors rest show through the wall at the different levels.

The building consists of three stories and an attic, all the stories being reached from the outside. The rather crude stairway is made, apparently, of a mixture of mud and stone,— a kind of concrete overlaid with flat stone, of which there is a great abundance in the immediate vicinity.

The roofs of the various buildings are shingled with similar flat stones, perhaps a slate. The railing of the stairway shows some attempt at ornamentation. The work of shaping all the timber seems to have been done with hand tools, and for this reason is commendable. The timbers, which have never been painted, show the effects of weathering.

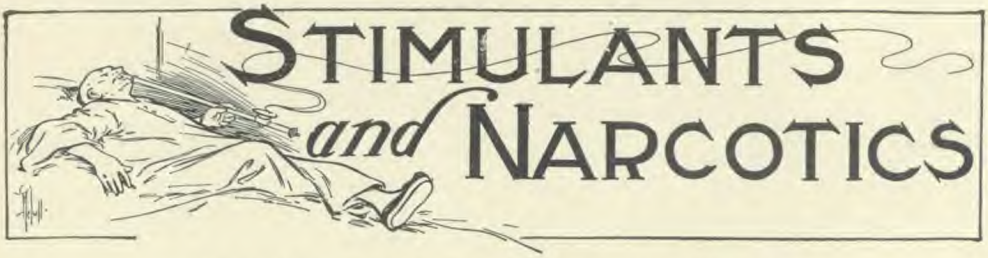
Some of the upper windows, which at first glance seem to have panes broken out, are probably of the same type as those of the lower story,— the large window containing a smaller hinged two-pane window for the purpose of ventilation.

The stone chimney, or possibly dormer, barely shows over the roof of the building.

The character of the pile of wood on the stairway — mostly roots — indicates that fuel is a precious commodity.

The general disposition of wood, clothing, ladders, and the like, betokens an esthetic sense, differing from what may be customary to us, but the window box of creeping plant indicates that at least one tenant has some appreciation of the beautiful.

One must judge that the interior of the house is inadequately lighted, according to our standards. But the part toward the hill, from the lack of windows, is probably not used for living rooms, but for storage.



ALCOHOL AND SOME OF ITS EFFECTS

T. D. Crothers, M. D.

Dr. Crothers, superintendent of a home for the care of inebriates and drug fiends, and lifelong student of the subject of drug addiction, has a valuable article on "The Neuroses of Alcoholics and Inebriates," in the December, 1914, *American Medicine*, from which the following statements are taken.— Ed.

CLINICAL observations of patients who come to hospitals and sanatoriums show diminished sensory, motor, and mental activity, that can be measured and stated in exact terms. This condition is practically a palsy, which increases with the continuous use of spirits. The conclusion was that alcohol, even in small doses, is an anesthetic, either for a longer or shorter period. Some illustrations bring out this fact.

A noted astronomer declared that every time he took a glass of wine or beer his work for a few hours after was full of errors and had to be repeated. He had to give up banquets and dinners in which wine was served, and announced that he had found from personal experience that all use of spirits was injurious.

In one of the large observatories in this country, there is a specific rule that assistants and observers must abstain from spirits, coffee, tea, and tobacco. This is a recognition of the action of alcohol and its injurious effect on all work requiring accuracy of the senses and reason.

In the musical world Sousa's band and other orchestras illustrate this same fact in their experience. No member is permitted to drink spirits, or even wine or beer, and all are required to abstain from tobacco and be abstemious in the use of coffee and tea. The reason given is that these drugs impair hearing and the accuracy of the sense of harmony and melody, as well as lower the muscular control of the fingers and lips.

Familiar examples are becoming more and more prominent in the management of railroads, and the increasing insistency that all officials and operators in the train service be total abstainers. Thus everywhere in practical life the anesthesia of alcohol is recognized, and becomes more and more apparent in the mistakes and errors that are traceable to its use. Numerous degenerations constitute a more or less prominent symptom in alcoholics.

> It is impossible to take into the human organism, day after day and year after year, large doses of a poison, such as caffeine, without in time damaging the living cells and bringing about degenerative changes.— *Dr. D. H. Kress.*

The Alcoholic

THE alcoholic is a continuous drinker of wine, beer, spirits, and other forms of alcohol, as luxuries, beverages, or medicines, in small quantities daily. He is literally a toxemic, from poisons introduced into the body from without, and poisons formed by chemical combination within, producing most complex disturbances and degenerations.

The early symptoms are always obscure, and often limited to an exalted *ego,* in which the person revels in the thought of his superior ability and his conviction that spirits have no injurious effect, and that his will power is amply able to control its use.

After a time disturbances of nutrition and circulation appear, vitality is lowered, and efficiency diminished; then come rheumatism, neuritis, and disturbances of the heart, all of which are attributed to overwork, nerve exhaustion, and other causes.— *T. D. Crothers, M. D., in American Medicine, December, 1914.*

Liquor and the War

IT was Russia which furnished the first striking governmental recognition of the fact that war is a very big business enterprise, in which the fullest efficiency of the employee — the soldier — must be insisted upon by the employer — the government. But Russia's acceptance of this situation did not commit it to any new theory. The antiliquor movement in this country, which now counts the conquest of eighteen States for the dry column, has been promoted vastly more by the interest of big business, corporate and otherwise, than by sentimental and religious effort. Rigid restriction or prohibition of the liquor traffic began to make big gains when business decided that it was suffering through the inefficiency of workers, resulting from use of liquor. The railroads were leaders in crusades to prevent such indulgence; they have been followed by many other employers.

Now comes the British government, with a bitter complaint, voiced by Mr. Lloyd-George, that the much-needed employees of the armament works will not all work full time because drink interferes. The government, he declares, needs munitions even worse than it needs men, and the situation is a grievous one. Because of it, he announces, the government is considering further measures for control of the traffic.— *Washington Times.*

Prohibition in America

ONE of the things which struck me in America was this: When we think a thing is good, we talk about it; when they think a thing is good, they do it. This can be more readily effected there, as each State makes its own laws with a knowledge of its own needs. Think of how many years ago we would have had the Temperance Scotland Bill if it had depended only on the votes of Scottish members of Parliament. . . .

What has been the general effect of prohibition in America? It has called public attention strongly to the evil effects of alcohol and to the good results of abstinence from it, and so influenced public opinion and practice. In repeated visits to America, ranging from New York State to California and from Florida to the State of Maine, I have never once heard it said that prohibition had done harm; I have often heard of the great good it had done. It is, of course, true that I did not talk much with saloon keepers and distillers, but I did talk with many who were not abstainers. I was astonished at the number of people I met who were not pledged abstainers, but who never tasted intoxicants.— *William L. Reid, in the Medical Temperance Review (London), February, 1915.*

The Harrison Law a National Obligation

THE Harrison law is not the result of any sudden spasmodic impulse on the part of Congress. It is, on the contrary, a part of a carefully considered program for the control of the traffic in habit-forming drugs, and especially in opium. This movement is not confined to this country; it is international, although the United States, it is a pleasure to record, has been the leader in the movement. It has been a part of the established policy of our government since the earliest relations with China and other Oriental nations, to discourage the opium traffic in the Far East. As early as 1833, a treaty with China forbade any American citizen to engage in the opium trade.

In 1906, China began earnest efforts to crush out this evil. To aid her in this, the United States initiated an international movement to secure the cooperation of the leading Western nations. As a result, there met at Shanghai in February, 1909, the representatives of thirteen nations, comprising Austria-Hungary, China, France, Germany, Great Britain, Italy, Japan, the Netherlands, Persia, Portugal, Russia, Siam, and the United States. This conference resulted in the establishment of the International Opium Commission, appointed to study the entire question and to submit recommendations. The next step was taken Dec. 1, 1911, when a conference of powers represented in the Shanghai Commission was held at The Hague. On Jan. 23, 1912, the members of the conference signed an agreement for a strict regulation of both national and international traffic in opium, morphine, and cocaine. To the carrying out of the program for the restriction of habit-forming drugs, not only is our national honor pledged, but also as leaders in this movement it is the plain duty of our nation to initiate such legislation as may be necessary. . . .

The object to be attained is the world-wide restriction of the use of opium and cocaine to their proper medicinal purposes. In securing this, the sympathy and support of every right-minded man and woman should be forthcoming. But physicians, especially as those who know better than any other class the dangers and ravages of drug addictions, should indorse and support in every way this effort for the uplifting of humanity, to which our national honor is pledged.— *The Journal of the American Medical Association, March 6, 1915.*

Liquor Forbidden to South African Soldiers.— A government order has been issued forbidding the giving of liquor to troops in the Union of South Africa.

Liquor Advertisements Banned.— In the Alabama prohibition law, recently passed by a large majority over the governor's veto, all liquor advertising is forbidden. The law even forbids the circulation within the State of papers from other States which contain liquor advertisements.

Drought Increasing.— Last year five States, Arizona, Colorado, Oregon, Washington, and Virginia went dry; recently three others, Arkansas, Alabama, and Idaho have joined the ranks; and before the year is ended, there is more than a probability that others will repudiate liquor.

Prohibition of Absinth Permanent.— Last August the French minister of the interior instructed the prefects of the various departments to forbid the sale of absinth and other similar drinks during the war. Now the president of France has signed a decree making this prohibition permanent.

Patent Medicines Destroyed.— The city government of Philadelphia has seized more than 4,000 bottles of Father John's medicine; and on the charge that these were misbranded and therefore misled the public, they were condemned and ordered destroyed February 18, under a decree filed in the United States District Court.

Mexico Drying.— General Villa has issued an order prohibiting the sale of liquor in his territory, except the city of Juarez, where liquor is permitted to be sold to Americans who cross the line for liquor when the saloons are closed in Texas. Evidently Villa thinks that if Americans want to make beasts of themselves, he will not deny them that privilege.

Idaho Submits Prohibition to People.— The bill submitting State-wide prohibition by constitutional amendment to the people, was passed unanimously by the house and with one dissenting voice in the senate of Idaho. The measure is to be submitted to the people at the general election next fall. There is no doubt that the State will vote dry.

Alabama Again Dry.— Of the nine Southern States that went dry, Alabama was the only one to return to local option conditions. The legislature recently passed a prohibition bill, which was vetoed by the governor. January 22 the legislature passed the bill over the governor's veto with an overwhelming majority. Evidently the return to saloon conditions was decidedly obnoxious to the better citizens.

War Less Ruinous Than Liquor.— The comptroller of the Russian treasury declared that, owing to the great increase in national savings due to prohibition, the extraordinary outlay occasioned by the war had caused no suffering in Russia. As proof he said that the savings in December, 1913, were 700,000 rubles; in December, 1914, 29,100,000 rubles. It would seem that, as stated by the *Searchlight*, dry Russia at war is more prosperous than was wet Russia at peace.

Does Prohibition Prohibit? — An Ohio brewery with $12,000,000 capital, asking for a receivership, attributed its failure to the recent legislation; namely, increase in the liquor tax in Ohio, which had closed twenty-five per cent of the saloons; the county option law, which still further diminished its sales; and lastly, prohibition in West Virginia, which cut off a business from this brewery alone of $500,000 a year. There is no reason to believe that the brewers in giving these causes for their financial embarrassment gave the temperance movement any more credit than was its due, for these men are loath to admit that prohibition is effective.

EXERCISING THE CHILDREN

Recently Dr. Eliza M. Mosher, of Brooklyn, N. Y., read a paper before one of the branch meetings of the Medical Society of New York State, on "The Care of the Abdomen in Infancy and Childhood,"[1] which is worthy of the serious attention of parents. Below is given a popular rewriting of this article. The accompanying illustrations, from the *New York State Journal of Medicine*, are given as suggestions to parents for exercising children so as to develop the abdominal wall and prevent enteroptosis, or "pot-belly," with its accompanying ill health and inefficiency.— ED.

THE recent careful study of the abdomen by the newer methods has revealed the fact that a partial or complete prolapse (falling) of the abdominal organs has a damming effect upon stomach and bowels of far-reaching importance. Frequently in patients having prolapsed organs there is a history of symptoms indicating that the condition originated back in childhood and infancy.

The muscular wall of the abdomen has a far more important relation to dropping of the abdominal organs than has been generally accorded to it. Especially in women who have borne many children there is an overstretching of the abdominal wall, resulting in a sagging of the organs, which accounts for ill health during and after the childbearing period.

"It is only needful to recall the delicacy of the abdominal wall in infants and young children to realize that infinite care should be given to its protection and development.

"During the early months of infantile life the horizontal posture of the trunk retains the abdominal viscera in place, and the almost incessant voluntary movements, up and down, of the little legs and feet, provide the best physical exercise for the development of the muscles in the abdominal wall. During the succeeding period, creeping and rolling on the floor add the needed increment of exercise to continue the normal developmental work.

"During these important periods of the infant's life the abdominal wall is unable to bear the strain of great pressure from inside without distention, and yet mothers and nurses ignorantly hold their infants in the sitting posture, trot and dance them up and down, jounce them over rough pavements in baby carriages, and in other ways stretch the abdominal wall and lengthen the mesenteric folds, whose office it is to hold the intestine in normal place.

"A stomach distended with food, and loops of intestines filled with it, are heavy, and by their own weight easily fall below their normal level. In these and many other ways stagnation begins. In its train follows the diarrhea of irritation, with flatulence, colic, and crying — all of which place added strain upon the muscle walls and mesenteric folds. Constipation also results, and it is not necessary that it shall be extreme to drag down the loosely hung transverse colon. Angulation at the splenic flexure easily follows this, with the almost inevitable dilatation of cæcum and ascending colon.

"In the typical 'pot-bellied' baby the abdominal wall has become so thin that it

[1] *New York State Journal of Medicine*, December, 1914.

is easy in a good light to distinguish with the eye the outline of the various sections of the digestive tube. Each of its sections is usually more or less dilated because of the temporary closure of some or all of the natural gastrointestinal gateways; namely, the pyloric, duodeno-jejunal, and ileocæcal."

Regarding the influence of intestinal poisons we recognize their far-reaching deleterious effects upon the body. We know that they lower its tone, making it less resistant to the entrance of germs, and we suspect that they hinder the work of the ductless glands, exhaust the sympathetic nervous system, and disturb the nutrition of the brain.

Granting these things, and that infancy and childhood, because of the undeveloped condition of the tissues, the flexibility of the spine, and the like, are periods of special danger, what can be done to prevent the condition of enteroptosis, and "pot-belly," in infants and children?

A few of the things that can be done are self-evident, such as regulation of the time of meals and quantity of food given, "a longer continuance of the horizontal posture of the trunk than is common; a life in the open air, free from bumps and jolts; prevention of mental forcing and early precocity; development of the abdominal muscles by every means possible."

"Overdistention of the stomach and intestines is common in bottle-fed babies, and is due to both overfeeding and the flatulence that accompanies indigestion. This condition is one favorable to the production of constipation, and should be guarded against with great care.

"An infant under six months of age should not find out that there is any posture of the body other than the horizontal, and his acquaintance with the out-of-door world would be better made from a basket on a balcony, fire escape, or even a window (safely caged), than from a bumping baby carriage. When the abdomen is sufficiently developed to safely permit the sitting posture, and the child shows an interest in things around him,

some modification of the 'gocart,' supplied with proper springs, and a seat upon which a child can balance easily, is better than the present baby carriage into the soft cushions of which he sinks, losing and gaining his equilibrium as his flexible little spine wobbles hither and yon."

"Little is needed for the development of the abdominal wall at this time, outside of perfect freedom of motion during waking hours. Petticoats, pinning blankets, and diapers should be so loosely fastened that they cannot interfere with the movements so important to a baby's digestive apparatus. It is of great importance that infants shall early learn to lie upon the abdomen as easily as upon the back; no one position, however, should be permitted to become habitual.

"From the time a child has learned to walk easily, there is little danger of abdominal injury until school life begins. His play instinct keeps him constantly changing his posture and varying his movements. There are a few kinds of play, however, that may prove injurious. Those which encourage the sitting posture on the floor are not desirable, nor are those which demand a stooping posture. To illustrate: a long-bodied, slender boy of five had a present of a little van. He spent hours squatting and stooping to load it, and often ran bent over, pushing it before him. After a month or two of this he had a severe attack of colic, the pain centering just below the navel. After some days in bed he recovered, and resumed his play with the van. The pain soon returned. After the third attack he was brought to the writer, and it was easy by auscultatory percussion to locate a V-like drop in the transverse colon below the umbilicus. A few carefully directed upward movements of the legs (the boy lying on the operating table) replaced the colon to its normal position. He was given no medicine, but his mother was instructed to conduct a set of upward kicking exercises three times a day in the form of play. Under these the colon kept its place, the abdominal wall thickened, and the general health of the child improved rapidly."

HOME COOKING SCHOOL

A FEW MORE SIMPLE DESSERTS

George E. Cornforth

PERHAPS desserts require more time and care in the making than any other part of the meal. But we can hardly recommend desserts whose preparation consumes an amount of time and energy altogether out of proportion to their value as foods. It would certainly be a great saving in time and energy to the housewife, thus giving her an opportunity for self-improvment, or by study of the problems of domestic economy to improve her own home, or to engage in various activities which would make her of greater value to the community in which she lives, if her family could be satisfied with the simple desserts elaborated by nature and cooked by the sun: I refer to the nuts, with their divers spicy flavors, and the great variety of luscious fruits. And the saving of vital energy in the digestion of these simple desserts might leave more energy and vim to devote to the various chosen activities of life.

But few have yet become sufficiently converted to the " monkey diet " to enjoy such simple living. Most persons would feel that such strictness is altogether unnecessary, and that it would deprive them of considerable innocent enjoyment; and as long as they feel that way, probably they would fail to get proper nourishment from such a diet. Therefore I shall give recipes for some simple desserts to which there is at least less objection than to many that are in common use.

In this article directions are given for making tapioca and sago desserts and steamed puddings.

Arrowroot is an edible starch obtained from the rootstock of various plants. One species of plant from which arrowroot is obtained has long been grown in the West Indies. Arrowroot has the peculiarity of crackling slightly when rubbed between the fingers. When boiled in water, it makes a transparent, odorless, and pleasant-tasting jelly. It is easily digested, and its use as a food is sometimes recommended in cases of bowel trouble.

The name arrowroot was given to this substance from the fact that the Mexican Indians applied the juice of the fresh root to wounds made by poisoned arrows.

Sago is obtained from the pith of the sago palm — a native of the East Indies — and from several other species of palm. At the age of about fifteen years the sago palm reaches the starch-producing stage, when the pith is in the right condition for obtaining starch from it. If the fruit is allowed to ripen, the pith disappears, leaving the stem hollow, and the tree dies after the maturing of the fruit.

The starch is obtained by grating the pith, and washing out the starch with water. This starch, mixed to a paste with water, is rubbed through sieves into small grains. The real sago is sometimes called brown sago, to distinguish it from white sago, which is really fine tapioca.

Tapioca (a native Brazilian word) is prepared from cassava starch, which is obtained from the large, tuberous roots of the cassava or manioc plant. Cassava is the West Indian and manioc the

Brazilian name of the plant. The roots of the plant grow to be three feet long and six to nine inches in diameter. The starch, in a moist condition, is spread on iron plates, and heated to such a temperature that, when stirred, the starch forms into small balls. The starch before being made into tapioca is called Brazilian arrowroot. Manioc, or cassava meal, used in making cassava cakes, is a meal made by grating dried slices of the root of the cassava plant.

Arrowroot, sago, and tapioca are easily digested starches, and by their use dainty desserts can be made.

Arrowroot Blancmange

2½ cups milk
¼ cup sugar
4 level tablespoons arrowroot
A few grains salt

Heat two cups of the milk, with the sugar and salt, to boiling. Stir in the arrowroot rubbed smooth with the one-half cup of milk, and cook till thickened, then pour into cups wet with cold water. When thoroughly cold remove from the cups, and serve with cream, or with fruit juice or a fruit sauce.

Blancmanges of all kinds after being turned into the cups, should be allowed to stand long enough to become thoroughly chilled and set. Otherwise they will be too soft to hold their shape when unmolded, and you will think there is a mistake in the recipe. But if the blancmange is made stiffer, it is much less palatable. Blancmange should not be tough and rubbery, but should be of a jelly-like consistency.

Sago Pudding

1 quart water
⅔ cup sago
½ level teaspoon salt
½ cup sugar
Dates stoned and cut into small pieces to make ½ cup
¼ cup walnuts cut into small pieces
1 tablespoon lemon juice

Soak the sago in one cup of the water for one-half hour. Heat the remainder of the water to boiling, and stir into it the soaked sago, the sugar, and the salt. Cook in a double boiler, stirring occasionally, till the sago is transparent, which will require about twenty minutes. Then stir in the lemon juice, dates, and nuts. Serve, either warm or cold, with cream or custard sauce.

Sago Cream

¼ cup sago
3 cups milk
½ cup sugar
¼ level teaspoon salt
½ teaspoon vanilla

Mix together all the ingredients except the vanilla, and let stand one-half hour. Then put to cook in a double boiler. Stir frequently, cooking till the sago is transparent, which will require about one-half to three-fourths hour. Remove from the fire and stir in the vanilla. Serve cold in glasses, with a bit of bright jelly or with pieces of broken nut meats on top.

Grape Sago

A recipe for this has already been given in LIFE AND HEALTH, but perhaps some would enjoy it better made by this recipe, which gives it a softer and more jelly-like consistency:—

1½ cups water
1½ cups grape juice
½ cup sugar
Juice of one half a large lemon
¼ level teaspoon salt
¼ cup brown sago

Mix together all the ingredients except the sago, and heat to boiling in a double boiler. Stir in the sago, and stir every two or three minutes till the sago does not settle to the bottom, then continue the cooking till the sago is transparent, which will require about one-half hour. Stir well. Turn into the dish in which it is to be served, or into molds wet with cold water. When cold serve with cream. It is better to make this the day before it is to be used, so that it will get thoroughly cold and set. This makes a simple and nice dessert for Sabbath.

Banana Snow

⅔ cup sago soaked in
⅔ cup water
3⅓ cups hot water
⅛ cup sugar
2 egg whites beaten stiff

To the soaked sago add the hot water, and cook in double boiler, stirring frequently till the sago is transparent; add the sugar, then beat the sago mixture into the beaten egg whites. Arrange in pudding dish in alternate layers with sliced bananas.

Strawberry or Pineapple Tapioca

½ cup pearl tapioca
3 cups water
¼ level teaspoon salt
1 pint diced fresh or canned pineapple or 1 pint fresh strawberries
⅔ cup sugar

Soak the tapioca in one-half cup of the water overnight. Heat the remaining two and one-half cups of water to boiling, stir in the

soaked tapioca and sugar, and cook in a double boiler till transparent, which will require from one to two hours. Partially cool, then carefully stir in the fruit. Serve cold with cream, whipped cream, or custard sauce.

Steamed Puddings

Suet or lard is, with few exceptions, a constituent of commonly known steamed puddings, and such puddings are generally conceded to be very difficult of digestion. Steamed puddings can be made, however, which are not so objectionable.

In steaming puddings the water in the steamer should be boiling when the pudding is put in; and if it is necessary to replenish the water in the steamer, the water which is added should be boiling.

Steamed Apple Pudding, or Apple Dumpling

Early in the morning set a sponge of
1 cup lukewarm skim milk
½ cake compressed yeast
2½ cups wheat meal or true Graham flour

Dissolve the yeast in the milk, add the flour, and beat thoroughly. When this sponge is light, add the following to make a dough:—

¼ cup oil
½ level teaspoon salt
1 level teaspoon sugar
1 cup wheat meal

When the dough is light, roll it out a little less than one-fourth inch thick. Cover the dough with sliced apples, sprinkle brown sugar and a few grains of salt over the apples. Roll up into a roll. Put into a pudding pan or large bread tin. Allow to rise for perhaps one-half hour in a warm place. Then steam three hours. Serve hot, with vanilla sauce.

In their season fresh blueberries, raspberries, blackberries, or cranberries may be used in place of the apples.

Pastry flour can be used instead of Graham, but the Graham supplies needed elements not contained in the white flour.

Steamed Fig Pudding

2 cups stale bread crumbs
2½ cups milk
1½ cups chopped figs
½ cup sugar
1 egg
¾ level teaspoon salt

The bread crumbs can be made by grinding stale bread through a food chopper, using the coarsest cutter. Left-over end slices of bread are good for this.

Mix together all the ingredients except the egg. Separate the egg; mix the yolk with the other ingredients, then beat the white stiff and fold it in last. Put into an oiled pudding dish which can be covered, or into a brown bread tin, and steam three hours.

Serve hot with cream, whipped cream, coconut sauce, or orange sauce. A mild sauce is desirable for a fig pudding. A sauce with a pronounced flavor, like a lemon sauce, so disguises the mild flavor of the pudding that it is impossible to discover by the flavor what kind of pudding is being eaten.

Steamed Nut and Fruit Pudding

½ cup raisins
¼ cup chopped citron
¼ cup finely chopped walnuts
¼ cup finely chopped pecans
1 pint zwieback crumbs
1 egg
1 tablespoon cream or oil
¼ cup sugar
1 tablespoon lemon juice
2½ cups milk

Mix together the dry ingredients; then stir in the remaining ingredients except the egg; separate the egg and stir in the yolk; then beat the white stiff and fold it in last. Steam three hours. Serve hot with cherry sauce made by heating one pint of juice from canned cherries to boiling, and thickening it with two level tablespoons of cornstarch stirred smooth with a little cold water.

Vanilla Sauce

¼ cup flour
½ cup sugar
¼ cup oil
1 pint boiling water
½ teaspoon vanilla
A few grains salt

Mix flour and sugar; stir in the oil; then stir in the boiling water, and stir over the fire till it boils up well. Add the salt and vanilla.

Orange Sauce

1 pint water
3 level tablespoons cornstarch
1 cup orange juice
1 cup sugar
Grated yellow rind from ½ orange
½ teaspoon vanilla
¼ level teaspoon salt

Stir the cornstarch smooth with a little of the water. Heat the remainder of the water to boiling, and thicken it with the cornstarch. Then stir in the remaining ingredients. In grating the orange rind, great care should be taken to grate off only the outside yellow part of the rind. If a richer sauce is desired, only two tablespoons cornstarch may be used, and one or two egg yolks added last, and the sauce allowed to cook long enough to thicken slightly by cooking the egg.

(*Concluded on page 240*)

EDITORIAL

IS CANCER INFLUENCED BY DIET?

IS there any correlation between dietetic habits and the incidence of cancer? If such a correlation can be shown to exist, we have at hand the means by which this loathsome, excruciatingly painful, and exceedingly fatal disease may be measurably controlled. While tuberculosis, pneumonia, typhoid, and diphtheria are decreasing, cancer is steadily increasing in prevalence. We escape death, it would seem, from certain diseases only to be more liable to death by the most sinister and painful of all. Research laboratories in various countries have been working for a number of years in the effort to discover some method of controlling cancer, but without any success worth mentioning. If it is true that the disease can be prevented or lessened by dietary means, we have a discovery of incalculable value to mankind.

At the recent meeting of the American Medical Association, Bulkley read a paper before the section on pathology and physiology,[1] in which he expressed his opinion that diet does have a definite relation to prevalence of cancer.

He reviewed the present status of the cancer problem, giving reasons why we no longer look to parasitism and heredity as important factors in the propagation of malignant tumors, and why the presence of wrongly placed embryonic tissue is not an adequate explanation for the development of these growths, and why cancer cannot be attributed wholly to local injury.

Cancer is a disease of civilization, asserts Dr. Bulkley, increasing among peoples who have previously been free from it, in proportion as they become associated with those who are more civilized, and as they adopt their customs and manner of life and diet; this has been shown in regard to Negroes before and after the Civil War, and also as to primitive people in India, Australia, Africa, Mexico, Brazil, etc. Dr. Bulkley says further: —

> "With advancing civilization the diet has become more and more complicated, and luxury and overeating have increased: this is especially true of meat eating, and alcohol and coffee drinking. The increase in the consumption of meat has been startling in many localities; and in England it has reached the yearly total of 130 pounds per capita, for men, women, and children, in addition to large quantities of fish, game, poultry, rabbits, eggs, cheese, etc. Among the well-to-do the meat consumption has been estimated at between 180 and 330 pounds per year. All this has much more than doubled the amount consumed fifty years ago, and in the same time the deaths from cancer have increased over *fourfold*.
>
> "The same figures apply roughly to the United States, where the per-capita meat consumption is said to be considerable in excess of European average, and all statistics show that cancer is rapidly increasing in this country."

And then, from a recent bulletin of the health department of the city of New York, he quotes the statement that the statistics from seven of the largest cities

[1] "The Relation of Diet to Cancer," by L. Duncan Bulkley, A. M., M. D., New York, Physician to New York Skin and Cancer Hospital, etc.

for 1913, recently tabulated, show that the cancer rate was the highest on record. But —

> " in striking contrast to the enormous extent and increase of cancer in meat-eating communities may be mentioned the relative rarity or almost absence of the disease in regions where the diet is largely confined to the products of the ground."

Bulkley refers to psoriasis and skin diseases characterized by a disturbed epithelial growth " quite comparable to ingrowing cellular masses of early cancer," and states that " it is not so very rare to have epithelioma [skin cancer] develop from lesions of psoriasis."

He reverts to instances where, without any medical treatment whatever, external or internal, he has cured psoriasis by restricting the patient to a strictly vegetarian diet, from which coffee and alcohol were excluded. He has psoriasis patients in private practice who remained free from the eruption while faithful to the diet, but who relapsed when the diet was relaxed. As to the analogy between psoriasis and cancer, Bulkley says: —

> " While to a superficial observer there may not seem to be any very great connection between the two diseases, there is in reality a lesson to be learned from one to the other. In both we have perverted and active proliferation of epithelial cells. . . . Even as we have seen cancer increase with increased consumption of meat, and just as psoriasis has been observed by many to disappear when the nitrogenous supply was cut off, so numerous observers, and the present writer among them, have seen unquestioned cancer steadily retrogress and even disappear, and remain absent, under a strict nitrogenous diet."

Bulkley urges competent early surgical interference in suitable cases, but he maintains that in an experience of forty years he has almost yet to find a case which has received adequate and continuous medical care before operation, with a view of discovering and rectifying the cause of the morbid growth. He calls attention to a work of Ross,[2] who maintains that in cancer there is a failure of potassium elements, and he has for years administered potassium salts to cancer patients with good results. These results Bulkley claims to have confirmed from his own observation. Ross mentions as one of the dietary errors, the faulty method of preparing vegetables whereby the natural salts are boiled out and thrown away. He notices that among the nations who are vegetarians and who escape cancer, this faulty method of cooking vegetables does not exist. Especially in the cooking of potatoes Ross advises that they be cooked with the skin on, and that only the outer colored coating be removed, thus leaving the potassium salt. Bulkley continues: —

> " Accumulated evidence dating back many, many years points to excessive nitrogenous intake together with faulty cooking incident to a more refined civilization, so called, as a prolific cause for the development of cancer; while an absolutely vegetarian diet, with the exclusion of coffee and alcohol, in conjunction with proper medicinal measures, has repeatedly resulted in the disappearance of cancer."

[2] " Cancer; the Problem of Its Genesis and Treatment," London, 1912.

Autos and Flies

If motor cars were adopted universally in place of horses, it would doubtless result, as no other one thing would, in an extermination of the fly; for it would take away the principal breeding place of this more than friendly insect, which we have rather graciously, in our days of ignorance, named the "house fly," or domestic fly. The manure fly, or typhoid fly, as it is more correctly called, would be puzzled to find breeding places if stables were banished. Ross, in his book "The Reduction of Domestic Flies," says that in the West End of London the stables and mews have become garages, and there are only a few flies where formerly thousands pestered.

It is true that thus far the motor car has only partially supplanted the horse. In fact, it is asserted that the number of horses is actually increasing in this country, which seems unbelievable, considering the millions of motor cars which have been brought into use where formerly the horse served the purpose. But there is a heavy capitalization behind the motor car, and the price of it is bound to diminish with the years; and on the other hand, the increased price of land, and the increased demand that all the land be used to furnish vegetable and animal food for man, will cause the price of the horse to go up until it will be practically supplanted by the fuel-burning vehicle. While from a sentimental viewpoint we dislike to bid farewell to the horse, perhaps on sanitary grounds the riddance will be a good one.

There is another fly, the stable fly, which also breeds in the refuse of horses, which is as dangerous as the "house fly," being implicated in a number of serious diseases, such as infantile paralysis and pellagra. This fly would also be partly eliminated by the elimination of the horse.

When we think of it, we tolerate from the domestic animals filth in the streets and roads which we would not tolerate from our own kind — perhaps because we know of no way to avoid it.

The final elimination of the horse is a long way off. Meantime we should discover some cheap and effective method of treating manure in the stable or barnyard so as to retain its value as a fertilizer while rendering it useless for breeding purposes to Mrs. Fly.

* * *

Distilled Water

Having read in the *Medical Record* of January 9 an article by Dr. L. L. von Wedekind, medical inspector of the United States Navy, commanding the United States hospital ship "Solace," I am well-nigh convinced. To all theoretical articles advocating the use of distilled water I have always opposed the arguments that animals and man have almost universally and for ages drunk water containing solids in solution; that nature provides it in this way; that those who have become centenarians or older have done so on water as nature furnishes it. But Dr. von Wedekind approaches the subject in another way, giving facts, and facts are hard things to deal with when they happen to coincide with your opponent's argument. The ordinary method is to ignore them.

Though the navy and marine corps numbers from 65,000 to 70,000 men, there was, according to the doctor, only one death from apoplexy in the service in

1913. I take it that the doctor is a sincere man, and that he has not picked out a year that was exceptional. In the registration area of the United States there were in 1910 seventy-five deaths from apoplexy and cerebral hemorrhage for 100,000 population, which would make about fifty in a body the size of the navy. Moreover, the registration area population includes infants and young people not subject to apoplexy. If a population the same age as those in the navy were selected, the number of deaths from apoplexy might be higher. Apoplexy is a disease caused by, or favored by, a hardening of the arteries. The use of distilled water not only prevents the spread of some of the communicable diseases which are usually transmitted by the use of contaminated drinking water, but seems to prevent the aging process in some other way; that is, by preventing hardening of the arteries and high blood pressure.

In a series of observations of naval men from forty to sixty years of age, taken haphazard without selection, Dr. von Wedekind found none with a blood pressure more than 142, and the average was 136. An observation taken from civil life at the same ages might show some as high as 180 or higher, and with an average of 150. His explanation is that distilled water is hungry for salts, as it were, and abstracts from the body its waste matter more freely than water which is already partly saturated with mineral matter. The doctor's advice is: —

"To those whose homes have been desolated by water-borne disease, boiling water is now a routine; but I would suggest to distill it and prevent other troubles. To those who have not experienced the harrowing anguish of a 'stroke' in 'dad,' hurry up and pump him full of distilled water and you will never know what harrowing anguish means, and he'll really live to call you blessed. Form a habit of drinking distilled water. It is pleasant, invigorating, rejuvenating. Make it a point to take three glasses a day in excess of your desire, and you will very soon appreciate the reason why life insurance companies assert that 'eliminate the hazards of a naval officer, and he is the best risk in the world.'"

He further advises not to put the iceman's ice in the water, "and do not in your suddenly awakened enthusiasm buy distilled water from your druggist. He has a well-labeled bottle, but that is all."

Frankly, I must acknowledge that, after all, I am not certain that the distilled water is the sole or the main factor in the splendid health of naval men.

* * *

Conservation of Food Products

Dr. M. E. Pennington, of the United States Department of Agriculture, in an address before the Philadelphia Produce Exchange, said that "no other civilized country wastes foodstuffs as we waste them." "If all the crops that the farmers raise were utilized," she continued, "all the meat animals that are killed eaten, all the fish that come into the nets marketed, hundreds of thousands who are now hungry would be well fed, and the agitation on the subject of high prices would not attract much attention." In her opinion,—

"conservation of foodstuffs in its broadest sense, means not only the saving of the excess production of flush seasons for the seasons of scarcity, but it means also the systematic, scientific care that prevents wormy apples, or windfalls, prevents the fermentation of carload after carload of corn, prevents the rancid butter from the dirty farm, or the rotten eggs or the tainted chicken."

"Go to any of the market terminals in this city on a warm summer Wednesday or Saturday, between 12 and 4 A. M., and see for yourselves the wastage of vegetables because of decay, low quality, or market gluts. Look at the spoiled poultry during a warm autumn . . . — thousands of pounds of it."

She believes that to refrigeration, more than to any other factor, we must look for the elimination of decay, the preservation of utilty, and the conservation of perishable products; but the perishable article must be put under refrigeration while it is sound and fresh. There's the rub. Refrigeration can be relied on to keep food sound, but it will not restore soundness to food that has already begun to turn; and too often it is used for that purpose, and that is what, in part, has given the bad name to refrigeration.

Piles and Hyperacid Stomach

Dr. E. Palier, of New York, in the *New York Medical Journal* of January 23, states that in a large number of cases of piles he has found present a condition of hyperchlorhydria, or excessive secretion of gastric juice.

For treatment he advises to give the patient a teaspoonful of sodium bicarbonate, which, he says, will often give relief to the agony of piles in half an hour, and if the patient is constipated will cause a semisolid evacuation with very little pain. If the patient is suffering from chronic constipation, magnesia usta can be given afterwards.

After administering the soda, give the patient a hot sitz for half an hour and put him to bed for the day, allowing him to apply lead and opium lotion to the piles for a few hours. Next morning, Dr. Palier says, he will be practically well, and will remain so while the stomach remains in good condition.

For radical cure of the piles, the remedy is operation during the quiescent state; but most patients would prefer the occasional discomfort to an operation.

Athletic Dangers

The *Journal A. M. A.*, referring to the expressions "bicycle heart," "football kidney," etc., says that it has been the merit of Albu, of Berlin, to point out that the pathogenesis of the abnormal conditions familiarly associated with the pursuit of athletics may be interpreted from a common point of view, and continues: —

"In other words, all undue muscular exertion, whether carried out by one group of muscles or another, in one type of motion or a different one, affects certain groups of organs and metabolism in general in entirely comparable ways. The physiologic or pathologic result may vary in degree, but not in kind. The effect of vigorous exercise in its more extreme manifestations exhibits two phases: first, there is a stimulation, bringing about a rapid, vigorous circulation to the taxed muscles and internal organs, and disclosing itself by a rise of blood pressure and augmented cardiac activity; this is followed sooner or later, as the varying intensity of the exercise may determine, by a depression phase; and fall in blood pressure, and functional heart weakness ensue. It is the latter aspect of the results of undue exercise, with the derived consequence of cardiac insufficiency, that is most likely to engage the attention of the physician.

"In varying intensity, the symptoms of stasis throughout the circulation now arise. Venous stasis in the kidneys occasions the characteristic nephritic changes which find expression in the altered composition of the urine. Every sort of pathologic sediment, ranging from the slightest deviation from normal to the picture of severe nephritis, may be seen."

The article, which contains some excellent warning against the abuse of athletics, concludes: —

"Much of what is called 'training' in this country, is, however, a combination of unscientific and sometimes irrational dietetics with physical quackery. Last but not least, the degree of exercise required has a live, determining significance when the ill effects of athletics are to be avoided. The distinction between doing and overdoing needs to be learned and appreciated more than any other single feature in the rational pursuit of bodily exercise for health and enjoyment rather than for personal superiority and group supremacy."

No Haven for Quacks

If we may judge from the laws of Hammurabi (B. C. cir. 2200), ancient times were not favorable for the development of quackery, as the reader will appreciate from the perusal of the following extract from the laws, taken from Neuberger's "History of Medicine:"—

"If a physician cause a severe operation wound with a bronze operating knife and cure the patient, or if he open a tumor (cavity) with a bronze operating knife and save his eye, he shall have ten shekels of silver.

"If it be a freedman, he shall have five shekels.

"If it be any one's slave, his owner shall give the physician two shekels of silver.

"If the physician make a severe wound with the bronze operating knife and the patient die, or if he open a growth with a bronze operating knife and the patient lose his eye, he shall have his hands cut off.

"If a physician heal a broken bone or cure diseased bowels, the patient shall pay the physician five shekels of silver."

THE MEDICAL MISSIONARY AT WORK

MEDICAL MISSIONARY EXPERIENCES IN CHINA

A. C. Selmon, M. D.

"COME ye after me, and I will make you to become fishers of men." With these words Christ not only called Peter and Andrew, but also made plain that in the catching of men, as in the catching of fish, there are various methods that may be employed. There are two methods commonly used in catching fish: one is the hook-and-line method, and the other is the net method. Needless to say that more fish are caught with the net than with the hook and line. Applying this to the work of fishing for men, the Lord has indicated a net method of catching men, which he himself made use of, and which has been made use of by his followers in every land; namely, the medical missionary work.

In showing what opportunities there are for the medical missionary work in China, and in helping those who are in training to get an idea of the conditions they will meet in the mission field, I shall give a somewhat detailed account of the work which Mrs. Selmon and I have done during the last few weeks.

The last of March, 1914, we left Shanghai for a trip to our mission station in Ying-shang, a city in the province of Anhwei, seven days' journey to the northwest of Shanghai. Our mission work there is in charge of a Chinese evangelist, Brother C. D. Han, and his wife. We reached this place April 2. Before the coolies had brought all our baggage from the boat, two sick persons came for help. They had heard we were coming, and some days before our arrival they had come in from their homes in the country, a distance of more than ten miles.

A room ten feet long by eight feet wide was fitted up for a temporary dispensary, and here we cared for the sick every afternoon from two o'clock until five. During the remaining hours of the day we conducted for eight days a general meeting of all the believers in that section. Before the general meeting, a trip was made to the two outstations. Following the meeting we had a three weeks' Bible institute. After closing the institute the forenoons were spent in teaching in our church school and in drilling the Chinese teacher in modern methods of teaching.

It was some days before the report of our arrival became noised abroad to any extent. There was also a downpour of rain for eight days, which made the roads impassable, so that our little dispensary was open only three hours a day for five weeks.

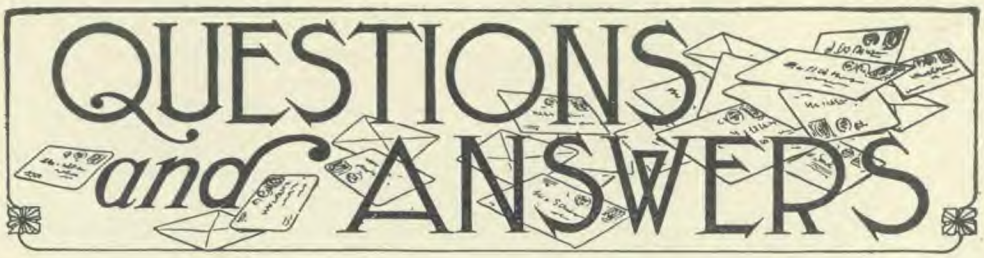
Every case was examined and treated by either Mrs. Selmon or me. It was our purpose to do the best that could be done under the circumstances for every one who came for help, rather than to run through a large number of cases with a snapshot diagnosis and a dose of Epsom salts for treatment. This is a method that is not so very uncommon in medical work where such large num-

bers are treated. But in this instance most of the treatments could have been given by trained assistants working under our direction; and with a dispensary properly fitted up and a corps of trained assistants, we could easily have cared for four or five times as many patients every afternoon as we were able to care for under the circumstances.

As the people came, they paid an examination fee of fifty cash (about two cents United States money), and were given a numbered slip. We are obliged to hold quite rigidly to the payment of this fee. Of course exception is made in the case of those who are really sick and cannot pay even this small sum. Where no examination fee is charged, crowds of idlers come and simply consume time. Out of one hundred Chinese it will barely be possible to find more than four or five who do not have some sort of *bing* (disease). The chronic grumblers are very keen on coming to the foreign doctor for an examination and advice, but they are seldom willing to part with a cash for any treatment that may be required; and in case medicine is given to them, they may throw it away, or sell it to some one else supposed to be suffering with a similar malady. After paying the examination fee the patients wait in the chapel, where an evangelist and a Bible woman are either preaching or conversing with them.

During the five weeks two hundred and fifty-nine different persons were treated. This number is exclusive of the several hundred who came with itch and ordinary malaria. As there were so many of these, and as they came at all hours of the day and were usually looked after by the Chinese assistant, no record was kept of them. A large number of the sick whom we treated came back the second time, and some had to return several times. There were in all, two hundred and sixteen returns, making a total of four hundred and seventy-five dispensary cases.

REMOVING OPIUM FROM THE STOMACH OF A WOULD-BE SUICIDE



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.

Catarrh of the Throat.—"What is the cause of catarrh of the throat? Does it hurt the voice to sing when one has catarrh?"

What is usually called catarrh of the throat is a chronic inflammation of the lining membrane of the throat, and it usually extends upward into the nose, and downward into the lungs. It may be caused by working in a dusty atmosphere, or by misuse or abuse of the voice. Many speakers have sore throat, but it is because they strain the vocal muscles in speaking, not having learned to speak naturally. Singing, if properly done, should not be a strain on the voice, but there are few singing teachers who are capable of teaching a natural use of the voice. The use of strong drink and tobacco also has a very deleterious effect on the voice. Any diet which causes an accumulation of waste products in the system, or an acid condition of the blood, predisposes to throat trouble. Many sore throats are, in fact, rheumatic in nature. An acute sore throat often follows an indiscretion in diet, especially one which is followed by increased acidity.

It avails nothing to give local treatments to the throat unless these are accompanied by general treatment including a properly regulated diet. The same local treatment administered in a sanitarium will give far better results than in the specialist's office, because in the sanitarium the patient's entire life—his dietary, exercises, general treatment, etc.—can be under the supervision of the physician.

Bed Wetting.—"My child frequently wets the bed nights. Even the fear of punishment does not prevent it. What can we do?"

Make certain that there is not some personal habit which keeps up the irritation.

If the child is a boy, he may be suffering from a phimosis requiring a simple operation.

You should protect the bed with a rubber sheet or an oilcloth. Do not allow drink or liquid food in the afternoon. Have the child get up at ten o'clock, and if this is not sufficient, awaken it twice during the night.

It is important to give nourishing food, sunshine, fresh air, and sufficient exercise, but not too much. Avoid excitement. This is a nervous trouble, and punishment, by increasing the nervous tension, will aggravate the trouble.

This course, if continued faithfully, may break the habit in a short time. The child will probably get over it in time, in any case.

Acid Stomach.—"What can I do for a terribly burning stomach after meals? Sometimes the burning fluid comes up into my throat."

This trouble is usually found in connection with mental unrest and nervousness. The acidity is probably the result of a general rather than a local condition.

It is important to avoid all occupations and conditions which cause mental unrest and worry.

Certain foods should be avoided, such as sugars and all sweets. Do not sweeten even your cereals or beverages. Avoid much starch. It may be better to discontinue the use of potato and other vegetables. Avoid uncooked foods, and foods that have stood in the pantry from a previous meal.

The following foods are usually well borne: eggs, not too well done; milk, and particularly cream, boiled if necessary (milk may be better borne if used on toast); corn flakes, shredded wheat, or oven-dried bread. Butter is usually agreeable. If there is acidity when the stomach is empty, eat a light meal between the regular meals.

In case of constipation, use freely of liquid paraffin, a teaspoonful four times a day, increasing or decreasing the dose or frequency as may be necessary.

Hyperacidity, being a symptom of a general nervous condition, requires general as well as dietetic treatment, and is best managed in a sanitarium.

Ringing in Ears and Deafness.—"Kindly write me what I can do for my head. A ringing noise began about three years ago. It was only by spells then. Now it is all the time, and very bad. I cannot be easy, or even sleep well; am getting quite deaf. Of late my brain seems to be sore at times. There is also soreness about the ears. I have catarrh, but my general health is quite

good; am seventy-eight years of age. Kindly prescribe some home treatment which would be helpful."

To give intelligent treatment to your condition, it would be necessary to make a thorough examination, and this examination ought to be made by a competent ear specialist. The trouble is not one that will yield to home treatment, I am very sure. It is possible that an operation will be required, or a series of local treatments to the ear may be required, or the difficulty may be something that cannot be reached by treatment. To advise you to apply treatments yourself might cause you to do something that would do more injury than good.

Disinfectant for Discharges.—"Kindly give your readers a reliable method of disinfecting discharges from a patient."

Freshly prepared milk of lime, added in equal quantity and thoroughly mixed with the disintegrated discharges, is a good disinfectant and deodorizer. The discharge should stand for two hours after the addition of the lime.

To prepare milk of lime, add a pint of hot water to two pounds of quicklime. The lime will heat, swell, and take up the water. To this add two gallons of water and mix thoroughly. As the mixture is exposed to the air, it gradually absorbs carbon dioxide and turns to chalk, so that it becomes valueless as a disinfectant. For this reason a fresh solution should be prepared every few days. The slaked lime or milk of lime will keep if it is in an air-tight vessel.

Another good disinfectant and deodorizer is formaldehyde, in the form of a ten-per-cent solution of formalin. An equal part of this may be added to the discharges, and the contact continued for an hour before disposing of the discharges.

Spring Water.—"Is spring water safe to use?"

Spring water as it emerges from the ground may be perfectly pure, but if cups and other vessels are dipped into the spring, and if surface water is allowed to run into the spring, the water will be contaminated. A spring does not necessarily come from an uncontaminated source, though as a rule such waters are free from contamination by disease germs. Spring water may contain mineral impurities which are more or less injurious if taken in quantity. Springs to which animals have access are objectionable as sources of water for human consumption.

Purifying Water.—"Which is the safer method of purifying water from a suspicious source, boiling or filtering?"

The ordinary household filter is not reliable. It may remove turbidity, but it cannot be relied upon to remove germs. In the best of household filters, some disease germs may pass through, and in some cases more germs are actually found in the water that has passed through than in that which has not passed through the filter. If the water is very turbid, it may be filtered and then boiled. Boiling will destroy all disease germs. If, after it has been boiled, it is aerated by shaking and cooled in a refrigerator, the water will be palatable.

Malaria and Water.—"I have moved into a marshy region where there is more or less chills and fever. Will boiling all the water drunk, prevent an attack of fever?"

There may be good reason for boiling your water in such a region, as it may be contaminated with typhoid or other germs; but boiling the water will not prevent an attack of malaria. Malaria is conveyed not by drinking water, but by mosquitoes. The mosquito that transmits malaria rarely bites except at night. If you remain at home nights, and have your house absolutely mosquito proof, you will probably escape malaria.

Disinfecting Thermometers.—"What is the best method of disinfecting a fever thermometer?"

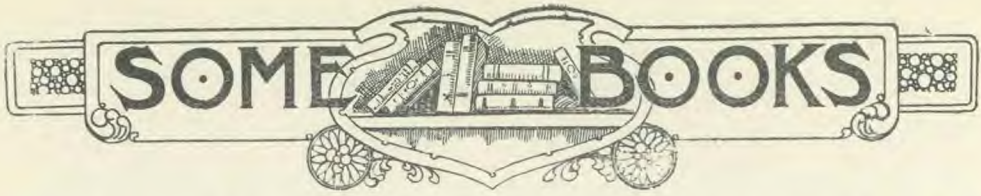
Keep pure formalin in the thermometer case, allowing the thermometer to remain in it when not in use. The thermometer should be carefully washed in running water before and after use.

Ice.—"What are the respective advantages of natural and manufactured ice? Is it safe to use ice in cooling drinks?"

The quality of any ice depends largely on the source of water from which it is frozen. If ice is taken from rivers, it is likely to be more or less polluted. It is true that part of its impurities are frozen out, but not all. Manufactured ice, made from distilled or boiled water, may sometimes contain more bacteria than the water from which it is taken. Plate ice is not necessarily made from distilled or boiled water. It is always safest to avoid contact of the foods or drinks with ice. The cooling may be effected by placing the articles to be cooled in a refrigerator, or by surrounding with ice the vessel containing the food or drink.

Answer in the May.—Two correspondents have written requesting replies in the May LIFE AND HEALTH, to their queries. Both came after the pages for this issue had been made up.

This is a good occasion to repeat that these columns are not intended for the personal answer of correspondents. When postage is inclosed with the query, we reply promptly by mail. Only a part of the answers appear in this column, and only after a lapse of one or two months or more. To be certain of an early reply, inquirers should inclose return postage.



Food and Cookery, by H. S. Anderson, instructor in cooking in the College of Medical Evangelists at Loma Linda, Cal. Published by The College Press, Loma Linda, Cal. Price, 35 cents.

This little book has come into existence because of the need of a small book giving a sufficient variety of recipes for use in teaching cooking classes, and also, in concise form, the general principles of healthful cookery. For so small a book at such a reasonable price it contains a valuable fund of information, and a splendid collection of recipes illustrating all the different lines of healthful cookery. Of special value are the suggestions given under the heading of "Combinations and Menu Making," showing how to select foods which harmonize in every way so as to make a well-balanced meal.

Accompanying the book, and given free with it, is a supplement bearing the title "Food Facts," giving valuable quotations from the Bible and from the writings of men and women who speak with authority on the subject of healthful living and practical dietetics. This treatise also contains questions for class recitation based upon the information given in the two books, and some valuable suggestions on "How to Conduct a Cooking Class," outlining a plan of procedure and the arrangement of the worktable, and giving a list of utensils needed.

While these books are intended primarily for use in cooking classes, they give facts on the subject of food which everybody should know, and recipes for the preparation of healthful food which will prove of value to any one to whose lot the preparation of food falls. GEORGE E. CORNFORTH.

Manual of Physical Training Games and Mass Competitions, by Charles H. Keene, A. B., M. D., Director of Hygiene, Minneapolis public schools. Illustrated. Cloth, 72 cents; paper, 30 cents. World Book Company, Publishers, Yonkers-on-Hudson, New York.

This manual should prove a boon to grade teachers, especially to those who have had no special training in physical exercise work. Ten physical training lessons are given for each grade, from the third to the eighth; these lessons form a systematic, graded, and progressive series. Full directions are given for each exercise — commands, counting, etc. The steps that form the elements of folk dancing are carefully taught and explained.

The games suitable for each grade are listed with the lessons, and the last part of the book contains explicit directions for the playing of each game. There are thirty-two illustrations of exercises and games.

No apparatus of any kind is required in following this course of physical training, and with the exception of some of the games, all the exercises can be carried out in the schoolroom as well as on the playground.

The Tuberculosis Nurse; Her Function and Her Qualifications, by Ellen N. La Motte, R. N., with an Introduction by Louis Hamman, M. D. Price, $1.50. G. P. Putnam's Sons, Publishers, New York and London.

In her eight years' experience, first as field nurse of the Visiting Nurses' Association of Baltimore, and later as organizer and director of the Tuberculosis Division of the Baltimore Health Department, Miss La Motte has seen many theories tried and abandoned. From her accumulated experience, she has written this book for the benefit of tuberculosis nurses, whether working in connection with a health department or under a private association, and has attempted to give the instruction in such a way that any community may with this information organize and conduct antituberculosis work.

While the book is written from the administrative standpoint, it contains a mine of information regarding the conditions that favor and those that hinder the progress of tuberculosis, such as occupation, diet, home life, clothing, and bedding.

The author writes from the viewpoint of one who believes thoroughly in segregation as the only efficient method of dealing with the tuberculosis problem.

Miss La Motte has added a valuable book to the tuberculosis literature.

(Concluded from page 230)

Steamed Nut and Fig Pudding

1 pound figs
½ cup nuts
2 cups stale bread crumbs
2 cups rich cream
¾ cup sugar
1 level teaspoon salt
4 eggs

Chop the figs and the nuts; beat the yolks and add the sugar and salt to them; mix bread crumbs, figs, nuts, cream, and salt; then mix in yolks and sugar, and lastly fold in the whites beaten dry. Steam four hours.

CURRENT COMMENT

House Screening as a Sanitary Measure

In the rural districts, the question of screening against insect pests assumes greater importance than in the towns and cities. This is because the house fly and the mosquito find in the country the ideal conditions for breeding. Theoretically the manure piles and the pools of stagnant water could be eradicated from the countryside as readily as from the streets of the cities, but practically a lack of money for sanitary improvements and the more or less sparsely settled population make this highly specialized sanitation which obtains in the cities impossible. Consequently, in order to preserve health and comfort it is necessary to resort to the protection afforded by measures intended to keep the insect pests out of the dwellings. . . . In order to be a safeguard at all, screening must be effective. Halfway measures are of little avail. One of the neglected matters in this problem is the time at which screens are first put up. In the early spring a few flies appear, and no attention is paid to them. About ten days later these flies commence to lay their first batch of eggs, and then in another ten days the first large swarm of flies makes its appearance. Then the people commence to put up the screens, which should have been up two or three weeks earlier.

This screening, undertaken at a date which is entirely too late, is apt to be hurriedly done and to be deficient in many ways. Few people realize the ease with which flies and mosquitoes can find the loopholes in the barrier erected against them. One of the chief of these consists in small holes which have rusted through the mesh of a cheap screen left over from the previous summer. Another is the space left between the door and the jamb, which results from the warping of the light framework. One of the most important of the openings is that which is found in the space between the sliding sashes of adjustable window screens, which are meant to slip in under the raised window and rest between it and the sill. Screens of this kind are almost never efficient. . . .

But even though the house be thus scientifically screened, the work will be ineffectual unless the details of springs on the doors and stopping of fireplaces be carefully attended to. Mosquitoes do not as a rule fly very high, but they will at times pass over houses, and when attracted by the open chimneys will often enter the house in this way. Keyholes are also another favorite way of entry. In fact, any small holes of any kind will attract the mosquito. Once having made his entry into the house by means of small holes, the mosquito does not readily find his way out again; and hence a badly screened house, instead of becoming free from the pest, becomes a veritable mosquito trap, in which hundreds of the insects are imprisoned, and which is more dangerous to its human inmates than if it were not screened at all. There are many more details of screening which are well worth the careful attention of the physician who cares to make himself an authority on the prevention of disease, as well as its cure; but those we have mentioned should be sufficient to stimulate interest in this badly neglected subject.— *Boston Medical and Surgical Journal.*

A Little Learning Is a Dangerous Thing

A recent copy of a newspaper, speaking of the remedy for bichloride of mercury poisoning proposed by Dr. Thomas A. Carter, of Chicago, after mentioning optimistically its success, concludes as follows: "Dr. Carter is now preparing a complete history of the seventeen cases he has treated, for presentation to the Chicago Medical Society, before which he has made public his simple antidote — sodium phosphate — (five grains for each grain of bichloride taken) and sodium acetate, both drugs in everyday use."

Now, sodium phosphate is not a remedy for bichloride poisoning, and is not the drug specified by Dr. Carter. The proper chemical is sodium phosphite, a substance which is not in everyday use, and one which it is not always easy to procure in a pure, fresh condition. The results of such a misstatement may well be lamentable. Exchanging newspapers will repeat and spread the error. Unfortunate victims will hasten to take some one of the numerous proprietary compounds labeled phosphate of soda, the precious moments during which the stomach might be emptied and washed out by repeated vomiting or otherwise will be wasted, and human lives sacrificed to "a little learning." In dealing with such a serious matter the editor should have consulted some competent physician before thus carelessly tampering with information that might mean life or death to some confiding reader.— *Editorial, Southern Medical Journal, February, 1915.*

Origin of the Healing Art

It is well known that animals possess strong self-curative instincts. Dogs and cats when indisposed will eat grasses that have a medicinal action, usually of an emetic or purgative nature. The fibrous-rooted wheat grass *Triticum caninum* is frequently eaten by the former. If an animal has been injured, it is noticed continually to lick the affected part, which is a somewhat crude combination of our modern fomentation and massage. Prehistoric man would most certainly have licked his wounds. Later . . . he would observe what animals did and imitate them. Thus the

(*Concluded on page 242*)

NEWS NOTES

Animals May Live Without Bacteria.— Recent work by Cohendy and Wollman confirms the work of Nuttall and Thierfelder, proving that animals (guinea pigs) can be raised without the presence of bacteria. The guinea pigs were kept germ-free for periods varying from sixteen to twenty-nine days, and at the termination careful bacteriological examination showed the food and interior of their cages to be sterile; and the young guinea pigs kept under these sterile conditions grew faster than the control guinea pigs kept under ordinary conditions.

Tuberculosis a House Disease.— A recent editorial in the *Journal of the A. M. A.*, states that "evidence accumulates daily that tuberculosis is a house infection or family disease, and that the proper way to stamp it out is to remedy the home conditions which predispose to it. That it is preeminently a disease produced by intimate rather than casual contact is shown by recent investigations." The public is gradually overcoming the hysterical fear of tuberculosis that at one time made a tuberculosis patient almost an outcast. We are learning that casual contact with a tuberculosis patient is not dangerous.

Nostrums for the Soldiers.— It has been necessary in Germany to issue a warning against certain articles which the manufacturers claim are to be sent to friends at the front. One of these is a tablet supposed to be a sure protection against cholera, typhus, dysentery, etc., as it clears the water of germs in two minutes. Warning is also issued against certain portable filters, and against Eusitin, which is said to keep up the strength when food cannot be obtained. The fakers who produce and sell such articles as these are psychologists enough to know that those at home will purchase almost anything that they think will be a benefit to their friends at the front.

Painless Maternity, a Correction.— Dr. M. W. Kapp, writes that in order to render parturition painless he gives hypodermically one-twelfth (1-12) grain of heroine [heroine hydrochloride, in the original article], and not one-half grain as stated in the March LIFE AND HEALTH, page 142. The error in copying is exceedingly regrettable. Half a grain of heroine administered hypodermically would, as Dr. Kapp says, "spoil the case completely." Dr. Kapp has excellent results, he says, from the administration of 1-12 grain. It is to be hoped that all who are interested in the item in the March issue will see this correction, or better, that they will read the original article in the New York *Medical Record* of Nov. 14, 1914.

Vaccinating on the Mexican Border.— On account of the smallpox epidemic in north Mexico, the physicians in the immigration service at Laredo, Tex., compelled every person coming into the United States from Mexico to submit to vaccination. Many who came over to celebrate Washington's birthday were vaccinated, and also some who crossed over into Mexico to witness the bull fight, and then returned.

Safeguarding Against Twilight Sleep Casualties.— The authorities of the Michael Reese Hospital of Chicago, as a result of their experience after a series of about forty maternity cases treated by the "twilight sleep" method, announce that they will not use this method in labor except with the express guaranty of the patient that the hospital shall be free from all liability as regards results to mother or child.

Smallpox in Chattanooga.— What was reported to be an epidemic of plague turned out to be an epidemic of smallpox in a severe form, brought to the city by a man from El Paso, Tex., who died of the disease. Two others in the same house came down with the confluent or severe form of the disease. The total number of cases from November to January was fifty-six, with a mortality of sixteen, or 28.6 per cent. From what we know of the protective value of vaccination, we can be sure that none of these unfortunates had been recently vaccinated.

(*Concluded from page 241*)

use of hellebore was believed to have been discovered from the goat. Vergil tells us that the dittany was "eaten by wild goats when they were shot with darts." Pliny tells us that bleeding was taught man by the hippopotamus: "That intelligent animal finding himself plethoric, goes out on the banks of the Nile and there searches about for a sharp-pointed reed, which he runs into a vein in his leg, and having thus got rid of a sufficient amount of blood, closes the wound with clay." [This story, I admit, taxes my credulity to the limit.— ED.] Buffaloes, horses, and camels are exceedingly fond of licking salt. Prezevalsky says: "On the Mongolian camels, salt, in whatever form, acts as an aperient, especially if they have been long without it." Livingstone says that "the chimpanzee, soko, or other anthropoid apes will stanch bleeding wounds by means of their finger or of leaves, turf, or grass stuffed into them." Primitive man must have done likewise, only always a little more.— *Scientific American Supplement, Dec. 5, 1914.*

French Academy of Medicine Approves Prohibition.— The French Academy of Medicine has just passed a resolution congratulating the government for abolishing the manufacture and sale of absinth.

Lead Poisoning From Cosmetic.— Dr. G. Wilse Robinson, Kansas City, Mo., reports in the *Journal of the A. M. A.*, March 6, two cases of lead paralysis caused by the use of face powder containing lead. It is well to remember that the use of such substances may do more harm than good.

Goldenseal.— Hydrastis canadensis, or goldenseal, which has been much used in this country as a remedy for throat and stomach troubles, is a plant native to this country, but on account of its scarcity, it is becoming much more expensive. In 1880 it brought eight to twelve cents a pound; now the price is from $3 to $4.25 a pound. The United States Department of Agriculture is trying to interest farmers in the cultivation of the plant.

Typhoid Versus War.— Sir William Osler, who has been in charge of hospital work at the front with the British army, and who knows conditions at first hand both in America, where he has lived for the greater portion of his life, and in the war zone, says that the typhoid germ this year will probably kill in the United States as many persons as will die of wounds in the British forces. And this is a mortality that lasts, not during one war, but is continuous. We pray for the war to cease, but begrudge the money and the authority necessary to clean up typhoid in this country, as yellow fever and malaria were cleaned up in the Canal Zone.

Danger of Telephone Prescribing.— A physician recently ordered over a telephone 1-75 of a grain of physostigmine sulphate. The druggist misunderstood, and prepared a solution containing 75-100 of a grain, which was sixty times too much. When he discovered his mistake, he communicated with the physician, who immediately telephoned to the nurse, directing an antidote to be given, jumped immediately into his motor car, but arrived to find the patient dying.

Mental Diseases and Arteriosclerosis.— Edward F. Leonard, in the *Lancet-Clinic*, says that the causes which produce insanity are in many cases the same as those that produce arteriosclerosis; for example, chronic alcoholism, overwork, interstitial nephritis (Bright's disease), gout, diabetes, high blood pressure, syphilis, etc. Increased blood pressure may result from indiscretion in eating and drinking, from the action of bacterial toxins, metallic poisons, bacteria, alcohol, syphilis, and prolonged muscular efforts. Early symptoms are headache, sleeplessness, feeling of *malaise* and giddiness, irritability, lack of control over the emotions, and undue sentimentality. Later, memory fails and new impressions cannot be retained. Patients should be treated at the very beginning of their symptoms in order to limit the progress of the disease.

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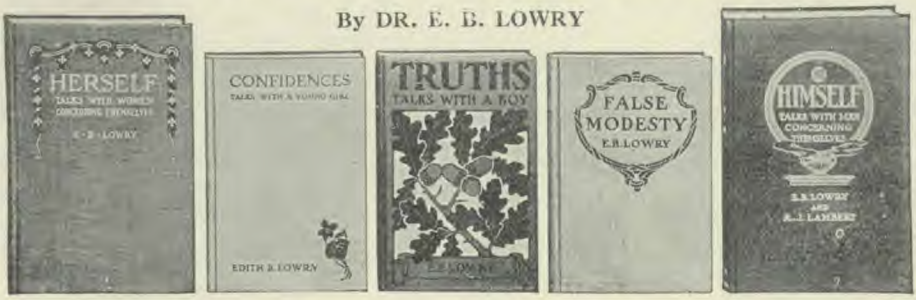

HERSELF

Talks With Women Concerning Themselves

This book contains full, precise, and trustworthy information on every question of importance to women concerning their physical nature.

"Herself" is superior to all books on its subject.— *The Independent, New York.*

HIMSELF

Talks With Men Concerning Themselves

The best book on sexual hygiene for men. It gives clearly and completely the knowledge essential to every man's health and success.

Every man ought to read this excellent, reliable book.— *Philadelphia Telegraph.*

Confidences

Talks With a Young Girl Concerning Herself

This book explains for young girls the origin and development of life in chaste, clear language. Critics and parents unite in declaring that the author's treatment of a difficult subject is wonderfully successful

Carefully written and should be given to every young girl. — *American Motherhood.*

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