Life & Health

THE NATIONAL HEALTH MAGAZINE

MAY 1913

10 CENTS A COPY – ONE DOLLAR A YEAR
WASHINGTON, D. C.

One Cent will send a vital health message to your friend who needs it.

We have prepared a series of ten tracts on important health topics, all right to the point and thoroughly readable, and printed just the right size to go in an envelope. An unobtrusive but effective way to send your friend the message he needs is to slip the right tract into your next letter. They are known as the

LIFE AND HEALTH LEAFLETS

and a single bunch costs just a dime, post-paid to you. Special prices on large quantities either assorted or of single numbers. Titles:—

1. *Alcohol and Disease.*
2. *Liquor and Poverty.*
3. *Counting the Cost of Alcohol.*
4. *Is Alcohol a Food.*
5. *The Cure for National Intemperance.*
6. *Patent Medicines.*
7. *Simple Treatments for a Cold.*
8. *Some Effects of Tobacco Using.*
9. *Pointed Facts About Tobacco.*
10. *Pure Air in the Home.*

Send to-day for a Sample package, 10 cents.

REVIEW AND HERALD PUBLISHING ASSN.
Takoma Park - - Washington, D. C.

Mt. Vernon Medical and Surgical Sanitarium

An Institution Centrally Located in the Most Healthful Portion of the State

¶ Equipped with modern appliances for surgical work and the treatment of chronic disorders. ¶ Latest improved apparatus for Hydrotherapy, Electrotherapy, Phototherapy, Mechanotherapy, Massotherapy. ¶ Physiologic System of Treatment and Diet fully carried ou in the institution. ¶ Pleasant Rooms; Elevator; Hot-Water Heating System; Natural Gas; Quiet, Secluded Grounds; Christian Attendants of both sexes. ¶ Noted Medicinal Springs in the immediate vicinity. ¶ Offensive patients not received in the building. ¶ Write for information.

MT. VERNON, OHIO

A Friend in the Kitchen

MRS. ANNA L. COLCORD

400 Carefully Tested Recipes
20 General Departments

16th EDITION, 160th THOUSAND

Marion Harland says: "The foundation of a happy home is laid in the kitchen." The housewife's best friend is the one who can help in the kitchen. Such a friend is our new cook-book.

In addition to the valuable recipes, and suggestive "Bill of Fare," the book contains much that is not found in the ordinary cook-book, such as, "Substitutes for Meat," "How to Become a Vegetarian," "How to Make Unfermented Bread and Wine for Sacramental Purposes," "The Pulse of Health," "Weights and Measures for the Kitchen," and many other important subjects.

"How to Can Fruit," is a chapter which in itself is worth the price of the complete work to any housewife.

Friend in the Kitchen is *not* an advertising medium. It recommends no branded articles. It is simple, thorough, practicable. A vegetarian cook-book for every-day use.

Cloth, Stiff Boards, 50 cents. Waterproof Paper, 25 cents.

REVIEW AND HERALD PUBLISHING ASSN.

New York City **WASHINGTON, D. C.** South Bend, Ind.

Our General Agencies

Kindly order "Life and Health" or any other publication advertised in this magazine from our agency nearest you.

UNITED STATES

Alabama Tract Society, 1700 N. Seventh Ave., Birmingham, Ala.
Arizona Tract Society, 615 N. Tenth St., Phœnix, Ariz.
Arkansas Tract Society, Fayetteville, Ark.
California Bible House, 2201 Telegraph Ave., Oakland, Cal.
California-Nevada Missionary Society, 339 E. Lodi Ave., Lodi, Cal.
California Bible House (Central), Box 1304, Fresno, Cal.
California Tract Society (Southern), 417 W. Fifth St., Los Angeles, Cal.
Chesapeake Tract Society, 1611 Ellamont St., Baltimore, Md.
Colorado Tract Society (Eastern), 1112 Kalamath St., Denver, Colo.
Colorado Tract Society (Western), 122 South Eighth St., Grand Junction, Colo.
Connecticut (see New England, Southern).
Cumberland Tract Society (E. Tennessee), 1214 Hawthorne St., Chattanooga, Tenn.
Delaware (see Chesapeake).
District of Columbia Tract Society, 700 Tenth St., N. W., Washington, D. C.
Florida Tract Society, Drawer 28, Orlando.
Georgia Tract Society, 169 Bryan St., Atlanta.
Idaho Tract Society, Box 126, Nampa, Idaho.
Illinois Tract Society (Northern), 3645 Ogden Ave., Hawthorne Station, Chicago, Ill.
Illinois Tract Society (Southern), 304 West Allen St., Springfield, Ill.
Indiana Tract Society, 521 East Twenty-third St., Indianapolis, Ind.
Iowa Tract Society, Nevada, Iowa.
Kansas Tract Society (East), 821 West Fifth St., Topeka, Kans.
Kansas Tract Society (West), 508 Fifth Ave., East, Hutchinson, Kans.
Kentucky Tract Society, Nicholasville, Ky.
Louisiana Tract Society, 810 Jackson Ave., New Orleans, La.
Maine Tract Society, 75 Grant St., Portland, Maine.
Maryland (see Chesapeake).
Massachusetts Tract Society, South Lancaster.
Michigan Tract Society (East), 426 Trumbull Ave., Detroit, Mich.
Michigan Tract Society (North), 510 Petoskey St., Petoskey, Mich.
Michigan Tract Society (West), Otsego, Mich.
Minnesota Tract Society, 336 East Lake St., Minneapolis, Minn. (Exchange case 45.)
Mississippi Tract Society, 932 Union St., Jackson, Miss.
Missouri Tract Society (North), Hamilton.
Missouri Tract Society (South), 520 West Lynn St., Springfield, Mo.
Montana Tract Society, Box 118, Bozeman.
Nebraska Bible Supply House, 905 North California Ave., Hastings, Nebr.
Nevada (see California-Nevada).
New England Tract Society (Northern), 136 N. Main St., Concord, N. H.
New England Tract Society (Southern), 51 Whitmore St., Hartford, Conn.
New Hampshire (see N. New England).
New Jersey Tract Society, 1109 Division St., Trenton, N. J.
New Mexico Tract Society, Box 286, Albuquerque, N. Mex.
New York Tract Society (Greater), Room 904, 32 Union Square, New York, N. Y.
New York Tract Society, 317 West Bloomfield St., Rome, N. Y.
New York Tract Society (Western), 8 East Jefferson St., Salamanca, N. Y.
North Carolina Tract Society, Glenwood, N. C.
North Dakota Tract Society, Box 285, Fargo.
Ohio Tract Society, Box 187, Mt. Vernon.
Oklahoma Tract Society, 217 N. Seventh St., Oklahoma City, Okla.
Oregon Missionary Society (Western), 719 E. Flanders St., Portland, Oregon.
Oregon Tract Society (Southern), Roseburg.
Pennsylvania Tract Society (Eastern), 4910 Arch St., Philadelphia, Pa.
Pennsylvania Tract Society (West), 7049 Hamilton Ave., Pittsburgh, Pa.
Rhode Island (see New England, Southern).
South Carolina Tract Society, 2332 Park St., Columbia, S. C.
South Dakota Tract Society, Box 595, Redfield, S. Dak.
Tennessee River Tract Society (Western Tennessee), 509 Cole Building, Nashville, Tenn
Texas Tract Society, Keene, Tex.
Texas Tract Society (South), Box 392, Austin, Tex.
Texas Tract Society (West), Abilene, Tex.
Utah Tract and Bible Society, 776 E. Sixth St., Salt Lake City, Utah.
Vermont (see Northern New England).
Virginia Tract Society, 2705 West Main St., Richmond, Va.
Washington Missionary Society (Western), 1407 East Forty-first St., Seattle, Wash.
Washington: Upper Columbia Tract Society, College Place, Wash.
West Virginia Tract Society, Fairmont.
Wisconsin Tract Society, Box 57, Grand Rapids, Wis.
Wyoming Tract Society, Crawford, Nebr.

UNITED STATES POSSESSIONS

Hawaiian Tract Society, 767 Kinau St., Honolulu, Hawaii.
Panama Tract Society, Cristobal, C. Z.
Philippine Islands Mission, 613 Nozaleda, Manila, Philippine Islands.

CANADIAN AGENCIES

Eastern Canada:
Canadian Pub. Assn., Port Hope, Ont.
Western Canada:
Alberta Tract Society, Lacombe, Alta.
British Columbia Tract Society, 1708 Maple St., Vancouver, B. C., Canada.
Manitoba Tract Society, 290 Bannerman Ave., Winnipeg, Man., Canada.
Saskatchewan Tract Society, Box 244, Regina, Sask., Canada.

FOREIGN AGENCIES

Great Britain: International Tract Society, Stanborough Park, Watford, Herts, England.
India Union Mission: 19 Banks Road, Lucknow, India.
Mexico: Imprenta de la Verdad, 1420 Avenida 20, Tacubaya, D. F., Mexico.
South Africa: International Tract Society, 56 Roeland St., Cape Town, South Africa.
West Indies: Watchman Press, Riversdale, Jamaica, B. W. I. (Cuba, Porto Rico, Jamaica, Central America, Caribbean Islands, British Guiana, Haiti, Venezuela).

LIFE AND HEALTH, Washington, D. C.

☞ **If you find a Renewal Blank inside the front cover, it indicates that YOUR SUBSCRIPTION EXPIRES WITH THE RECEIPT OF THIS NUMBER. Please fill out the Blank and send the same, with remittance, to our NEAREST AGENCY. See advertisement "Our General Agencies."**

CONTENTS FOR MAY

Entered as second-class matter June 24, 1904, at the post-office at Washington, D. C., under the Act of Congress of March 3, 1879. Published monthly by Review and Herald Publishing Assn., Washington, D. C.

PRICES, POST-PAID

Yearly subscription	**$1.00**	**Three years**	**$2.00**
Six months (subscriptions for less than six months not accepted)	**.50**	**Five years**	**3.00**
Single copy	**.10**	**Five copies, one year, to one or more addresses**	**3.00**

Five or more copies, mailed by publishers to five addresses or to one address, post-paid, each .05

NO EXTRA CHARGE ON FOREIGN SUBSCRIPTIONS

HOW TO REMIT.— Remittances should be made by Post-office Money-order (payable at Washington, D. C., post-office), Express Order, or Draft on New York. **Cash should be sent in Registered Letter.**

DATE OF EXPIRATION.— Your address on the wrapper shows the date of expiration of your subscription. To avoid missing any numbers, please **renew early,** for we **stop** all subscriptions **promptly upon expiration.**

CHANGE OF ADDRESS.— When a change of address is desired, both the **old** and the **new address** must be given. The publishers should be notified six weeks in advance of the desired date of change.

SUBSCRIPTIONS GUARANTEED.— Our authorized agent will present signed **credentials** from our **agency nearest you,** also receipt for subscription money. If requested, he will also deliver the first copy to commence your subscription.

TERMS TO AGENTS.— 5 to 40 copies, 5 cents a copy; 50 or more copies, 4 cents, post-paid, to one or more addresses. Foreign orders, 5 or more copies, 5 cents a copy, post-paid. Special discount on subscriptions quoted upon application.

ADVERTISEMENTS GUARANTEED.— The reliability of every advertisement found in **Life and Health** is guaranteed.

YOU WILL NOT BE ASKED TO PAY for this magazine unless you have subscribed for it. Some friend may have subscribed for you. The receipt of a sample copy is merely an invitation to subscribe. So please do not refuse the magazine at your post-office **for financial reasons.**

A. J. S. BOURDEAU, Circulation Manager

Courtesy Grand Trunk Pacific Railway

IN JASPER PARK, NEAR FITZHUGH, ALBERTA

VOL. XXVIII
No. 5

Life & Health
THE NATIONAL HEALTH MAGAZINE

MAY
1913

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

George Henry Heald, M. D., Editor

CHARACTER FORMATION

In every moment of his life man is the joint product of his inherited tendencies and the adjustment and education or habit of his life.—*Forel, in "Nervous and Mental Hygiene."*

WE admire a great personality, and sometimes we wish we might attain to such a character; but such wishes amount to nothing, for, after all, character is but the sum total of one's tendencies — of one's ways of reacting to the circumstances that come to him; and one's tendencies are but the result of his past life.

As Liddon has said: "What we would do on some great occasion will depend on what we already are; and what we are will be the result of previous self-discipline."

Like fire, habit is a faithful servant, but a fearfully hard master: and he is wise who forms habits which will be his friends rather than his enemies. As Marden, in "The Making of a Man," says: —

"Habit is practically, for a middle-aged person, fate; for is it not practically certain that what I have done for twenty years, I shall repeat to-day? What are the chances for a man who has been lazy and indolent all his life starting to-morrow morning to be industrious; or if a spendthrift, frugal; if a libertine, virtuous; if a profane and foul-mouthed man, clean and chaste? . . .

"After a man's habits are well set, about all he can do is to sit by and observe which way he is going. Regret it as he may, how helpless is a weak man bound by the mighty cable of habit, twisted from the tiny threads of single acts which he thought were absolutely within his control!"

What the child of five does partly determines what he will do at seven; and the repetition at seven makes it doubly sure that he will do the same things at ten, twelve, twenty-five, and fifty years of age. "As the twig is bent the tree's inclined." What a pity parents can not realize this to the extent that they will give more care to the training of the children in their early years! And yet the parents do as they do because of their own early training. They allow their children to form haphazard habits because they themselves are the slaves of such habits and find it impossible to get out of the rut.

As Marden says in another place: —

"A man's entire life is spent writing his own biography. Beyond his control is the photograph of the soul, which registers faithfully every act, however small, every sensation, however slight, every impulse, every motive, every aspiration, every ambition, every effort, every stimulus, on the central tissue.

"If a young man neglects his mind and heart,— if he indulges himself in vicious causes and forms habits of inefficiency and slothfulness,— he experiences a loss which no subsequent effort can relieve."

And yet we must not excuse ourselves because we perchance were allowed to form careless or evil habits. For the sake of our children we must arouse, we must force ourselves to action, we must discipline ourselves, so that we may be the better able to discipline and guide the young shoots that depend upon us for their future character.

THE FOUNDATION LAW of the SCIENCE of HEREDITY

JOHN M. CONNOLLY, A.M., Ph.D., M.D., LL.D.

[The subject of heredity is a fascinating one, though so complex that the most earnest students realize that they have just made a beginning in the study. The notion that we can, by means of the Mendelian traits, change the character of human beings is one on which students are not yet united. Some believe that in some characteristics human heredity follows the laws of Mendel, and in others it does not. The length of the human generation is so great as compared with pea-vines and wheat, and the difficulty of obtaining pure stocks with which to experiment offers such obstacles, that thus far little but inferential work has been accomplished. However, there is no doubt in the minds of many students of the subject that the Mendelian law holds good as regards at least some of the human characteristics.— ED.]

IN the year 1900, the National Association of British and Irish Millers took official notice of the very disturbing fact that the annual wheat yield of Great Britain was exceedingly deficient, and that from a disease called rust a loss was taking place, amounting to five hundred million dollars each year. With a wisdom to which it would be difficult to find a parallel, this association raised a fund to provide for an experimental study of the subject, and engaged the services of Prof. R. H. Biffen, of the University of Cambridge, England.

Professor Biffen discovered an American variety of wheat which was never attacked by the disease rust, but which, unfortunately, was of small yield and with a small kernel. On crossing this variety, however, with the British variety, a wheat was produced that possessed all the good qualities of the original British wheat, and yielded on the average about ten bushels an acre more, and was immune to the disease rust.

It is needless to say that this striking result was developed not by haphazard breeding, but by a series of well-conceived experiments carried out in strict accordance with a definite law.

This law, which through a single instance of its application enabled Professor Biffen to save annually to the British Empire so enormous a sum of money, and which through the many other applications made to plants and animals has conserved or produced wealth compared with which this example is a mere bagatelle, and which is destined to be of yet more profound significance through its application to human beings, is certainly worthy of the most careful and respectful consideration of all who are interested in racial improvement.

The story of the epoch-making law by the light of which Professor Biffen guided his experimentation is a most romantic one. In the year 1865, Gregor Johann Mendel, O. S. A., president of the Brunn (Austria) Society of Naturalists, read to the society an account of the results which he had obtained during eight years of work in the breeding of pea plants. This paper, in which he enunciated the law now known by his name, was buried in the provincial journal in which it had been published, until, in the year 1900, de Vries rediscovered it and confirmed the observations of Mendel, placing his law as the foundation-stone of the modern science of heredity, applicable alike to all living things, both plants and animals.

Of Mendel's law, Dr. Wm. E. Castle, professor of zoology, Harvard University, writes that it is "the greatest single discovery ever made in the field of heredity;" and his new book, just issued, concerns itself chiefly "with the operations of that law."

Professor Bateson, of the University of Cambridge, England, says: "I think

that I use no extravagant words when I venture to declare that Mendel's experiments are worthy to rank with those which laid the foundation of the atomic laws of chemistry."

Dr. David Starr Jordan, president of Leland Stanford University, quotes Kellogg to the effect that "biologists see in the establishment of the Mendelian principles of heredity the greatest advance toward a rational explanation of inheritance that has been made since the beginning of the scientific study of the problem."

Mendel discovered that if purple peas and white peas were mated together, the resulting hybrids were all purple; but that if these purple offspring were again bred together, the next generation would contain, out of every hundred, seventy-five purples and twenty-five whites. He went further, and found that if tall and short varieties were mated together, the resulting hybrid was invariably tall, but that in the next generation one out of every four plants was short. The same held true of other characters which he studied, such as color of the seed, shape of the seed, color of the pod, distribution of the flowers along the stem, and other qualities. In all these cases he found that one character or quality invariably showed itself by preference in the next generation, while the contrasting quality remained hidden; but that in every instance this hidden quality reappeared in the following generation, and reappeared always in the definite and constant ratio of one to three, that is, in twenty-five per cent of the offspring.[1]

He therefore introduced the term *dominant* to indicate that quality (such as purpleness, tallness, etc.) which appeared alone in the first generation of progeny, and *recessive* to signify that contrasting quality which became latent or hidden (as whiteness, shortness). It also became evident from his experiments that these qualities behaved as units independent, distinct, and indestructible, and that although in the first generation all the plants appeared purple and the white character from one of the parents had passed out of sight, yet the white character was still there, though latent, and could be made to reappear without fail in twenty-five per cent of the progeny, independently of all the

[1] The explanation of why this particular ratio of three to one should be invariable is too technical for our present purpose, but is given in detail in an article by the author published in the Boston *Medical and Surgical Journal*, Dec. 5 and 12, 1912.

This photograph of a portion of Dr. Connolly's herd illustrates Mendelian *dominance* in transmission of the belted condition. On the extreme right are two pure-bred Dutch-belted cattle. Next are two belted cross-breds by a Dutch-belted sire from the Holstein next adjacent. In the background, left of the Holstein, is the daughter of one of these cross-breds, showing the transmission of the belt to the third generation. At the extreme left is a belted daughter of the Jersey cow seen with difficulty in the background between the pure-breds.

other characters of the plant. It was an easy matter, therefore, to replace at will one of these characters by its partner of the "Mendelian pair" without changing the other characteristics of the plant.

And this is how Professor Biffen proceeded to secure his immune wheat,—by discovering a wheat that had the quality of immunity to rust, and substituting that quality for non-immunity in the British species. He discovered that in wheat, susceptibility to rust is a Mendelian dominant, and immunity to rust is a Mendelian recessive, and by cultivating only the twenty-five per cent of recessives in the third generation and discarding the seventy-five per cent of dominant rust-attacked plants, he soon had seeds enough and to spare.

The calf on the left is reddish brown, with a white belt, and is the offspring of a Jersey cow by a Dutch-belted sire. The calf on the right is from a Dutch-belted Holstein cross, is black with a white belt, and can not be distinguished by inspection from a pure-bred Dutch-belted. In many years of breeding experience, the belt has never failed to appear if one of the parents was pure belted. The belted cross-breds, however, produce, on the average, one in four without the belt.

I have for many years been interested in breeding Dutch-belted cattle; and in the offspring, even when mated with grades, I have found the broad white belt constant. And in the next generation the progeny of these cross-breeds almost constantly show the belt. Beltedness in cattle acts therefore as a Mendelian dominant, just as hornlessness in sheep is dominant over the ordinary horned condition.

The list of recognized Mendelian traits in both plants and animals is already large, and is increasing almost weekly. In plants, colors of flowers, stems, seeds, and seed-coats; seed characters, such as amount of starch, sugar, or gluten; annual or biennial habit; smoothness or prickliness of stem in, for instance, the jimson-weed and crowfoot; susceptibility to certain diseases; early or late ripening,—have all been found to Mendelize.

In animals the "waltzing" habit of mice and the pacing gait of the horse are Mendelian traits, and can therefore be bred into or out of the offspring at our pleasure. Length of hair and smoothness of coat, presence of an extra toe, length of tail, and in fowl shape and size of the comb, presence of a crest or a "muff," a high nostril, feathering of the legs, "frizzling" of the feathers, certain characters of the voice, a tendency to brood,—all of these are Mendelian traits, and can be taken from or added to any desired variety, just as a red book may be removed from a bookcase and replaced by a black or a green one, and this without altering any other characters in the animals any more than it is necessary to disturb any other books in the case.

In man two-jointed fingers and toes are dominant over normal three-jointed ones, brown eyes are dominant over blue, red hair over brown. Height; weight; physical strength; tendency to certain diseases, as rheumatism, hemophilia, epilepsy, chorea; talent for music; mechanical ability, can all be expressed in Mendelian terms, and it is in our power to modify the transmission of these characteristics to posterity.

Idiocy and imbecility are Mendelian recessives, as are practically all hereditary insanities and mental defects; and it is therefore entirely possible to eliminate by wise, or to perpetuate by unwise, marriage matings all these antisocial and degrading factors.

The possibilities opening before the application of the new science of eugenics,

(Concluded on page 235)

THE SUN AND MY LADY'S FACE

LEONARD KEENE HIRSHBERG, M.A., M.D.
(JOHNS HOPKINS)

THAT the warm spring sun burns the face and leaves traces through the year will not be denied by even the most weather-beaten old salt. Aided and abetted by the cold winds and damp nights of May and early June, the chemical rays of the equinoctial sun work havoc with delicate skins and tender indoor constitutions. Not that any one should avoid the quickening impulses of the warming sun! Such is not my thesis. There is no more powerful force for good in all physical nature than the hot, bactericidal, ethereal waves of old Sol.

His very powers, so mighty and wonderful, that quickly put to rout any stray tubercle bacillus or other vicious enemy of mankind, may also penetrate beyond the surface layers of a young girl's skin, and rough-hue it to permanent rack and ruin.

When the bold, strong rays of a midsummer sun beat down upon my lady's face, she knows what to expect, but the equally penetrating waves of a May sun are ignored. As the sun sends insidious lancets through the rosy, filamentous skin of the frosty winter's weaving, the fair face of the maid soon loses its fleeting shades and high lights of pink and rose. Soon the aurora-hued flesh with its cerise tints gives place to a Bardolph-like floridity that puts even a Falstaff to shame. Then follows scarlet, crimson, maroon, and finally a thick-skinned brown. Thus layer upon layer of insinuating and unnoticed bronze takes the place of dreamy, alabastered, and a titanic kind of texture.

I wish to avow right here that I approve of the fresh air and the sunlight always and unequivocably. There is no greater balm in Gilead than a fine sunshiny outdoor life. More maladies are prevented, more disease germs are annihilated, by Apollo than all the chemical concoctions and psychotherapeutic discoveries from Galen to Christian Science. If there is or can be such a thing as a near-panacea, sunshine is *it*.

The damp nights of May and early June and the chemical rays of the equinoctial sun work havoc with the skin.

But this does not by any means indicate that every fair maid of blooming mien and American Beauty cheeks shall expose the nape of her neck or the dimple of her chin to its balmy rays. Not at all. Every girl owes it to

There is no greater balm in Gilead than a fine sunshiny outdoor life.

herself, just as the flower must have brightness to attract bees, to retain the miniature with which nature endowed her, in its finest coloring and shades. Go out in the sun, but save the delicate of your skin. Remain outdoors as much as possible, but nurse the attractive qualities of your face as you would your life. Your face is your fortune, so hesitate about squandering it for a moment's wanton pleasure. A fool and her fortune are soon parted, is not an untrue paraphrase of an old saw.

How then, you ask, can one both be in the sun and not in the sun? The answer is apparent.

They are not mindful of their faces.

Make free with your sunshade; do not hesitate to unbuckle your parasol. If the umbrella at hand happens not to match either your costume or your complexion, open it anyhow. If it does not match the latter, it will rescue it from destruction, and prevent you from purchasing one at the nearest pharmacy or beauty doctor's.

Next to a becoming — or for that matter an unbecoming — parasol, is a spider-webbed, but delicately meshed, veil. For motoring this should be doubled, but in this case it should contain eye-holes or else have goggles attached.

If the umbrella at hand happens not to match your costume or your complexion, open it up anyway.

Never use soap or hot water on the face. After washing briskly with cold water, use a bit of diluted peroxid to remove the oils, greases, stains, or dirt that remains. It is often advisable to avoid absolutely all use of water on the face, and substitute for it the cleansing properties of peroxid with a few drops of glycerin in it.

I must vigorously advise against the prevalent and pernicious practise of the use of the ubiquitous and expensive chamois skin. Ordinary cotton-wool or absorbent cotton is decidedly preferable to anything else. It is as filmy as the skin itself, and much finer than chamois.

Finally, those whose skin predisposes them to acne, pimples, liver-spots (an exaggerated form of localized sunburn), blackheads, and oily or coarse eruptions, should use no powders nor soaps at all upon the face. Vigorously rubbing with dilute peroxid containing some flavored water and glycerin, using absorbent cotton or flannel, tabooing all alcoholic liquors, teas, coffee, soups, and cocoa, as well as foods too much flavored with condiments, will help to preserve the face in infantile freshness.

The Value of Dental Hygiene As Regards the Health of the Child

Charles K. Farrington

The Need

ONE of the most encouraging signs of the times is the ever-increasing interest taken by the public in any movement that provides for the mental and physical betterment of the child. It is now coming to be realized that a healthy child will usually develop into a healthy adult, and that a sickly child or adult is a detriment and expense to any community. Hence we find that even small places have playgrounds, provide medical inspection for schoolchildren, and in many other ways aid in preserving the public health. One of the latest phases of this work is the attempt to provide for free dental service for children who otherwise could not receive it. Unless the value of such services is explained to a layman, he can not as a rule appreciate their worth.

Only the other day the writer in talking the matter over with a dentist of wide experience was told that ninety per cent of the schoolchildren in the suburban district of New York City where he lived needed attention to their teeth which they were unable to have on account of the expense. He went on to explain that many of these children were being seriously injured by lack of this attention. It would be beyond the scope of this article to enter into a technical discussion as to why this is so, but the writer will say that many a child is compelled to stay a second year in a class because of a retarded mental development due to faulty teeth. Frequently "laziness" or "inattention" is merely inability to perform the required work. This matter is now beginning to receive in a slight measure the attention it deserves. As time passes on, it will doubtless receive its full measure. Those of us who have watched the development of medical inspection for schoolchildren can not doubt this.

The other day the writer came across a typical case which well illustrates the value of such inspection. Two children afflicted in the late summer-time with what was supposed to be a bad case of sunburn, mingled freely with their playmates until it was discovered that the supposed sunburn was really the desquamating period of scarlet fever. The "peeling off" of the skin was considered to be the result of the action of the sun's rays, but any medical man would have known at once that it was not. Many adults as well as children were exposed to the infection. After the summer vacation medical inspectors usually find much to do. It should be remembered in this connection that a child suffering with a contagious disease may not realize that it is sick. A very severe case of diphtheria or scarlet fever may be contracted from a mild attack of these diseases. Consequently it repeatedly happens that a mild case spreads the disease more than a severe one does. But the duties of a medical inspector do not confine him to discovering contagious diseases; and he can diagnose eye, ear, and throat troubles, and also other disorders too numerous to mention.

Doctor Not a Dentist

But a doctor of medicine can not attend to dental matters. For such troubles a dentist should be consulted. For years there have been hospitals where free medical and surgical treatment can be had for those who can not afford to pay for them, and also dispensaries where medical advice is gratuitously given; but

until lately nothing has been done for free dental treatment, notwithstanding the pressing need.

How Can This Be Remedied?

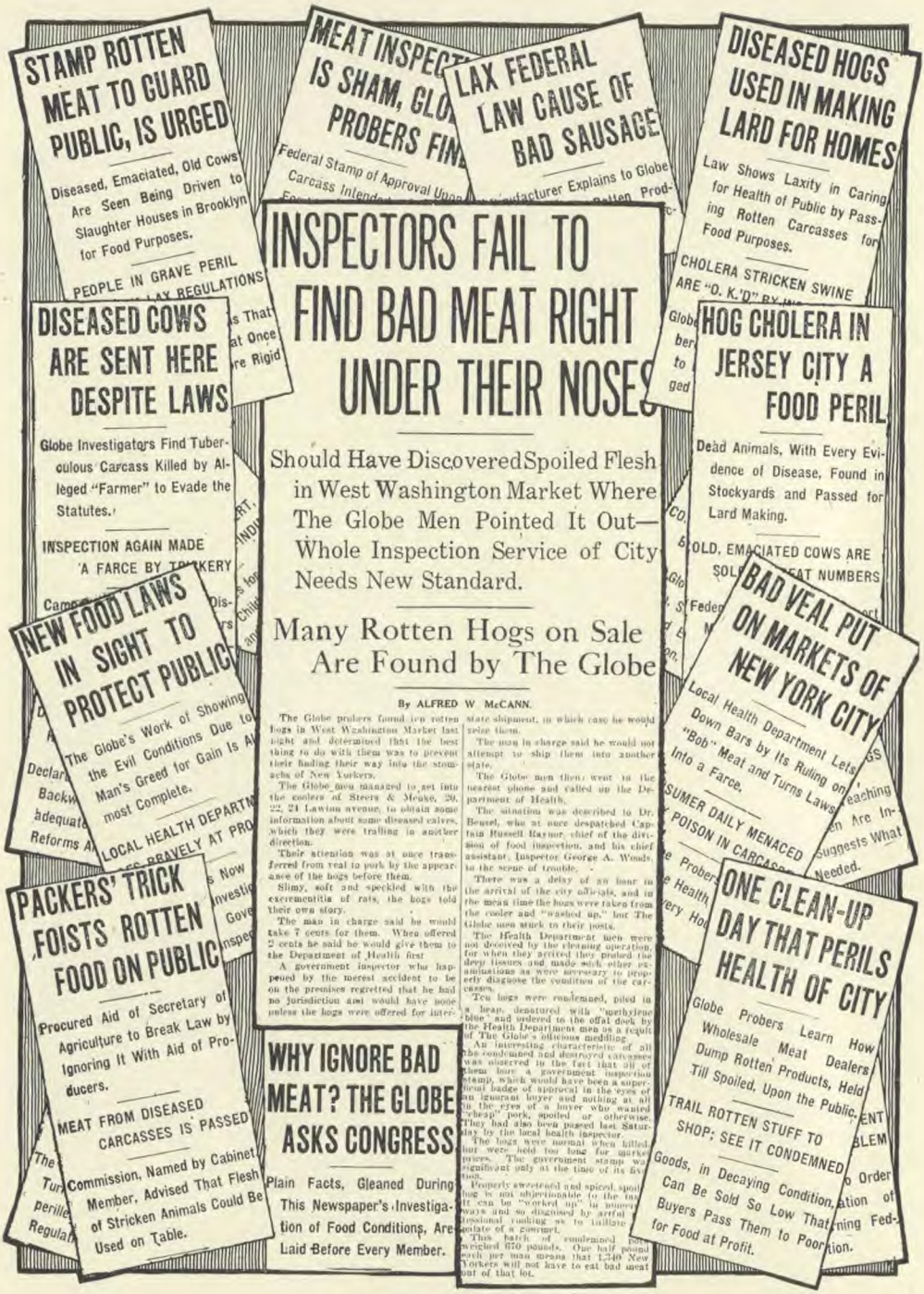
The New Jersey State Legislature has passed a bill providing that municipalities under certain conditions can appropriate money for free dental services. Usually the board of education, working in conjunction with the councilmen or aldermen, as the case may be, can arrange this matter, the board of education working out what might be termed the practical details, and the councilmen or aldermen making arrangements for the necessary money. The cooperation of the local dentists is often of the greatest value. The question now will doubtless occur to the reader as to how the practical details can best be worked out.

It may be asked, Shall a dentist be employed who will give his entire time to the matter, or shall the local dentists give their services on certain days? Shall the children have the services of a dentist given them during school hours, etc.? In reply, the writer would say that local conditions must govern such matters. The size of the city or town, the number of children, the number of dentists who would volunteer their services, the amount of money that can be appropriated, etc., must all be carefully considered before any definite plan can be devised. In nearly all cases, if not in every one, a place must be secured for the treatments to be given in, for it is obvious that it would be impracticable for the children to go to the different dentists' offices for dental work. Where a sufficient appropriation can be secured, and the number of children would warrant it, a dentist should be employed who would devote his entire time to the matter. In large places it would be necessary to have a number of dentists working. If a child's teeth are given attention once a year, a great benefit will be obtained, and an absence of say an hour or two once a year will not seriously interfere with the school work. It is best to have the needed attention given in school hours. In small places the services of the local dentists (which they will often freely give) is all that is necessary.

It may be asked if such methods of free dental inspection and treatment do not interfere with the practise of the local dentists. The case is exactly the opposite. In a most practical manner the general public is enlightened as to the value and necessity of having the children's teeth attended to. The children's parents absorb the experiences of their little ones and note the advantages, and also realize that it is important for themselves to have their teeth looked after, local dentists, much of which they undoubtedly would not have received if it had not been for the children's example. It should be remembered in this connection that each year thousands upon thousands of foreigners land upon our shores, and that it is our duty to teach these people many things in order to make them useful citizens. The ignorance one finds regarding matters of health is simply appalling. But in many cases if explanations are made and assistance given, decided improvements are made, and it is clearly the duty of every person to aid in this.

Is It Worth While?

I suppose some readers will ask if such a course pays. I am glad to be able to say it does. When it is fully realized that disease means expense, any method of preventing it will be welcomed. In the writer's home place there is a large ward in the local hospital which is used exclusively for consumptive cases. The cost to maintain such a ward is large. If this disease can only be held in check by the means of proper medical inspection and treatment *at the beginning,* much can be accomplished. It is far better to *prevent* disease than to *care* for it after it has attacked its victim. Hence the movement for free dental inspection and treatment. It will aid in preserving the health of many a human being, and deserves the earnest support of every one.



STAMP ROTTEN MEAT TO GUARD PUBLIC, IS URGED

Diseased, Emaciated, Old Cows Are Seen Being Driven to Slaughter Houses in Brooklyn for Food Purposes.

PEOPLE IN GRAVE PERIL

MEAT INSPECT... IS SHAM, GLO... PROBERS FIN...

Federal Stamp of Approval Upon Carcass Intende...

LAX FEDERAL LAW CAUSE OF BAD SAUSAGE

...facturer Explains to Globe ... Rotten Prod...

DISEASED HOGS USED IN MAKING LARD FOR HOMES

Law Shows Laxity in Caring for Health of Public by Passing Rotten Carcasses for Food Purposes.

CHOLERA STRICKEN SWINE ARE "O. K.'D" BY ...

DISEASED COWS ARE SENT HERE DESPITE LAWS

Globe Investigators Find Tuberculous Carcass Killed by Alleged "Farmer" to Evade the Statutes.

INSPECTION AGAIN MADE 'A FARCE BY ...KERY

HOG CHOLERA IN JERSEY CITY A FOOD PERIL

Dead Animals, With Every Evidence of Disease, Found in Stockyards and Passed for Lard Making.

OLD, EMACIATED COWS ARE SOL... ...EAT NUMBERS

INSPECTORS FAIL TO FIND BAD MEAT RIGHT UNDER THEIR NOSES

Should Have Discovered Spoiled Flesh in West Washington Market Where The Globe Men Pointed It Out—Whole Inspection Service of City Needs New Standard.

Many Rotten Hogs on Sale Are Found by The Globe

By ALFRED W. McCANN.

The Globe probers found ten rotten hogs in West Washington Market last night and determined that the best thing to do with them was to prevent their finding their way into the stomachs of New Yorkers.

The Globe men managed to get into the coolers of Steers & Meuke, 20, 22, 24 Lawton avenue, to obtain some information about some diseased calves, which they were trailing in another direction.

Their attention was at once transferred from veal to pork by the appearance of the hogs before them.

Slimy, soft and speckled with the excrementitia of rats, the hogs told their own story.

The man in charge said he would take 7 cents for them. When offered 2 cents he said he would give them to the Department of Health first.

A government inspector who happened by the merest accident to be on the premises regretted that he had no jurisdiction and would have none unless the hogs were offered for interstate shipment, in which case he would seize them.

The man in charge said he would not attempt to ship them into another state.

The Globe men then went to the nearest phone and called up the Department of Health.

The situation was described to Dr. Bensel, who at once despatched Captain Russell Raymer, chief of the division of food inspection, and his chief assistant, Inspector George A. Woods, to the scene of trouble.

There was a delay of an hour in the arrival of the city officials, and in the mean time the hogs were taken from the cooler and "washed up," but The Globe men stuck to their posts.

The Health Department men were not deceived by the cleaning operation, for when they probed the deep tissues and made such other examinations as were necessary to properly diagnose the condition of the carcasses,

Ten hogs were condemned, piled in a heap, denatured with "methylene blue," and ordered to the offal dock by the Health Department men as a result of The Globe's officious meddling.

An interesting characteristic of all the condemned and destroyed carcasses was observed in the fact that all of them bore a government inspection stamp, which would have been a superficial badge of approval in the eyes of an ignorant buyer and nothing at all to the eyes of a buyer who wanted "wrhsap" pork, spoiled or otherwise. They had also been passed last Saturday by the local health inspector.

The hogs were normal when killed but were held too long for market purposes. The government stamp was significant only at the time of its application.

Properly sweetened and spiced, spoiled hog is not objectionable to the taste. It can be "worked up" in many ways and so disguised by artful professional rushing as to facilitate relate of a gourmet.

This batch of condemned weighed 870 pounds. One half pound each per man means that 1,740 New Yorkers will not have to eat bad meat out of that lot.

NEW FOOD LAWS IN SIGHT TO PROTECT PUBLIC

The Globe's Work of Showing the Evil Conditions Due to Man's Greed for Gain Is Almost Complete.

LOCAL HEALTH DEPARTM... BRAVELY AT PRO...

BAD VEAL PUT ON MARKETS OF NEW YORK CITY

Local Health Department Lets Down Bars by Its Ruling on "Bob" Meat and Turns Laws Into a Farce.

...SUMER DAILY MENACED ... POISON IN CARCA...

...eaching ...en Are In... ...Suggests What ...Needed.

PACKERS' TRICK FOISTS ROTTEN FOOD ON PUBLIC

Procured Aid of Secretary of Agriculture to Break Law by Ignoring It With Aid of Producers.

MEAT FROM DISEASED CARCASSES IS PASSED

Commission, Named by Cabinet Member, Advised That Flesh of Stricken Animals Could Be Used on Table.

WHY IGNORE BAD MEAT? THE GLOBE ASKS CONGRESS

Plain Facts, Gleaned During This Newspaper's Investigation of Food Conditions, Are Laid Before Every Member.

ONE CLEAN-UP DAY THAT PERILS HEALTH OF CITY

Globe Probers Learn How Wholesale Meat Dealers Dump Rotten Products, Held Till Spoiled, Upon the Public.

TRAIL ROTTEN STUFF TO SHOP; SEE IT CONDEMNED

Goods, in Decaying Condition, Can Be Sold So Low That Buyers Pass Them to Poor for Food at Profit.

...ENT ...BLEM ...o Order ...ation of ...ming Fed...tion.

A WAR ON PUTRID MEATS

Recently the New York *Globe* began a campaign against filthy and diseased meats, employing inspectors who discovered some startling and disconcerting conditions. The above are only a few of the headings of the *Globe* articles on the subject.

A CAMPAIGN AGAINST DISEASED AND DIRTY MEAT

G. H. Heald, M. D.

THOSE LIFE AND HEALTH readers who subsist on a diet that appeals to esthetic instincts will not be personally interested in the disclosure of slaughter-house scandals. But for the benefit of those who still depend partly upon a meat dietary, it may not be amiss to call attention to the recent campaign of the New York *Globe* against the horrors of the meat industry in the metropolis.

For several weeks the *Globe* continued its campaign, evidently with a sincere purpose to improve the condition of the meat supply of the great city. We give on the opposite page a few headings that appeared in the paper during this campaign. The articles, we can assure our readers, were not confined to generalities, but plainly specified instances of gross violation of common decency and disregard for public health in the conduct of the meat business, and showed that the present inspection system is totally and hopelessly inefficient. The *Globe* employed a private inspecting corps, who went around with their eyes open and observed many things that evidently escaped the eyes of the government or city inspectors, and not infrequently they called the attention of the inspectors to meat products which the latter immediately condemned. Sometimes the *Globe* article specified individual cases, giving the name of the firm and the address, where the conditions were particularly obnoxious. Of course, if the *Globe* people had not been able to produce the evidence for all their assertions, they would have been subject to numerous libel suits. The fact is, they had by careful investigation substantiated what they had to say, and they stated some very plain and some very abhorrent facts. On the basis of these they have appealed to Congress to relieve the situation, sending a copy of the appeal individually to every senator and representative.

It will be remembered that about a year ago there was a congressional investigation of the federal meat inspection instigated by Mrs. Crane, of Michigan, which, for some reason, was suddenly hushed up. A partial account of this investigation was given in LIFE AND HEALTH, July, 1912. In this connection the startling disclosures by Dr. Alfred B. Leffingwell, in "American Meat" (E. Schulte, publisher, New York), will be recalled to mind. There has been a disposition to discount and ridicule the statements made in this book, and there is a tendency on the part of the Bureau of Animal Industry to minimize the fact that diseased meat is passed for consumption. We think that the contention by the *Globe* that meat should be labeled — that "THIS MEAT WAS CUT FROM A HEALTHY CARCASS," or, "THIS MEAT WAS CUT FROM A DISEASED CARCASS," should be stamped upon every piece of meat offered for sale — is no more than just. Granted that, according to certain "eminent scientists," diseased meat is harmless for human consumption, should not those who purchase meat have the right to know whether the meat is diseased or not?

We have become so careful regarding the matter of preservatives that if a little benzoate of soda is put in a package for preservative effect, it must be mentioned. Why should not the fact that an animal is diseased be mentioned? The fact is, there would be very little use for the stamp for healthy meat, and if the fact were known to what extent meat is diseased, there might be many more non-meat eaters than there are at present.

As to the nature of the disclosures by the *Globe* we must content ourselves with just a few. Mentioning two uninspected slaughter-houses in Brooklyn, one article says: "The *Globe* men found the carcasses of old cows so emaciated that in many instances the bones were bursting through the skin." This is a startling statement. The article continues: —

"Eye-witnesses, whose names will be produced at the proper time, have seen the cows being driven along Johnson Avenue to these places in such deplorable physical condition that many of them are half dead before they get to the killing pens.

"Swollen glands, heavy lumps on the necks of the animals, stiff limbs, and many other marks of physical degeneration are observed by pedestrians.

"Dr. Long of the Bureau of Animal Industry declares that he would condemn half of these animals as unfit for food if the establishment fell under his jurisdiction."

Speaking of dressed calves, the writer says: —

"Wherever the *Globe* men go they find hundreds of dressed calves (the sale of which in New York City is enormous), of the history of which not even the meat men who own them know anything.

"A large proportion of these animals are known to the trade as 'grassy.' They are thin, emaciated, soft, and uninviting in appearance. Taken from the mother cow almost as soon as born, they are fed on skim-milk and slops, and then turned loose to find scanty nourishment for themselves until it is convenient to send them to slaughter. The longer they are held, the more money they eat up. It costs something to hold them, whether the law says so or not.

"When killed they are in an excessively fatigued condition, and are often suffering from malnutrition and anemia."

By the federal law, so-called "farmers" by asserting that the meat was slaughtered upon the farm from healthy animals, and that no preservative was used, can ship the meat into interstate commerce without federal inspection. In numbers of cases meat most grossly diseased has been shipped by farmers into the cities. The fact is, slaughterers become farmers in order to evade the meat inspection laws, and thus slaughter and ship animals which they know would not be passed by the inspectors.

These are only a few of the statements with which the *Globe* challenges the meat producers, and the latter dare not resent it, for they know every word is true.

Says one: "Well, I am glad I do not have to eat meat in New York City." But unfortunately New York is not unique in this matter. Probably there is not a city in the United States in which similar conditions could not be found if the local newspapers cared to press the matter.

Butchering is an unclean business, and it can not be made clean. At the best, it is dealing out diseased animals for human consumption. The strictest federal laws, even when conscientiously enforced, do not weed out nearly all the diseased animals, and many are labeled "U. S. inspected and passed" that are quite seriously diseased. It has to be so, otherwise meat would be scarcer by far than now, and prices would soar beyond the reach of any but the wealthy. The production of healthy meat in sufficient quantity for the needs of the nation, at a price within the reach of the masses, is an insoluble problem. Fortunately there are other foods which can supply the needed protein in a much cheaper form, and with the added advantage that the dangers from disease are reduced to a minimum.

THE FAMILY GARDEN

Edythe Stoddard Seymour

PLANTING and cultivating a garden, if managed well, will do much more toward promoting the health of a family than the usual one or two weeks' outing, called a vacation. The garden will give outing, change, and amusement, as well as work (exercise), from early spring until frost appears, if one is interested in keeping it in running order that long. However, it is sufficient for most persons, especially those with long working hours, to plant only the early things that produce when prices are high, and again such things as mature in the fall, leaving midsummer for rest or vacation.

The first preparation of the family garden is strictly a masculine affair, for this work is heavy and uninteresting. Either fine stable manure or other fertilizer should be spread evenly over the ground, except where the tomatoes are to go. Tomato plants run too much to vine on rich ground. The ground should be made rich for potatoes. Beans do well in poor soil; but cucumbers, squash, and melons need an extra shovelful of fertilizer worked into each hill. Bulbs do best in light, sandy soil, but heavy soil can be made fine by careful working.

The ground for a large garden is usually broken first with a plow and harrow, but the work can be more slowly done by a strong man with a good spade. Lumps should be well broken up, and then made smaller and finer yet with a hoe and rake.

At this stage the garden can become a family affair, and will furnish much diversion if all help; even the baby in his go-cart will enjoy being out with the others. House cleaning can well be slighted while active gardening work is going on. Much of the gardening, however, can be done a little at a time at odd moments, and the mother can thus get out into the air to exercise, if she enjoys this work, or she can sit and watch the others if she is unable to take part in the work.

During March and until June (or longer in the Northern States) seeds can be planted, and in April and May, according to locality, garden plants can be set out. A good seed catalogue will furnish much information as to when to plant each variety of seed in a certain locality. The quality of the seeds is of first importance for a successful garden. Get freshly packed ones from a reliable and well-known firm.

The following partial list of vegetables names as many kinds as usually find a place in the family garden, and gives the time required after planting until each is ready for use:—

	DAYS
Radishes	20-40
Lettuce	60-90
Turnips and rutabagas	60-90
Irish potatoes	80-140
Sweet potatoes	140-160
Onion seeds or sets	90-150
Bush-beans	40-65
Pole-beans	50-80
Beets	60-80
Brussels sprouts	90-130
Late cabbage	90-130

Carrots	75-100
Sweet corn	60-100
Pumpkins	100-140
Cucumbers	60-80
Kohlrabi	60-80
Okra	90-140
Parsnips	125-160
Peas	40-80
Squash (summer)	60-80
Squash (late)	120-160

Cauliflower, celeriac, celery, eggplants, peppers, and tomatoes can be bought at the greenhouse and set out late in the spring, or earlier farther south.

There are several vegetables mentioned in the list that are not generally known, but they add a pleasant variety to the available table vegetables. I did not mention Swiss chard, but will describe it for the benefit of those not familiar with this useful plant. It belongs to the beet family, but develops, instead of bulbs, large leaves and stalks that taste like beet tops when cooked. The leaves can be stripped from the white midribs, and these cooked separately with a cream dressing as a substitute for asparagus. The plants continue to send out leaves until frost comes.

Celeriac is of the celery family, but forms a bulb (used for cooking) instead of stalks.

Kohlrabi is also a bulb grown above ground, with a delicate flavor between a cabbage and a turnip. It can be cooked, or sliced in thin sections to be mixed in a vegetable salad, raw.

We must also mention Brussels sprouts, a tender, delicate member of the cabbage family, forming sprouts along the stalk with a few large leaves at the top; these are usually served with a cream dressing.

Okra pods should be gathered while tender, and can be used in soup, stew, mixed pickles, or cooked as a stew by itself with a little onion and a cupful of tomatoes and seasoning.

Divide the seeds so they can be planted about every two weeks, in order to have a succession of crops. Take the amount of seeds desired, and mark and prepare the rows for them. The rows should be about a foot apart for small vegetables, such as radishes, and three feet apart for vines; other vegetables, according to the spread of their foliage. For horse cultivation the width should be much greater. A stout cord stretched between two good stakes, one at each end of the row, makes the best marker for keeping the rows straight. Take the point of the hoe and run a furrow along the cord, shallow or deeper according to the size of the seeds to be planted. An old-fashioned rule is to sift very fine seeds over the ground and lightly rake them in, and to plant each larger size a little deeper until a depth of five or six inches is made for potato cuttings, which are about the largest seeds.

If potatoes are to be planted, the gardener can run a row of dahlia bulbs in the patch, for the home or for sale blossoms if he wishes, for they are cultivated exactly like the potatoes. Unless the home gardener has time to give the potatoes thorough cultivation, and to keep the patch free from weeds and bugs, these vegetables are not a paying crop, and often will not yield sufficient to pay for the seed. But they repay the gardener with a large supply of good-sized tubers who gives them thorough attention and an abundant supply of fertilizer.

I have seen radish, lettuce, and carrot seeds mixed and planted in one row with good success, as they mature at different times; and when one kind is pulled, it leaves room for the next to develop. In this way they do not require the extra work of thinning the young plants. Cucumbers do well planted in alternating rows with corn, for the shade keeps them yielding good-sized fruit during dry weather. Care must be taken that the vines are not disturbed or tread upon.

Much cultivation makes finer crops, but many vegetables will produce fairly well with little attention, and still be of better quality than the huckster carries. Corn will need to be cultivated twice, and beans will do with one hoeing if the

weeds are kept pulled, and will bear abundantly; these can be left safely to the care of the children.

The plants that have vines should have the earth hoed around and banked up against the stalk, in small hills, after the leaves appear. When the vine turns over and starts to run, it must not be disturbed, and great care must be taken in pulling weeds. Leave about three of the sturdiest plants to a hill.

Onions, carrots, and turnips should be kept free from weeds, and thinned so there will be room for the bulbs to form. When the onions are near maturity, the tops should be bent over, then the bulbs will rapidly enlarge; and when the tops die, the onions should be harvested.

Liquid manure can be poured around the roots of cauliflowers and Brussels sprouts in midsummer to help them develop; finish by drawing the earth up around the stalk with a hoe, to keep the moisture in; tie the leaves over the cauliflower head to blanch it. Make the liquid manure by putting a spadeful of fertilizer in a keg and filling it with water; when it has stood several days, it is ready.

Peas are difficult to grow, but there is no more dainty and nourishing dish than the cooked product, gathered while still tender from one's own garden.

Such parts of the gardening work as planting, weeding, hoeing, and harvesting are light enough for most women and children, if the work is not too long continued at one time. But when the whole family turns out into the garden to help in the freshness of the morning hours or in the cool of the evening, "many hands make light work," and it becomes a healthful play, and a joy, and promotes a feeling of comradeship among the members of the family. Also the chance to study nature, from the bursting of the seedling through its shell until the plant reaches maturity, furnishes interesting and valuable lessons.

A sunflower hedge planted to screen a shady rest-nook is a pretty addition to a garden. After the plants are mature the chickens will enjoy the seeds. Choose large sound seeds for the planting, and place each about four inches deep. Make two rows, with the plants about a foot apart. They are very pretty when sturdy and in bloom.

LIVE WITH YOUR CHILDREN

TO move another life you must touch it. A father who spends all day in work or business and all evening at his lodge or club, is a miserable sinner in the sight of God, and needs to bring forth works meet for repentance before he can set his life right with the Heavenly Father. The mother who spends most of her time at social parties and literary clubs, turning her child over to the doubtful care of hired help, should be severely dealt with by society, for she is violating a sacred trust. Live with your children. Not that you need always to be with them. But stoop to their level. See life as they see it. Lucky the boy whose best charm is a noble father. Fortunate the girl whose most valued friend is her mother.

To fulfil all these holy duties and grave responsibilities, parenthood needs the sanctions and indorsement of religion. Well might a father and mother exclaim, as they contemplate all the possibilities of mistake and all the obligations imposed in the training of a family, "Who is sufficient for these things?" It is a task calling for love and wisdom almost divine. There is no argument so potent to drive a person to Christ as the fact that he or she is a father or mother. The issues involved are too tremendous for mere human strength or wisdom.—*Child-Welfare Magazine, August, 1912.*

HEALTHFUL COOKERY

SALADS

George E. Cornforth

THE making of salads gives the cook an opportunity to bring into play her artistic tastes and ability, for salads may be made very attractive to the eye as well as to the taste. The salad has been called the "prince of the menu." The needs of the bodies of those who partake *might* be supplied by putting proper combinations of food on the table as feed is put before horses, and those who eat *might* do so as if they were getting a disagreeable duty done; but we believe that with sufficient study, thought, and care the preparation of food may be a real pleasure, and give the satisfaction which comes with the feeling that we have done something well; and it is capable of demonstration that food which delights us through the eye and the taste is of greater benefit to us than that which is eaten mechanically. I do not know but we might say that to enjoy our food is a duty which we owe ourselves. Therefore we feel that salads may fill an important place on the bill of fare. Moreover, in salads, vegetable oils which have no inconsiderable dietetic value, for the taking of which many feel an aversion, may be so disguised with other most wholesome foods, such as fresh vegetables, that the whole is made a very palatable food combination of real health-giving value, the oil supplying real nourishment, while the other ingredients supply elements of real medicinal value in the form of vegetable acids and salts in combination with pure water. I am inclined to believe that a properly prepared salad of the right kind is a far better medicine than any kind of emulsion of cod-liver oil.

General Suggestions

Vegetables and leaves should be fresh, crisp, and tender. Tough and bruised parts should be removed. Lettuce, celery, parsley, spinach, endive, and dandelion should be washed in cold water, allowed to stand in ice-water till crisp, then drained and put into the refrigerator until serving time, when they should be dried with cheese-cloth if any water remains on them. "It should be remembered that winter greens are raised under glass, and should be treated as any other hothouse plant. Lettuce will be affected by a change of temperature, and wilt just

Vegetable salad fashioned in the shape of a black-eyed daisy. Zwieback.

Fruit salad served in a sherbet-glass. A variety of crackers.

as quickly as delicate flowers." To prepare lettuce for garnishing salads, cut out the tough lower part of the midrib of the leaf. Vegetable salads may be garnished with lettuce, parsley, beets cut in various shapes, olives, tomatoes cut in different ways, nuts, radishes cut in the shape of tulips, slices of radish, slices of lemon. Fruit salads may be garnished with parsley, lettuce, nuts, sections of orange from which the rind has not been removed, nasturtium leaves and flowers, pansies, sweet peas, or other flowers, and smilax. A pretty way to serve a fruit salad is to put it into a sherbet-glass, set the glass on a small paper doily on a salad plate and lay a wreath of smilax around the glass on the plate.

To prepare oranges for salad, peel them as you would peel an apple, removing all the white skin on the outside of the orange. Then by cutting with a sharp knife on each side of the membranes that separate the sections, remove the sections free from membrane, then cut the sections into small pieces. To prepare white grapes for salad, pour boiling water over them, let them stand a few moments, then pour off the water and pour cold water over them. The skin can then be easily peeled off. Remove the seeds also. When apple or banana is used in salad, the dressing should be made first, and the apple or banana cut into it, so it will not turn dark by standing exposed to the air after being cut.

Salad should always be served cold. Green salad plants lose their crispness by standing in the dressing; therefore the dressing should be added to green salads just before serving. Left-over cooked vegetables may be well utilized in salad. With salads of this kind it is well to mix the dressing, and then allow the salad to stand in a cold place for an hour before serving, so that the ingredients may become seasoned with the dressing.

Fruit salad garnished with orange sections. Cream sticks. Pictures fail to show the beauty of salads because they do not reproduce the colors.

The ingredients of a salad should not be carelessly stirred together, but should be gently "tossed together" with as little handling as possible. "Vinegar is the liquid excrement of a microbe," a product of decomposition; therefore we do not recommend its use. Lemon-juice, with whose medicinal qualities all are acquainted, is to be recommended instead. The dish in which the salad is served may be rubbed with a cut onion or with the cut end of a clove of garlic to give a delicate flavor. Some kind of hard bread, like crackers, is usually served with salad.

I do not use olive-oil in making salad dressings. Instead, I use a salad oil which has no flavor, and find that people who think they can not eat salad dressing because the flavor of olive-oil is disagreeable to them enjoy my dressing. There are other oils which are almost, if not quite, as valuable as foods as olive-oil, and they are less expensive.

SPECIFIC DIRECTIONS

Mayonnaise Dressing

1 egg yolk
1 cup salad oil
4 tablespoons lemon-juice
¼ tablespoon salt

Have all the ingredients cold. Put the egg yolk into a cold bowl. Beat it with an egg beater till it begins to thicken. Add a drop or two of oil and beat it in, then add a drop or two more and beat it in. Continue beating in the oil in this way, adding a few more drops at a time after the first few additions of oil. When the mixture becomes too thick to beat, thin it with lemon-juice, then beat in oil again. Continue in this way till all the oil is used. Use enough lemon-juice to make the dressing of the desired consistency. Lastly, beat in the salt. If the oil fails to unite with the egg, it will be necessary to begin over again, putting another egg yolk into a clean bowl and beating the oil-and-egg mixture which failed to unite, drop by drop, into the new egg yolk. This dressing will keep two weeks or more in the refrigerator.

French Dressing

1½ tablespoons oil
1½ tablespoons lemon-juice
¼ teaspoon salt

The ingredients of this dressing may vary. More oil than lemon-juice may be used or more lemon-juice than oil. Have the oil and lemon-juice, also the bowl in which the dressing is to be made, very cold. With a fork stir the salt into the oil, then beat the lemon-juice drop by drop into the oil. The oil will turn white, thicken, and become creamy. Pour at once over the salad, and serve. If the dressing is allowed to stand long before using, it will separate. Use only as much of the dressing as the salad will take up, not enough so that any will drain out of the salad into the bottom of the bowl or onto the plate on which the salad is served.

Boiled Salad Dressing

3 eggs
¼ cup oil
½ cup lemon-juice
¼ cup water
½ teaspoon celery salt
½ teaspoon salt
1 teaspoon sugar (this may be omitted)

In a double boiler heat all the ingredients except the eggs. Beat the eggs, add to them some of the hot mixture, mix well, then stir the eggs into the hot mixture and cook, stirring, till the mixture is of the consistency of thick cream. Too long cooking will cause the mixture to separate and look rough or curdled.

Nut Salad Dressing

1 round tablespoon peanut butter
½ cup water
¼ teaspoon salt
2 tablespoons lemon-juice
¼ cup thick cream

Rub the nut butter smooth with the water, add the salt, and cook till the mixture thickens. Cool, and add the lemon-juice. Whip the cream, and fold it into the dressing.

The two preceding dressings, also, may be mixed with whipped cream when using.

Tomato Salad Dressing

½ cup tomato-juice
1 tablespoon lemon-juice
½ teaspoon sugar
⅛ teaspoon celery salt
1 tablespoon oil
1 level teaspoon corn-starch
⅛ teaspoon salt

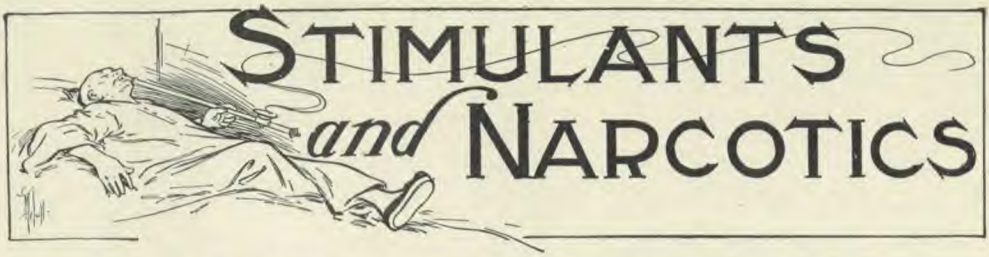
Heat the tomato-juice to boiling, and thicken it with the corn-starch, which has been stirred smooth with a little cold water. Add remaining ingredients.

Whipped Cream Dressing

1 tablespoon sugar
2 tablespoons lemon-juice
½ cup thick cream
⅛ teaspoon salt

Mix the lemon-juice, sugar, and salt. Whip the cream, not too stiff, then add to it the mixed lemon-juice, sugar, and salt. Care must be taken not to stir the mixture too much when the acid is added.

With these general directions the reader should be able to make a large variety of salads, but in the next article I shall suggest a few combinations.



ALCOHOL AND THE BODY TEMPERATURE

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

NATURE has ordained a certain fixed temperature, day and night, summer and winter, for the healthy body, 98.6°, and has provided for the control of this temperature and the maintenance of animal warmth. Even the slight departure of a single degree above or below the normal temperature spells mischief, and gives warning of interference with health. Should the temperature reach 100°, there is a state of fever, which usually indicates the beginning of some more or less serious illness.

In the skin are countless numbers of very small delicate tubes, the blood-vessels. These vessels are so numerous and so closely packed together that it is impossible to pass the finest needle through the skin without piercing some of these tubes and drawing a drop of blood. When for any reason the blood-vessels become enlarged, dilated, and filled with blood to their full capacity, the skin takes on an intense red color and becomes hot, and the loss of heat is proportionately increased.

The Skin as a Heat Regulator

Now, one of the most important duties of the skin is to regulate the temperature of the body. When there is danger of too great heat, the blood-vessels of the skin, which are under the control of certain nerve-centers in the brain, dilate for the purpose of bringing more blood and therewith more heat to the surface of the body so as to get rid of it more rapidly. If the temperature is very high, then the process of heat dissipation is greatly facilitated by the pouring out of moisture from the sweat-glands. The evaporation of the water cools the skin more rapidly, thus greatly increasing the loss of heat.

On the other hand, when we go into the cold, perhaps improperly nourished or insufficiently clad, nature does her best to maintain the necessary warmth of the body by partially closing the blood-vessels, thus decreasing the flow of blood in the skin, and rendering it pale. This gives us the sensation of cold, which acts as a warning, and the proper thing to do is to dress more warmly or walk faster, or even run, for it is a well-known fact that muscular exercise increases the heat production in the human body. Now, it must be clear to the reader that disastrous results are liable to occur if anything is taken which would benumb or partly paralyze the controlling nerve-centers in the brain, and thus interfere with heat regulation so as to cause more loss of heat when the warmth should be saved for the protection of the body. But this is exactly what alcohol does, as we shall see.

A Common Fallacy

One of the most persistent and pernicious fallacies concerning alcohol is the belief that by taking it in one form or other the temperature of the body is raised and animal warmth increased. The traveler coming home on a cold night is often tempted to step into the railway refreshment room and have a glass of whisky or brandy. The doctor who is called out on a cold, stormy night, is likewise tempted to fortify himself against the cold, as he erroneously thinks, by a dram of whisky. Many men, and

women, too, think they can shield themselves against cold and exposure by taking a dose of brandy.

Now, what is the real explanation of this, unfortunately, most common practise? Surely there must be at least a feeling of warmth and some comforting effect upon the body. This is true, for there is a distinct glow of the skin. Whisky, brandy, or any other spirituous liquor exerts a paralyzing influence upon the controlling heat centers in the brain, which leads to an enlargement of the blood-vessels of the skin, bringing more blood to the surface, and with it additional warmth, which at once proves comforting and agreeable, but at the same time hastens the loss of valuable heat. But this is a serious interference with nature, for the comforting warmth of the skin is gained at the expense of the vital internal organs, which are thus defrauded of their proper blood supply, and therewith suffer loss of heat, which may lead to grave consequences. This indicates very clearly the deceptive influence which alcohol possesses. Nature has provided us with nerves of temperature in the skin so that we can recognize instantly whether the hand is warm or cold; but we do not have nerves of temperature in the heart, liver, lungs, and kidneys. Therefore, the taking of alcohol in any form for the purpose of withstanding cold means a serious risk of contracting a chill on the lungs, bringing bronchitis or pneumonia, a chill on the kidneys. Therefore, the taking of alcochill on the liver, or some other internal organ.

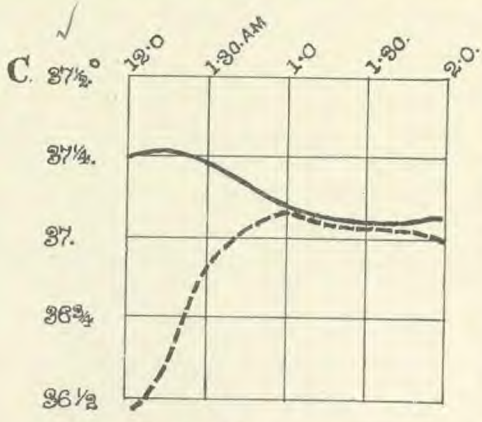


Diagram showing changes of temperature after taking half an ounce of pure alcohol in a tumbler of cold water. The broken line indicates the surface temperature, and the unbroken line the internal temperature. Centigrade thermometer. (By courtesy of Prof. G. Sims Woodhead.)

At the very time when, on account of exposure to cold, the heat of the body should be conserved and protected from unnecessary loss, then the ignorant victim of drink imbibes alcohol, which poisons the nerve-centers, allowing the blood-vessels to open, and precious heat to escape, endangering both health and life.

Professor Woodhead's Experiments

Prof. G. Sims Woodhead, of Cambridge University, recently carried out some most interesting and important experiments with regard to the loss of heat produced by the use of alcohol. He showed that as small a quantity as "about half an ounce of pure ethyl alcohol (equal to about one ounce — two tablespoonfuls — of brandy) in a tumbler of cold water," when sipped slowly, produces almost immediately "a sense of warmth and glow, both in the stomach and in the skin, the latter soon becoming more moist. The face feels a little flushed." Professor Woodhead goes on to say that, according to the *British Journal of Inebriety*, "from my general sensation I was satisfied that both external and internal temperatures had risen considerably. I was very tired, however, and within a few minutes I fell asleep. On awakening in the morning, I was not surprised to find that, owing apparently to the increased flow of blood through the capillary vessels of the skin (which thereby becomes a better conductor of heat) and the increased activity of the cutaneous glands, there had been a temporary, but marked, rise of temperature recorded by the surface thermometer, a rise which had continued for

one and one-half hours, and was then followed by a fall. On developing the record given by the internal thermometer, I found that my sensations had misled me, and that, instead of a rise, there had been a distinct initial fall which, as regards time, corresponded very closely with the surface rise." See diagram on the opposite page.

It is not necessary to add anything to this clear, scientific testimony concerning the true effect of alcohol upon the body temperature. It teaches us the important lesson that we can not rely altogether upon the feelings when it comes to the temperature of the internal organs.

The Testimony of Arctic Explorers

On this point concerning the influence of alcohol upon animal temperature, the testimony of arctic explorers is valuable. In his "Voyage to the Arctic Regions," Sir J. Ross says: "I was twenty years older than any of the officers or crew, yet I could stand the cold better than any of them, who all made use of tobacco and spirits. I entirely abstained from them. The most irresistible proof of the value of abstinence was when we abandoned our ship and were obliged to leave behind us *all* our wine and spirits. It was remarkable to observe how much stronger and more able the men were to do their work when they had nothing but water to drink."

Another arctic explorer, Dr. John Rae, makes the following statement: "The greater the cold, the more injurious is the use of alcohol."

Dr. Hansen writes: "My experience leads me to take a decided stand against the use of stimulants and narcotics of all kinds. . . . It is often supposed that, even although spirits are not intended for daily use, they ought to be taken on an expedition for medical purposes. I would readily acknowledge this if any one would show me a single case in which such a remedy is necessary; but till this is done, I shall maintain that the best course is to banish alcoholic drinks from the list of necessaries for an arctic expedition."

The following brief paragraph from "Alcohol and the Human Body," by Sir Victor Horsley and Dr. Mary D. Sturge, is also to the point: "Alcohol is undoubtedly often taken merely in order that a feeling of warmth may be experienced. For example, the cabman drinks that he may 'feel' warm, although in a short time, having lost heat by taking alcohol, he again feels cold and shivers. He drinks once more — each time driving the blood to the surface and parting with valuable heat that ought to have been stored all the time in the center of his body."

Alcohol as a Source of Heat

The truth is that alcohol is not a real source of heat in any true sense, for the small amount of heat that the body may derive from alcohol is more than wasted in the increased loss through the skin, caused by the poisoning influence of the drug.

In his text-book on physiology, Professor Schafer makes the following statement: "It can not, in fact, be doubted that any small production of energy resulting from the oxidation of alcohol is more than counterbalanced by its deleterious influence as a drug upon the tissue elements, and especially upon those of the nervous system."

This is the teaching of science, and we think we have made it perfectly clear to any one that there is really no excuse whatever for the claim that alcohol either adds to the warmth of the body or protects any one against cold. The real source of heat is found in the food that we take, which serves as fuel for the body and provides us not only with the necessary warmth for the maintenance of health and life, but also with energy with which to accomplish the daily duties.

EDITORIAL

IS THE STOMACH AT FAULT?

OUR last article, after alluding to various popular diet reforms, gave a brief account of Bouchard's studies of intestinal autointoxication and his proposed remedial measures.

Another student of digestive conditions was Elie Metchnikoff, a Russian, who began his career as a naturalist, making a special study of microscopic single-celled animals. This led him to study the cells of the higher animals, particularly as regards their property of devouring other cells, and to publish his theory of these cell activities generally known by the name phagocytosis. For many years after his publication of this theory there was a contention between those medical men that accepted the belief that immunity against disease depends upon certain chemical properties of the blood and other body fluids, and those who adhered to Metchnikoff's belief that immunity depends upon the power of certain body cells to devour the invading bacteria. It is now generally accepted that both these theories are in part right, that both the body fluids and the body cells act as defenders against the inroads of bacteria; and Metchnikoff's work stands as a permanent contribution to medical science.

Among other of Professor Metchnikoff's activities are his investigations of the cause of old age. He arrived at the conclusion that we grow old because we have a large intestine, and that if we could dispense with this part of our anatomy, we should live much longer. This utterance was not based entirely on theory, for in some cases where the intestine has been greatly shortened or put out of commission by means of surgery, there has been a marked improvement in the digestive and nutritive processes.

But Metchnikoff realized the need for some simpler method of remedying the evils connected with the digestive tube. He saw, of course, that the trouble with the large intestine was the stagnation of food there over long periods, its decomposition under the influence of bacteria, and the absorption of the poisonous products of this decomposition. He found that intestinal antiseptics are practically valueless in that they have almost no effect in remedying the amount of intestinal bacteria.

He found the intestines of babies at birth sterile, but in a few hours they were swarming with bacteria, of a particular kind — a harmless acid-forming germ known as *Bacillus bifidus,* which is antagonistic to the putrefactive germs that appear later. If the baby be fed on cow's milk, instead of mother's milk, the picture changes, and other varieties of germs not so harmless are present in large numbers. In order to prevent as far as possible the infection of the canal from dangerous germs, he advises the use entirely of mother's milk for babies, or if this is not possible, at least of boiled milk. For older persons he advises the sterilization of all food and water, for one takes microbes into the digestive tube in vast numbers with raw food. To quote: —

> "Microbes enter the digestive tube in vast numbers with raw food, and in order to lessen the number of species in the intestines, it is important to eat only cooked food, and to drink only liquids which have been previously boiled. In that way, although we can not destroy all the microbes in the food, because some of them can withstand the temperature of the boiling-point of water, we can kill a great majority of them."

He especially advises against the eating of raw fruits, etc., with the skins. His opinion of boiled versus Pasteurized milk, is worthy of attention, coming from the successor of Pasteur and the head of the Pasteur Institute, especially since more recent investigation in England shows that boiled milk is well borne by children.

> "Although in certain cases sterilized milk is not well supported by infants, it can not be doubted that the boiled milk and cooked food are generally successful. The large number of children brought up successfully on boiled cow's milk, and the health of travelers in arctic regions, are ample proof of this."

He here gives an account of an antarctic party that lived for sixteen months in good health on nothing but sterilized and cooked foods and a little cheese.

Professor Metchnikoff gives various facts showing the preservative qualities of lactic acid, especially against putrefaction (for instance, the decomposition of meat may be prevented for an indefinite time by keeping the meat in sour milk), and reasons: "As lactic fermentation serves so well to arrest putrefaction in general, why should it not be used for the same purpose within the digestive tube?"

He advises the use of a bacillus discovered in a Bulgarian fermented milk by another worker in his laboratory, now known as the *Bacillus bulgaricus,* or the Bulgarian bacillus, which has the advantage of being an intense acid former and of bearing acclimatization in the human intestine. After its use for some time, chemical examination shows a great decrease in the absorption of toxins from the intestinal tube, and if one continues to take doses of this bacteria for several weeks, there is a general change in the character of the intestinal bacteria.

Metchnikoff objects to the use of the ordinary fermented milks, which, he says, contain yeasts and set up unfavorable action in the intestine. He recommends that milk be first heated, rapidly cooled, and inoculated with the Bulgarian bacillus in sufficient quantity to prevent the germination of spores. Those who, for any reason, are unable to take milk, may swallow pure cultures of the Bulgarian bacillus, but should take also a certain quantity of sweets for the nutrition of the germs.

Metchnikoff's remedy, then, for the ills of the intestine is (or was at the time he published this theory) the use of sterilized foods, and of milks ripened with *Bacillus bulgaricus,* or else of cultures of *Bacillus bulgaricus* with sugar.

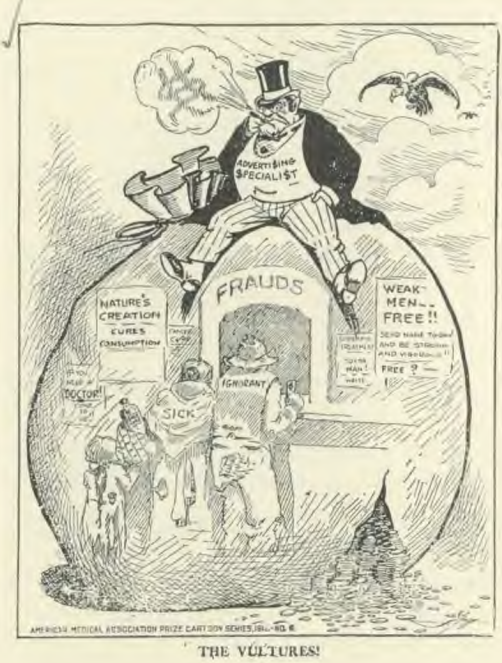
Some years later he practically yielded this method for a newer one based on the fact that sugars are antagonistic to the putrefactive germs in the intestine, or at least that as long as the sugars are there the putrefactive germs will work on them and not on the proteins. A germ discovered in the intestinal canal of a dog, which was given the name "glycobacter," was found capable of producing sugar from starch in the lower levels of the intestinal tube where sugar is most

needed to counteract the action of the putrefactive germs, and now Metchnikoff relies largely on this germ as a preventive of intestinal putrefaction.

Needless to say, there are many who have no faith in Metchnikoff's "sour milk therapy," though the experience of many patients indicate that the remedy certainly has some virtue. Doubtless there are particular cases in which this sour milk acts almost as a specific; that is, in these particular cases conditions are such in the intestines that the lactic bacteria are able to obtain a firm foothold, and make it difficult for the putrefactive germs to continue their work.

The next issue will consider the work of Professor Combe, of Lausanne, Switzerland, who, in his studies of the intestines, found points in which he agrees with, and points in which he differs from, both Bouchard and Metchnikoff.

J. H. Kellogg.



THE VULTURES!

Friedmann Tuberculosis Treatment

A RECENT report from Germany indicates that interest in the Friedmann tuberculosis treatment, which has had some sensational advertising in this country, has practically died out for several reasons, among which are his secrecy about his methods, his intention to have it patented and thus make it the means of private gain, the failure of the remedy to render any incontestable cures in test animals and in humans, and the man's previous reputation.

It gives pleasure in this connection to quote from the *New York Medical Journal* words by Dr. H. J. Achard, a former contributor to LIFE AND HEALTH. He says: —

"The feature which has struck us most forcibly in regard to the new tuberculosis remedy introduced by Franz Friederich Friedmann, of Berlin, is the newspaper notoriety which it is receiving. . . . From the newspaper accounts of the remedy, one gets the impression that Dr. Friedmann employs a clever press-agent, or is himself one. His attitude appears to be slightly quackish, and is certainly tinged with personal considerations. . . .

"In pronouncing this severe criticism on Friedmann's attitude, we must not lose sight of the fact that our information is derived entirely from newspaper accounts, which may or may not be correct. The newspapers themselves do not deny that what they are after is news first, without any particular insistence on truth. If the news happens to be true, so much the better; if not, it is news anyway."

This is also a severe arraignment of the press, and of the *readers*, for the papers give the readers what they want. Given two papers, one which is careful to verify everything it publishes and another whose stock-in-trade is early sensational news of the whether-it-be-true-or-not kind, the latter will boom in circulation, while the former languishes. Readers can only blame themselves for having near news, instead of real news, because they will always patronize the sensational newspaper. However, in this case the opinion seems justified that Friedmann is willing to have these sensational statements made concerning his treatment.

Since Dr. Friedmann has come to this country we have seen no reason to change our opinion concerning his work.

❦ ❦ ❦

"Digestible Bread"

EITHER through misplaced confidence or from some other motive, the Philadelphia *North American* recently published a four-column article, written by the editor, purporting to show that ordinary wheat bread is indigestible, and that by a secret process known only to the promoter, one Lydia Sharpless, a bread had been made — but let his headlines tell the story: —

"PHILADELPHIA WOMAN FINDS WAY TO MAKE BREAD THAT IS DIGESTIBLE; BIG DISCOVERY, DOCTORS SAY."

"MRS. LYDIA SHARPLESS SOLVES PROBLEM THAT PUZZLED SCIENTISTS AND MADE DYSPEPTICS."

"SIMPLE METHOD TAKES ONLY THIRTY-SEVEN SECONDS, BUT COOKS STARCH THAT CAUSES SERIOUS ILLS."

Following is a delicious piece of information by the redoubtable Lydia Sharp—— (What was that last syllable? but never mind, there is not much in a name.) Evidently the editor or one of his staff was favored with an interview: —

"I was amazed to find how little was really known about bread. The lack of anything

like exact knowledge concerning this most important of all foodstuffs mystifies me. I wondered what I might learn by going to the Boston Library."

"She went to Boston and exhausted the 'bread' resources of that famous house of books," the editor tells us, but she gained little additional knowledge.

The query arises, where she looked in the Boston Library, and if the Boston Library is so poorly furnished in bread literature as she seems to think.

The editor gravely informs us that in the average loaf of bread about 90 per cent of the starch granules remain uncooked. Occasionally there will be a batch of only 75 per cent, but the average is about 90 per cent. He continues: —

"This means that nine tenths of the chief constituents of all-wheat bread is taken into the mouth, and from there to the stomach, in a form *quite as indigestible as chalk marbles* [italics ours]. No matter how much one chews the bread, no matter how slowly it is eaten, the only possible chance of getting any nourishment out of the 90 per cent of raw starch rests with a bunch of bacteria which may or may not be on hand in the intestines and which may be too busy to bother about this raw starch, allowing it to pass by and begin its health-destroying work," and so on.

Now I will engage to take a small portion of any ordinary bread in my mouth, chew it until it is liquid, and show by chemical means, within say five minutes, and probably within three minutes, that there is no unchanged starch left.

In two weeks after the publication of this sensational article, a lame retraction was made by the editor, but meantime the mischief had been done. Thousands of persons, perhaps unintentionally, had been deceived, and doubtless other newspapers took up the story. The shrewd Mrs. Sharpless could not have obtained such efficient advertising for her new product had she paid thousands of dollars.

The fact is that repeated experiment has shown that 98 per cent of the starch of ordinary bread is digested. Ordinarily, newspapers are wary of giving free advertising to promoters of private enterprises, but once in a while a cancer cure or a tuberculosis cure or some other thing that "startled the physicians" or "astonished the scientists," if it promises to minister to the hankering for something sensational and make a big sale, will be bit on by an unwary editor, as in this case. And then if the editor is at all conscientious, he has time for reflection afterward as to what he has done.

One would think that a lesson or two of this kind would be enough for a man with sufficient intelligence to be the editor of a great metropolitan daily. But the mind of man is past finding out. If not the *American*, then some other paper will boost the next fake that comes along.

❦ ❦ ❦

Tobacco and Cholera

A REPORT made by Professor Wenck, of the Imperial Institute of Berlin, seems to indicate that tobacco is fatal to cholera germs. Cigars treated with cholera germs were found to be free from these germs in twenty-four hours, and cholera germs died after one-half hour exposure to the smoke of Brazil, Sumatra, or Havana tobacco, and tobacco smoke killed in five minutes the cholera germs in the saliva. Finally it is stated that not a workman in the Hamburg cigar factories was attacked by the epidemic.

We pass this along for the consolation of those who *will* smoke, and who want some sort of excuse for the habit, and as a drowning man catches at straws, this may be as good as any.

In view of our imminent danger (?) from cholera it would seem fitting that every one should take to smoking, and I should suggest, to be consistent, ye lords of creation, that you supply your wives, sweethearts, daughters, and mothers, with a dainty brand of the newest cholera germicide, for certainly it would be unmanly for the men to take protection which they would deny the women. The nation which can boast of such men as cheerfully went down on the "Titanic" in order that the women might be spared, can be counted on to look after the welfare of the women. Let us all smoke and avoid the grave danger that threatens us; and as the babies are most susceptible

to the effects of the cholera germs, we ought to educate them in the gentle art of puffing a cigarette as soon as they are weaned. Why not?

After all, every smoker knows that such a defense of smoking is not sincere. He may argue that he uses it as a protection for himself, but he does not want to see his wife or sister or daughter use it for that purpose.

Tobacco may be antagonistic to germ life, as it is to all other life, but there are more rational, more cleanly, more healthful, and more inexpensive methods of combating cholera.

Alcoholism and National Prosperity

THE *Medical Record*, in an editorial article entitled "Alcoholism in France," speaks of the lessened tendency to drink in Great Britain, but in other countries "there has been no marked tendency in this direction. In the United States figures seem to show that drink is not decreasing, while so far as France is concerned, alcoholism exhibits progress rather than decline." The number of deaths caused annually in that country by alcoholism, directly or indirectly, exceeds 100,000, and alcoholism is also an important cause of the large number of mental diseases in that country. Moreover the assertion is made on excellent authority that of all the European armies the French suffer most from maladies indicating a condition of feeble race resistance. The *Record* continues: —

"If these reports be true, and it may be presumed that in the main they are true, then France provides a striking object-lesson of the evil effects of alcoholism on the human race. France is rich and prosperous, and France is notorious for a large consumption of alcohol.

"If prosperity brings in its train the wholesale use of alcohol, with its manifest and manifold ills, then material prosperity is not to be desired. National decay, mental and physical, is too high a price to pay for the accumulation of riches.

"The most hopeful sign of the situation, for, after all, France is by no means the only country in which so-called prosperity and alcoholism go hand in hand, is that the public conscience everywhere is becoming aroused with regard to the alcohol question, and that steps are being taken to investigate and try to remedy the existing state of affairs in the most intelligent manner possible. Undoubtedly one of the most powerful factors in bringing about this change is education through the public and the medical press."

Substitute for Coffee

THE following question and answer appeared in the *Journal A. M. A.*, February 1: —

"Can you give me a formula for a good substitute for coffee — something that will give the warmth and nutrition [!] and please the taste reasonably well, and will be cheaper in price, but will give none of the bad effects of coffee? I suppose some of the commercial articles serve reasonably well, but their prices are entirely above a reasonable first cost, and besides I should like to know what I am prescribing. I am sure that you will agree with me that a good substitute for tea and coffee would be a great benefit to our race, and this is a matter for the profoundest attention of the medical profession."

The answer given by the *Journal* was: —

"Roasted barley is used, and so is chicory. . . . Perhaps some of our readers can suggest other substitutes they have found acceptable."

"Crust coffee," made by browning in the oven left-over crusts of bread and steeping these in hot water, is not a bad beverage by any means, and roasted peas make a very acceptable substitute, so far as taste is concerned, for the caffein-containing berries. Of course, if one drinks for the stimulating effect of the caffein, none of these drinks will prove entirely satisfactory.

"Sex Hygiene" Commercialism

IT is pretty generally known that when there is an attempt by public-spirited persons to create popular interest in any public health topic, crafty promoters of proprietary "remedies" take advantage of the aroused public interest for the furtherance of their personal, selfish, and entirely unbenevolent propaganda. A letter by Margaret F. Eliot, in the *Survey*, is a case in point: —

"I am sorry to see that some of the patent medicine companies are taking advantage of the popular interest in sex hygiene teaching to

advertise their goods. This will tend to throw discredit on the movement itself.

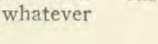
"I have come across a woman who is traveling for the Viavi medicines. This Viavi is made from herbs which are picked by moonlight, on a magic date, and kept in retorts for eight or nine years, hardly failing to have incantations said over them.

"At each of the towns which this woman covers, she gives a free public lecture, showing charts of the female organs and describing alarming symptoms, common to every one, which call for Viavi. In one Alabama town she obtained permission from the superintendent of schools to lecture to the high school, which she did, calling her talk sex hygiene. One can readily see what a morbid apprehension might be aroused in the boys and girls by this sort of talk.

"This evil is to be classed with that of the quack doctors for men's diseases, and the social hygiene societies generally realize the danger from the latter. I should like to point out the work of the Social Hygiene Society of Portland, Oregon, in suppressing these quack doctors, as a good example to be followed everywhere. Finally, let me say that proper and adequate sex hygiene teaching will protect our boys and girls, and later our men and women, who are now such frequent dupes and victims of these frauds."

Any one desiring to know more regarding this supposed remedy should procure from the Journal American Medical Association, Chicago, a copy of their pamphlet "Viavi." This sentence from the cover gives it in brief: —

"A fake concern called the Viavi Company, which preys on impressionable women, has organized an elaborate 'lecture bureau, mostly women and clergymen, to spread its doctrines, the chief of which is that every woman has something wrong with her, and that whatever it is, Viavi preparation will cure it."



Smallpox Epidemics

IN view of the fact that there have been recent outbreaks of smallpox in severe form in California, Texas, Oklahoma, Pennsylvania, and Maryland, it is well to give attention to an editorial article in the *Cleveland Medical Journal* of January, protesting against the fact that there are now 20,000 unvaccinated children in the public schools of that city. This journal says: —

"The memory of man is truly brief. It is only ten years since the close of an epidemic costing the city over $300,000, and incidentally resulting in some 250 deaths. It is only two years since the close of a smaller epidemic, which would have reached larger proportions but for the prompt and vigorous action of the board of health, and yet in spite of these examples, the presence of this large unprotected population is apparently looked on with equanimity, not to say cheerfulness. Let us refresh our memory as regards these two epidemics. In 1901 there was an extensive outbreak of a mild type, during which there was no serious attempt at general vaccination. As a result the people were not protected and in 1902 a far more serious epidemic occurred."

Then follows a report of the health officer of the city for 1902, describing a recent epidemic of 1,248 cases, of whom 224 died, a death-rate of 17.95 per cent. Owing to the strenuous opposition to vaccination, the school council had to make vaccination a compulsory prerequisite to attendance at school, and a physician was placed in each school to attend to it. Employers urged vaccination upon their employees, and advised them to have their families vaccinated. The city paid for 195,000 vaccinations, paying only for those that were successful. The epidemic disappeared, and during the next two years there were less than 150 cases.

No epidemic followed until 1910, when an outbreak in the southeast threatened the entire city. By isolation and vaccination of 55,000 children, this epidemic was checked. Since then no serious outbreak, but with the presence of new accretions of unvaccinated persons, the *Journal* has some reason to fear the consequences in case of another outbreak.

Nursing Versus Doctoring

A DOCTOR who has a serious case, and secures a well-trained sanitarium nurse for the first time, has a new experience, and possibly before the termination of the case obtains a new view, if he is an observing man, of how little the doctor really accomplishes for the patient. The following, related by a sanitarium nurse, is a case in part: —

"Being called upon to care for a lady suffering with erysipelas, I found the patient in a very critical condition. Her temperature was 105°; her breath indicated poisons in the system; her skin was dry and hot; her lips were parched. Soon after my arrival I found that there had been no evacuation of the bowels for more than three days, and that her skin was inactive from lack of bathing. Fresh

air had been scrupulously avoided, every window being tightly closed. A strong odor of tobacco was noticeable, indicating that some member of the family had been smoking in the room.

"The first thing I did was to cleanse the bowels thoroughly. The windows were raised, allowing plenty of fresh air to enter. In a few hours her temperature came down several degrees. Then I began the use of hot and cold applications to the spine to increase her resistance. When the temperature reached normal, I used massage with oil to help the condition of her skin.

"At first the husband looked in very often and seemed worried at the windows' being open, but finally, becoming assured that it was to his wife's benefit, he became satisfied. In less than a week the patient was in practically a normal condition. The attending physician and the patient's family were astonished at the rapid recovery she had made."

How many persons experience just such conditions when a little knowledge in simple hygiene would alleviate much of their suffering.

❦ ❦ ❦

The Public Health Movement

POSSIBLY it was necessary that an economist take up the study of health from the viewpoint of dollars and cents, for it seems to be the only way of reaching the ear of the American millions. When health can be shown to have a money value, then we begin to think it is worth considering. As a matter of fact, health has far more than a money value.

Professor Fisher has been hammering away at the public health question from a money-value standpoint for a number of years, probably realizing that it is the only argument that will catch the eyes and ears of Americans, who seem to think that increasing the wealth of the country is the only legitimate function of government. We are free to believe that not only is the amassing of material wealth not the only function, but it is not by any means the most important function of the government. What greater function could a government have than to care for the well-being and comfort of the great mass of its citizens, who compose the so-called middle and lower classes; and this would presuppose not only their financial welfare, but their health.

In the *Survey* of Dec. 21, 1912, Professor Fisher has an article on the "Public Health Movement" in which he makes some notable statements, from which we quote the following: —

"I believe we must have a revolution in the habits of living in the community if we are going really to realize the promise of Metchnikoff and others as to the prolongation of human life. Health officers in this country have not regarded it as a part of their duty either to live personally a clean, hygienic life or to teach others to do so, or even to investigate what those conditions of well-being are which make for personal vitality."

"Scientific men to-day have reached substantial agreement that alcohol is a poison. When everybody understands this, the days of alcohol as a beverage will be numbered. Sweden in the 30's was called drunken Sweden, but to-day the antialcohol movement there has converted Sweden into one of the soberest of countries.

"But the use of tobacco, tea, and coffee ought also to be investigated, so that we may know how far they are deleterious, and spread this knowledge among the people."

❦ ❦ ❦

Cottonseed Products as Food

A RECENT issue of *American Medicine* predicts that sooner or later we may find a way to utilize for human food the millions of tons of cottonseed-meal annually produced on the Southern cotton plantations, and suggests that some of the governmental agencies should take up the work of elaborating a method for preparing from this meal a food adapted to human consumption.

Provided the edible portion of the seed can be separated from the part which is deleterious and unpalatable, the cottonseed will certainly make an exceedingly nutritious food.

The article refers to the value of cottonseed-oil in the following language: —

"The food value of cottonseed-oil has finally been recognized in spite of the prejudice of peoples who have depended upon solid fats so many thousands of years that they can not relish the fluid ones. While the Mediterranean nations have in the comparative absence of animal food obtained their fats from the olive, the northern races have been forced to resort to butter, lard, and tallow. There is then ample reason for the habit of soaking everything in oil in the south, and the apparently extravagant use of butter and suet in cakes

and puddings in the north. The Italians have long been in the habit of selling their high-priced olive-oil and subsisting on imported cheaper cotton-oil — the food value being the same, the difference being one of taste recognizable only by the trained palate. Indeed, immense quantities of refined cotton-oil are re-imported into America as olive-oil, and few buyers know the difference. There is no sense in this expensive, roundabout way of getting food, and sensible people are therefore buying cottonseed-oil for the table in preference to the expensive imported article, whether it be pure or spurious olive-oil."

Diphtheria and Bread

A RECENT incident in France goes a long way to prove that diphtheria is not necessarily transmitted directly from one person to another. There was a small epidemic of diphtheria in several communities where there had been no diphtheria for several years. With the exception of one case the epidemic occurred among the patrons of one baker, although several bakers furnished bread in this region. The wife and son of the baker had diphtheria, and in course of time the epidemic spread among the purchasers of the bread. As the baker, after his wife's sickness, had not been in direct contact with the customers, the inference is that the disease was transmitted by means of the loaves of bread, inasmuch as after the loaves were baked they were kept in a room adjoining the room occupied by the patients. It was, of course, possible that these loaves in some way became infected, and this infection was carried to those who ate the bread.

Hand Cleanliness Among Schoolchildren

A CHARLOTTENBURG (Germany) physician has recently published a very interesting article on the cleansing of the hands of schoolchildren. He finds 216 German schools furnished with shower-baths, but only 73 with places for the simultaneous hand-washing by a number of pupils. He considers that from a hygienic standpoint the child may get along on one bath a week, but the hands should be washed several times a day, especially before meals.

He found, besides a lack of adequate lavatory arrangements, another reason for hand uncleanliness is a lack of proper soap. He shows the disadvantage of various kinds of soap, liquid soaps, chained soaps, soap papers, etc., and favors the use of luffa sponge soap.

He found by experiment that the fibers of the sponge-gourd (luffa sponge) easily take up soap solution and give it out again when wet. They have a good scouring action, and can be used like a nail-brush for cleansing the space under the nails. Each child desiring to wash receives a piece of this sponge one and one-half inches square, which is used once and discarded into a receiver provided for the purpose. The trouble is the manufacturers decline to make the luffa soap to sell wholesale, because the process is difficult, and it would be unprofitable for them. He advises the use of frequently changed towels or of paper towels.

THE MEDICAL MISSIONARY AT WORK

TWENTY THOUSAND PATIENTS IN A TWENTY-DOLLAR BUILDING

Dr. Riley Russell

A LITTLE over four years ago we came from the United States to Soonan, Korea, where we are now located. We have a small Korean house which cost twenty dollars gold, or forty yen, also one small house where women and children may wait.

In the four years we have been here we have seen over twenty thousand patients. This may seem incredible to the people in the home land, but in these old densely populated countries it is different.

The people know nothing of infection, but in the old heathen mind all disease is wind in the bones or some other part of the anatomy, and it must be let out. This is generally accomplished by means of needles of various sizes and all possible degrees of uncleanliness.

One woman sent for us whom we found to have been stuck nearly three hundred times in the face to let out the bad blood and wind, and it was only by diligent effort on our part that her life was saved, so severe was the infection.

We are constantly impressed with the similarity of conditions to the time of Christ's ministry on earth. Leprosy is common in the south. Cholera is present every summer. And the pest (Asiatic plague) is always in hearing distance.

The Great Physician gave to the world the example of spending much of his time in relieving the distress of the people and diffusing life and peace. Satan's object is to cause misery, woe, and, at last, death. So it is no wonder that here where the arch-rebel is feared and worshiped, degradation is so apparent. The infant mortality is so high that the population is hardly holding its own.

The medical work gives prestige to, and makes openings for, the gospel, as the rankest devil-worshiper, who hates Christianity and all that goes with it, will call the Christian physician when death faces him or his family. Only two weeks ago, while returning home from a hundred-mile horseback ride, I was called to see a woman about nineteen years old who could not possibly have lived more than a few hours; but the diagnosis was easy, the treatment simple, and from my saddle-bags I was able to give her almost instant relief. She and her mother walked twenty miles to see me last week. The old woman said no one but a missionary could have known what to do, and "this our daughter who was the same as dead is alive and with us well."

There are things that shake heathenism to its foundations. One woman who had a felon which left the finger bone protruding, came to the dispensary after suffering for three months. A little cocain and ten minutes' work fixed it up so that in ten days she was well. Her hold on devil-worship was so badly shaken

that she listened intently to the old, old story.

The schools are changing conditions. The Union Medical School in Seoul and the Japanese medical schools are training young men in better methods. The change in government has also brought in many much-needed hygienic reforms, but Korea's great need is yet only touched on the extreme edges.

The twenty-dollar office of Dr. Russell, Korea

BRITISH GUIANA

Mrs. E. C. Boger

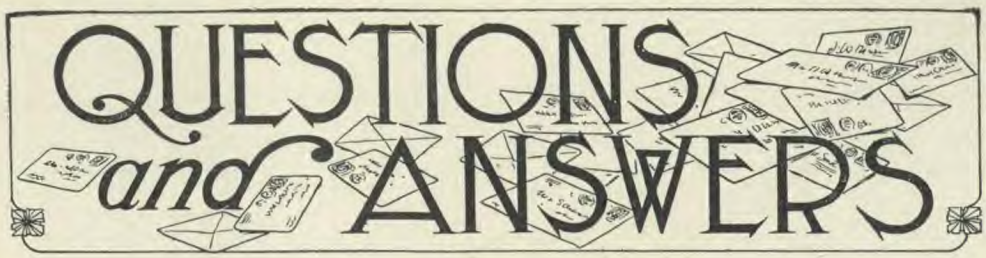
WHILE my husband and I were visiting companies of believers last summer, one trip took us up the Demerara River one hundred miles. This is considered a short journey on the river. It is hard to realize at times that this mighty waterway is only a river. The dark, murky waters ever flow onward to the sea, but for over one hundred miles they receive the ebb and flow of the tide; and the natives plan all journeys accordingly.

The Essequibo River has more than one hundred islands standing out of its brown waters, like green plants in a garden. These islands are all inhabited.

We have a mission, called the Bootooba Mission, one hundred miles up the Demerara River. A little school is being taught by one of our colored sisters, while her husband runs the farm. We celebrated the ordinances with the company there, and two sisters were baptized. One of them at the meeting spoke of her husband's being very sick. He was not a believer, and entertained much prejudice against his wife's belief. After the meeting my husband went in a canoe to visit him. While yet a good way off he could hear his screams and cries. He was suffering intensely from muscular rheumatism, and was unable to stand or to sit.

As quickly as possible water was heated, and a good treatment given. It seemed the Lord blessed the simple facilities, and permitted the same result to follow as might have been seen at a well-equipped sanitarium. The man was so greatly helped that he was able to sit up, and while Mr. Boger was washing his hands, he called him, saying, "Now, elder, you have helped me physically, won't you pray with me?" Most joyfully this wish was granted.

Early in the winter Mr. Boger again visited the mission at Bootooba. The brethren told him that this man had entirely recovered, had given his heart to Jesus, and desired baptism. He was not at home at the time, as he had work far back in "the bush." But they said they knew he would be most sorry to learn that my husband had been there in his absence, for thus he would have missed the opportunity of being baptized.



THE editor can not treat patients by mail. Those who are seriously ill need the services of a physician to make a personal examination and watch the progress of the case. But he will, in reply to questions sent in by subscribers, give promptly by mail brief general directions or state healthful principles on the following conditions: —

1. That questions are *written on a separate sheet* addressed to the editor, and not mixed in with business matters.

2. That they are *legible and to the point.*

3. That the request is *accompanied by return postage.*

In sending in questions, please state that you are a subscriber, or a regular purchaser from one of our agents; or if you are not, accompany your queries with the price of a subscription to LIFE AND HEALTH. This service is not extended to those who are not regular readers.

Such questions as are of general interest will, after being answered by mail, also be answered in this department.

No Treatments by Parcel-Post.—"I saw in your magazine that you will give advice to sick people that are subscribers. I am weak and a very little work does me right up. I have no ambition; my back is weak, and I suffer a great deal with cold feet. What should I take or do in order to obtain relief?"

You will notice by the head of the Questions and Answers department that we do not attempt to treat by mail persons who are severely sick. Any such attempt would be an injustice to our correspondents. If I were to take your case in hand, I should want at least one-half or an hour's talk with you to learn more about your condition or habits of life, your peculiarities, your diet, etc., and I should also want to make a physical and a chemical examination, and this I could not do by mail. My advice to you would be to go to the most conscientious local physician and let him handle your case, or else go to a sanitarium. Your trouble has some definite cause, probably something in your manner of living, and it will be necessary to find out that cause in order to effect anything like a permanent cure. Anything that you might "take" would only temporarily relieve the symptoms, and would not do any permanent good, and might eventually leave you worse off than before. What you most need is a course of sanitarium treatment, which is itself an education in healthful living.

Metal Tacks and Cold Feet.—"Would metal tacks in shoe soles cause the feet to be cold, as I have heard?"

Probably not.

Artificial Baby Foods.—"What do you think of feeding a baby with ——'s malted milk? I had insufficient milk, so weaned baby at one month. She was born October 4, and weighed 6 lbs., and now, January 9, weighs 12 lbs. She seems healthy, but some say that this artificial food is not recommended by physicians. I can not get milk that I feel is fit to give her."

You made a mistake in weaning your baby. Even if you can give one half or one quarter of the milk necessary, there is something in mother's milk that helps to protect the baby against disease which you can not get from cow's milk or ——'s milk or any other kind of milk. If you love your next baby, nurse him as long as you can, at least for several months, and feed artificially only to that extent that your nursing fails to give enough nourishment. Drink milk yourself, also plenty of water, to increase your ability to nurse. Bringing cow's milk to a boil will do away with practically all the infectious material, and the boiling will not materially injure the milk. This is preferable in the home to an attempt at Pasteurization; and in England it has been found that babies are as well nourished on boiled milk as on raw milk, and the boiled milk is much safer, from a bacterial standpoint. The milk should be the cleanest you can obtain, and from a healthy cow.

Castoria.—"Is Castoria injurious? Some say it is, and others that it is not. Will enemas used frequently cause one to have piles?"

If necessary to use anything for baby's bowels, a little castor-oil is preferable, although the addition of a little barley-water to the milk may help, and in some cases the use of malted milk once a day is said to be a help. I can not myself testify as to this.

Avoid as much as possible the use of the enema, not that it necessarily produces hemorrhoids, but it is apt to form a bad habit. The child should not be accustomed to depend on artificial help for a natural function. Be sure you give it an abundance of water to drink. Often when a child seems to be hungry, it is only thirsty.

Asthma.—"Please tell me whether you think the medicine, which you will find in this mail in a small vial, with two addresses, and enclosed in a pasteboard box, has any curative virtues? It is recommended for asthma and colds or lung troubles."

There are quite a number of remedies on the market for the *relief* of asthma. They usually contain stramonium and niter, and there is a good fancy price charged for them, more than a person would have to pay if he bought the drugs himself. There are none of these that *cure* asthma, because none of them reach the cause. Asthma may be caused by one of many different things: polypus in the nose, digestive troubles, or various other things; and in order to effect a cure, the condition that is back of it must be determined, and this must be corrected.

Laxative Tablets.—"Would you advise the continued use of tablets similar to the enclosed for constipation?"

The tablets you sent seem to be largely aloes, with a sugar coating; in fact, I think they are practically pure aloes, and you would very likely receive just as much good by buying aloes in bulk as you would from the tablets. But it is probable you will not be benefited by a continuous resort to any kind of laxative. If you can by exercise, manipulation of the abdomen, water drinking, natural laxatives, and the like, secure movements, you would better do so.

Tapeworm.—"I believe I have a tapeworm. I am always hungry, eat very much, frequently find myself gnashing my teeth at night, sleep soundly during fore part of night, but awaken after sleeping six hours, am tired in the morning, and have dark rings below the eyes. What would you advise for removing same?"

There is no need of treating for tapeworm unless you are certain you have one. Your first procedure is to make a careful examination of the discharges, washing in water to determine whether any of the segments of the tapeworm are present. Other conditions besides tapeworm might produce the symptoms that you have. If you find you have tapeworm, you might try the use of pumpkin-seeds, that is, the inside of the seeds, after fasting, although the surer method is to give yourself into the care of a conscientious physician who will know just how much he can safely poison the tapeworm without poisoning you. The only way to get rid of a tapeworm is to poison it. And you can never be sure that you are rid of it until you get its head. All this requires considerable experience. Above all, do not put yourself in the hands of a "tapeworm specialist," for such fellows are always quacks. Go to a regular physician.

Forgetfulness.—"I am forgetful, and it bothers me in whatever I am doing. What would you advise in my condition, as it seems I can not bear it sometimes?"

It may be a consolation to you to realize that the majority of us are more or less forgetful, at times, at least. The most brilliant people have their weak places, and when one faculty is weak, we learn to do without that and use something else in its stead. The blind person learns to use his hands for eyes; the deaf person uses his eyes for ears; and the man without hands must make use of some other shift. Our greatest happiness comes, in regard to faculties which we find lacking, in accepting the admonition of the apostle Paul: "Be content with such things as ye have."

It is possible, however, this condition which you have may be to a certain extent remedied. Sometimes forgetfulness is due to intestinal autointoxication, that is, poisons absorbed from the intestinal canal because the food rots, as it were, instead of being turned into body-building material. If you have any intestinal disorder, this may be the thing that needs remedying.

While there is a difference naturally in memories as there is a difference in the taste for music, both can be cultivated. The brilliant singer had to learn his work by hard, long practise; his genius did not teach him the best part of his skill, and so with the penman, or the person who is skilled in anything else; and in the same way you can train your memory. It is never so good but that it is capable of improving, and it is never so poor but that you can do something to help it.

Danger From Iron Vessels.—"We have a cheap granite-iron pot, which has begun to rust, and water that has stood in it for some time is colored by the rust. Would it be dangerous to use such a vessel, and would it be dangerous for chickens to drink from it?"

There is probably no danger from the iron rust. A generation ago it was the custom to cook in pots entirely made of iron, and often the iron must have been more or less rusty. If there is any danger, it is from the mixture of lead that is apt to be in the enamel. I should certainly think the vessel quite safe for chickens.

Tooth Preparations.—"Do most tooth preparations contain ingredients of an injurious nature to the teeth? Are there any harmless ones?"

Doubtless there have been many dental preparations containing gritty matter harmful to the teeth, but it is doubtful whether this is the case as much as it was formerly. I am not prepared to state just what proportion of them are harmful. If one is very fastidious about the matter, he might purchase some precipitated chalk and powdered orris-root, mix them together with a little bicarbonate of soda and some flavoring matter, and have his own tooth-powder, "guaranteed under the pure food law."

Pathfinders in Medicine, by Victor Robinson. Price, $2.50. The Medical Review of Reviews Company, New York.

The author says in his preface that he entered the field of medical history as he entered several others, out of curiosity, "but the fruit was tempting and I have gathered it ever since." And certainly the fruit *was* tempting, for Robinson seems to take to history and biography as a duck to water.

With a careful discrimination in choosing his material, a fine sense of perspective in giving it a setting, and a rare art of delineation which brings the reader back in imagination to the times and scenes described, he makes his heroes stand out with stereoscopic distinctness. Both from a historic and a literary viewpoint, those interested in medical biography and in the history of developing science will welcome this volume.

It must be admitted, however, that the author is frankly monistic, and not infrequently there is some slurring statement regarding the Christian religion. And here we think he has made his mistake.

It is an undeniable fact that men high up in the so-named Christian churches, both Catholic and Protestant, have burned or otherwise persecuted many of the pioneers of knowledge whom the world now honors; but we do not think he should attribute this to the influence of the Nazarene.

Even during the lifetime of Jesus, two of his disciples wanted to call down fire on the heads of some who later generations would have named "heretics," and he replied, "Ye know not what manner of spirit ye are of." Again, when Jesus was being taken prisoner, his chief disciple attempted to use his sword in defense of the Master, who told him to sheathe his sword. He said, "My kingdom is not of this world."

Those who have used the sword, the dungeon, the stake, to propagate their faith, whatever their profession, were not followers of Jesus. Yet we must admit, almost with a blush, that there has been in the world since history began, no such persistent opponent to every advance of science as so-named Christianity.

As the author says, for centuries the church (which considers itself the only real representative of the Christian religion, and which considers itself infallible) forbade dissection, and for a very good reason, for it had "always preached that as God took a rib from Adam to make Eve, man had one rib less than woman," and of course any man who by dissection would dare to show that man had twenty-four ribs the same as woman, was a very good candidate for the flames.

Child Labor in City Streets, by Edward N. Clopper, Ph. D., secretary of National Child Labor Committee for Mississippi Valley. Net, $1.25. The Macmillan Company, New York.

Many years ago Macaulay uttered the words which now seem to have been almost prophetic, not only of England, but also of America: —

"Intense labor, beginning too early in life, continued too long every day, stunting the growth of the mind, leaving no time for healthful exercise, no time for intellectual culture, must impair all those high qualities that have made our country great. Your overworked boys will become a feeble and ignoble race of men, the parents of a more feeble progeny; nor will it be long before the deterioration of the laborer will injuriously affect those very interests to which his physical and moral interests have been sacrificed. If ever we are forced to yield the foremost place among commercial nations, we shall yield it to some people preeminently vigorous in body and in mind."

If our civilization is to continue and to improve with time, every child must have a proper opportunity to grow under conditions as nearly normal as possible; we must secure to the children their birthright — the right to play and to dream, the right to healthful sleep, the right to education and training, the right to grow into manhood and into womanhood with cleanness and strength both of body and mind, the right of a chance to become useful citizens of the future.

The author queries why in the general movement for child welfare the newsboy, the bootblack, and pedler, who are certainly more conspicuous than other child laborers, should have been overlooked. "If we could have focused our attention upon them," says the author, "as we did upon children in factories, they would have been banished from the streets long ago. But they were too close to us." Because these little boys and girls have been a convenience to us, ministering to our wants, we have given them scarcely a passing thought.

The first five chapters of the book review the present conditions and discuss causes, the next two deal with the effects, and the final chapters concern the remedy. All forms of street work that engage any number of children, are described at length, and opinions and findings of others have been freely quoted.

Not the least important parts of the book are the statistics showing the effect of child labor on scholarship, the digest of the State and city laws on the subject, the facsimiles of forms used in carrying out these laws, and the bibliography.

The New Immigration. A Study of the Industrial and Social Life of Southeastern Europeans in America, by Peter Roberts, Ph. D. Net, $1.50. The Macmillan Company, New York.

This book is an attempt to describe the equality, the industrial efficiency, the social life, and the relation to the native-born of the men of the new immigration — the peoples who have been coming to our shores from southeastern Europe in steadily increasing numbers since 1880, until now they number at least three quarters of our entire immigration.

The author evidently believes in the immigrant, who, as he says, "has in him the making of an American, provided a sympathetic hand guides him and smooths the path which leads to assimilation." He believes that the native-born can best do this, and that "in every community where the men of southeastern Europe have settled, the redemptive forces necessary to raise the foreigners from inefficiency and ignorance, from antisocial habits and gross superstition, are available, provided they are marshaled, supported, and set to work by patriotic men." On the other hand, if the native-born inhabitants "lie supinely, looking to State or federal government for relief from the ills precipitated by foreigners, their expectations will not be fulfilled, and the ills they bemoan will grow more intense. Foreigners in American cities will not throw off the slough of medieval civilization unless the native-born will help them."

The book is a compact compendium of facts, giving evidence of long and careful study, and the author has been conservative in his criticism of conditions. Nevertheless, one reading the array of facts there portrayed can not help feeling that if a large proportion of the millions of foreigners who land on these shores have little respect for our laws, they have some good reason for this feeling in the way they are sometimes received by the officers of the law on their first arrival.

The impression has grown among us that we are getting from southeastern Europe a shiftless, good-for nothing, degenerate stock, which can only make for the ruin of our civilization. As a result of his study, Roberts has been convinced that such is not the case; that as a rule these immigrants are a self-respecting, industrious class, and if they are given sympathetic help and protection, a large proportion of them will make good and substantial citizens.

"He is made up of good and evil," says Roberts, speaking of the immigrant, "the same as the rest of us, and these qualities manifest themselves in shop and mine. What he asks of America is a square deal. He is patient and long-suffering, and endures stoically hardships and inconveniences in making a living; but his meekness and silence should not justify barbaric treatment."

But the details of the abuse, of the exploitation, of the deception, to which many of these unfortunate people are subjected by government officials and by grafters, is enough to make one blush for his country. In our Declaration of Independence our forefathers stated that all men are created equal, and are endowed by the Creator with certain inalienable rights, among these life, liberty, and the pursuit of happiness. But it seems that this declaration is often forgotten in our treatment of the strangers who have come to our shores. As Roberts says: "America can not afford to wrong immigrants nor let them be robbed; can not afford to connive at pitfalls for unwary foreigners nor shield the criminals who oppress the stranger within our gates."

These foreigners fill a place in our industrial economy which no others will fill. Those occupations which are characterized by foul smells, dark, damp, unhealthful conditions, and low pay, fall to their lot; and yet, notwithstanding all their handicaps, they are a thrifty people, and a large proportion of them, if given half a chance, win out.

The book is most instructive, most enlightening, and can not but give the reader a more sympathetic knowledge of these peoples who have come to America to better their conditions. Among other topics discussed are the industrial life of this people, the community conditions, social relations, their assimilation and hindrances. One can not give this book even a cursory reading without having a much more sympathetic attitude toward the immigrant.

Socialism Summed Up, by Morris Hillquit. The H. K. Fly Company, Publishers, New York.

Whether we believe that socialism is the menace of civilization or is the only hope of our present troubles, or whether we have vainly fancied that we could best handle the question by ignoring it, the fact is, socialism is here, and it will not down. We must reckon with it. If it has something valuable in store for us, we ought to know it. If it is only a meshwork of fallacies, we at least ought to know what the leaders of this movement believe and what they are aiming for.

The present work is by one of the most forceful socialistic writers, and gives a fair summing up of the socialistic ideals.

Finns Banish Fly.— There is an active popular movement in Finland — think of it — to banish house-flies from the country, and we think we are ahead of the Finns.

Unvaccinated Children Barred.— Because they failed to observe the order for vaccination, 2,400 pupils were recently barred from the schools in Berkeley, Cal., and 500 in Evansville, Ind. It seems hard, but not so hard as a smallpox epidemic.

Feeding and Efficiency.— According to W. S. Cornell, tests of 360 schoolchildren show that those who received school lunches gained considerable more in weight, height, hand strength, and lung capacity during six months than those who did not receive the lunches.

A Good Resignation.— McCabe, the man who "held down the lid" on practically all effort to control the food frauds, has resigned his position as solicitor for the United States Department of Agriculture. Doubtless he will be well cared for on the outside. Sometimes it may be well said of a man retiring from office, "his last official act — resignation — was his best."

Drugs by Post-Card.— Accidentally it was recently discovered that the heavily embossed post-cards frequently sent by friends to prisoners in Sing Sing prison, contained cocain. This interesting discovery explained how it is that some of the prisoners have been obtaining secret supplies of this and other drugs. The discovery may for a time put a stop to the evil.

Typhoid Inoculation in French Navy.— Antityphoid inoculation was first authorized in the French navy in April, 1912, since which time there have been among the 67,000 uninoculated sailors 5,421 cases of typhoid, or more than 8%, and among the 3,107 inoculated sailors not a single case of typhoid, although their proportion should have been, had they not been inoculated, about 251 cases.

A School of Chiropody.— A new profession has been started in New York by the inauguration of the school of chiropody under the leadership of Dr. Maurice J. Lewi, a well-known resident of New York, who has resigned his position as secretary of the New York State Board of Medical Registration, in order to accept the presidency of the new school. We may be certain that under his leadership the profession of chiropody will take its place alongside that of dentistry.

Glass Eye Big Help.— To nursing mothers, who may be unfortunate enough to have but one eye, and who have difficulty in providing sufficient nourishment for their children, the following news item, which appeared in the Washington *Star* of February 19, from Kansas City, may offer a suggestion: "A cow belonging to a Wyandotte County farmer, giving eight quarts of milk a day, lost an eye. She was provided with a glass eye, and now she gives ten quarts."

Warned Against Coughing and Sneezing. — The director of physical culture in the New York public schools sent out a circular for the principals and teachers of the public schools of that city. Calling attention to the danger of spreading diphtheria, measles, colds, etc., by coughing and sneezing, he urged that all schoolchildren carry clean handkerchiefs to guard the mouth and nose while coughing, and if the impulse is too sudden to be resisted, he suggested the head should be turned away from others. These simple rules, if followed by all, would do much to prevent the transmission of certain infectious diseases.

Antityphoid Immunization.— Based on the results of more than 100,000 inoculations, the following conclusions have been reached. The practise conveys a notable immunity against typhoid infection. It reduces the case incidence about three fourths in the groups submitted to this form of immunization. Under similar conditions, typhoid fever occurring in immunized persons has approximately one half the fatality of typhoid in persons not so protected. Typhoid fever is thus less apt to occur, and when it does occur, it runs a milder course among the sick who have been immunized than among those who have not.

Beer in United States and Germany.— The manufacture of beer in the United States is increasing, but in the mother country where they have had a chance to realize what the consumption of beer means to the individual and to the race, there is a reaction against the seductive beverage. For instance, the students of the university of Bonn have voted for the erection of milk-shops (think of it!) on the university premises. One of the professors, when commenting on the decrease of drinking among the students, said, "A new future now smiles upon our students." It is generally known that the emperor is throwing his influence against the use of beer in the army, for he has realized that a beer-drinking army is not at its best.

Advertising Does the Work.— That prince of advertisers, "Sir" Joseph Beecham, recently testified before the Committee on Public Medicine in London, that his firm sells a million pills a day, or fifty tons a year. England, it will be remembered, while monarchical in its form of government, is extremely democratic. It even knights its brewers and pill makers! And the principal virtue of the pills is the large amount of printer's ink used in their promotion.

Tuberculosis and Housing.— The Paris Health Bureau has a complete record of every one of the 80,653 houses in the city, showing the sanitary equipment, the cases of sickness, deaths, and like data, and from a study of these, the bureau announces that all of the 101,496 deaths that have occurred from tuberculosis in the last ten years, occurred in 38,477 houses. The records of these 38,477 houses show that tuberculosis is concentrated in certain quarters, and that outside of this the disease is not more prevalent than other diseases.

Electricity and Development.— An experiment is in progress in Stockholm on fifty children, divided into two groups, identical as to health, height, weight, etc., placed in two class-rooms of the same dimensions, situation, exposure to light, etc., and having the same instruction, but with one class subjected to the electric current, while the other is not. So far as the experiment has gone, the electrified children seem to be showing better mental and physical development than the others. Of course if the children know that they are getting the electricity, we must take into account the possible effect of suggestion.

Eternal Vacation.— He was a good soul and a fine doctor and he worked very, very hard. To all advice to take a vacation his answer was that he could not afford it. The expense was too great. And so it was, for to the actual expenses of the trip he always added his loss in practise, which amounted to one thousand dollars a month. But he always promised that in three or four years he would take a good long vacation, for by that time he would have put away enough not to mind any loss in practise. But his vacation came sooner than he had expected; for a little notice in this morning's *Times* tells us that he went to the land whence no traveler returns. And now he will have a good long rest.— *Critic and Guide.*

Importance of Mouth Treatment.— Dr. C. Everett Field, in the *Medical Record* of February 8, asserts that minute instructions regarding the care of the mouths of patients are fully as important as are instructions regarding treatment and diet. The teeth of the patient should be cleansed twice a day, and the mouth rinsed or swabbed with an alkaline antiseptic solution before and after each feeding. If this is carefully attended to, the danger of complications and autoinfection will be reduced to a minimum, the food will digest better, the appetite will be maintained, and the patient will be much better nourished than if the mouth is not attended to. This should also be a hint to those who are not ill enough to be under the care of a physician or nurse. Doubtless a very large proportion of digestive troubles are due in great measure to neglected mouths. If through neglect the teeth and gums are diseased, even though they do not actually ache, these conditions must be remedied by a dentist before one can hope for any permanent relief from digestive troubles.

Pyorrhea Alveolaris.— L. B. Scott reports in the *Indian Medical Gazette* the results of the study of pyorrhea alveolaris (a disease of the gums in which they shrink away and the teeth loosen) in the Bengal jail. The disease is almost universal among the natives, and is more prevalent in hot, damp weather. He thinks it is more a result than a cause of ill health, and doubts that it is a cause of dysentery, rheumatoid arthritis, appendicitis, or ulcer of the stomach. He believes that after the first stage it is incurable, though it is possible to remove some of the most troublesome symptoms.

Composition of the Air.— A recent bulletin of the Carnegie Institute shows the results of careful studies of the composition of the air over the ocean, on the tops of high mountains, in city streets, and in subways. In observations extending over many months, during all kinds of weather and in the presence and in the absence of vegetation, the figures showed a remarkable uniformity, the average being .031 per cent carbon dioxid, and 20.938 per cent oxygen. In city streets only the slightest difference over the country or ocean air could be noticed, and even in the tubes during rush hours, only a decrease of .03 per cent oxygen, and increase of .032 of carbon dioxid, reducing the oxygen to 20.908 and doubling the carbon dioxid.

Cane- and Beet-Sugar.— An article in the *Medical Press and Circular* (Dec. 11, 1912) attempts to show that there is a relationship between the increased consumption of beet-sugar and tooth decay. Since 1840 there has been a marked change in the sugar trade, and especially since 1870 in Great Britain there has been a great increase in the consumption of beet-sugar with a decrease in the cane-sugar consumption, and the article has shown that corresponding to this change there has been a great increase in dental decay. Of course, there has been a large increase in the total amount of sugar used, which might account for the increased tooth decay. As a fact, beet-sugar and cane-sugar are identical chemically; and it will need more than the words of perhaps some interested parties to show that the effects of one are different from the other.

THE FOUNDATION LAW OF THE SCIENCE OF HEREDITY

(*Concluded from page 200*)

based fundamentally on the law of Mendel, are so immense that we have not yet begun to realize their potency for good. Just as, when it was found that the climate of Manitoba and British Columbia was too severe for the ripening of what were the finest varieties of wheat, the Mendelian clue enabled the early ripening quality of an inferior variety to be transferred to the variety chosen, so that these countries are now producing enormous quantities of the finest wheat in the world; just as a cotton has been produced which combines early growth, by which it escapes the ravages of the boll-weevil, with the long fiber of the finest sea island varieties; just as sheep have been produced combining the excellent mutton qualities of one breed with the hornlessness of another and the fine wool qualities of still a third; just as in plants and animals new races, new species, may be built up to meet almost any demand and with almost any desired combination of characters, and these races remain stable,— so in man, by the application of the law discovered by Mendel, we may in the years to come eliminate evil tendencies, delinquency, criminality, hereditary insanity, idiocy, feeble-mindedness (all definite, inheritable Mendelian unit characters), and cultivate instead the valuable physical and mental traits and talents. To this result, much to be desired, nothing will contribute more powerfully than an enlightened public opinion, a knowledge of the facts and laws of heredity, a realization of the truth that we are not helpless in these matters, but that we may begin presently to work out our salvation by our own efforts directed by simple biological law. And it is through the faithful following of the laws of biology, which are the laws of our nature and nurture, and thus alone, that we can at length reach the solution of many pressing economic and social problems.

BE OUR AGENT!

YOU HAVE READ this and doubtless other numbers of LIFE AND HEALTH, and are, therefore, competent to judge of its value to the WELL and to the SICK.

IT HAS TOLD YOU, in simple language, (1) How to KEEP WELL, (2) How to GET well, (3) How to TREAT simple diseases AT HOME without drugs, and (4) How to sleep, cook, eat, and dress for health. Therefore we want you to

ACT AS OUR AGENT

in your community, and pass on to others the benefits of this magazine. Incidentally, you will find the handling of this National Health Magazine to be

EASY AND PROFITABLE WORK

the year round. You will be welcomed by all classes, and will be engaged in truly philanthropic work of the highest order.

FOR OLD AND YOUNG ALIKE

One lady agent in Nebraska sold 1,000 copies in four days, her highest record for one day being 370 copies. Profit, one day, $22.20.

A lady 73 years of age averaged 1,000 copies a month all last summer, her profits being equal to a salary of $60 per month.

One young lady sold 7,550 copies in six months, an average of 1,258 per month, and a salary of $75 a month for six successive months.

A little girl eleven years of age, working one hour and a half in an office building, reports 92 copies sold,— $3.70 profit per hour.

MONTHLY PROFIT OF 150% ON INVESTMENT

On orders of 50 or more copies at one time, agents make a monthly profit of 150 per cent, or 1,800 per cent per year, on their investment. Figure it out for yourself from the following table: —

Send $1.00 for 20—To get money back, sell 10—Profit on 20, $ 1.00
Send $2.00 for 50—To get money back, sell 20—Profit on 50, $ 3.00
Send $4.00 for 100—To get money back, sell 40—Profit on 100, $ 6.00
Send $6.00 for 150—To get money back, sell 60—Profit on 150, $ 9.00
Send $8.00 for 200—To get money back, sell 80—Profit on 200, $12.00

PRICES

Yearly subscription	$1.00	Five copies, one year, to one address or more	$3.00
Six months	.50	Single copy	.10
Three years	2.00	Five or more copies, mailed by publishers to	
Five years	3.00	five addresses or one address, post-paid, each	.05

WHOLESALE PRICES

5 to 40 copies, post-paid, each — $ .05
50 or more copies, post-paid, each — .04

EARN YOUR OWN SUBSCRIPTION

Send us TWO YEARLY SUBSCRIPTIONS, accompanied by $2, and we will enter your own name upon our mailing list for one year FREE OF CHARGE.

Apply for agency, territory, and full particulars to our Tract Society or General Agency nearest you (see list of agencies on another page), or to

LIFE AND HEALTH

Takoma Park — — — Washington, D. C.

COME TO SANITARIUM

In California

WHERE HEALTH IS CONTAGIOUS

THE ST. HELENA SANITARIUM is one of the great institutions where all approved scientific therapeutic resources and agencies have been gathered together under one control.

Situated in a little hamlet bearing its name, this remarkable institution appeals to all, because of its accessibility, wealth of picturesque surroundings, magnificent and varied forest growth, extensive vistas of mountains and valleys, and sparkling mountain streams.

At this place is represented the maximum of organized medical efficiency. Here patients have the combined advantage to be derived from the favorable climatic conditions, close medical supervision, skilled attendants, pleasant, homelike accommodations, and appetite-creating foods.

HERE SICK PEOPLE GET WELL. They go away and tell others of what they have found. They return again and again to enjoy the unusual privileges afforded here.

We want to extend these benefits to you also. So come!

For further particulars and beautifully illustrated booklet "E," address

ST. HELENA SANITARIUM :: :: Sanitarium, California

The INSTRUCTOR

Temperance Annual for 1913

Is an attractive 32-page issue with cover in colors, and thoroughly and appropriately illustrated throughout.

Devoted exclusively to temperance themes, emphasizing the curse of intoxicating liquors, and the evils of tobacco—the prevailing, contagious, and deadly cankers to health, happiness, and morals.

ITS MISSION

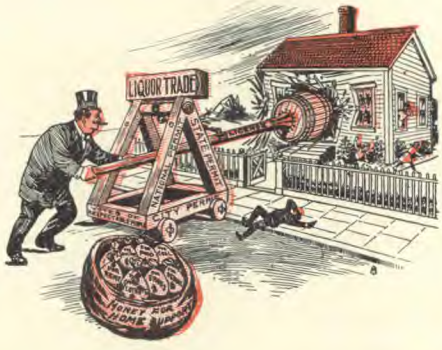
Against these wreckers of individuals, these crushers of homes, and the spoilers of the nations, and in behalf of society and the good of all the people, the Instructor Temperance Annual will wage a vigorous warfare throughout the year 1913.

PRICES

Single copy, 10 cents.

Five to forty copies, one order, one address, 5 cents each.

Fifty or more copies, one order, one address, 4 cents each.



The Temperance Instructor

Takoma Park, D. C.