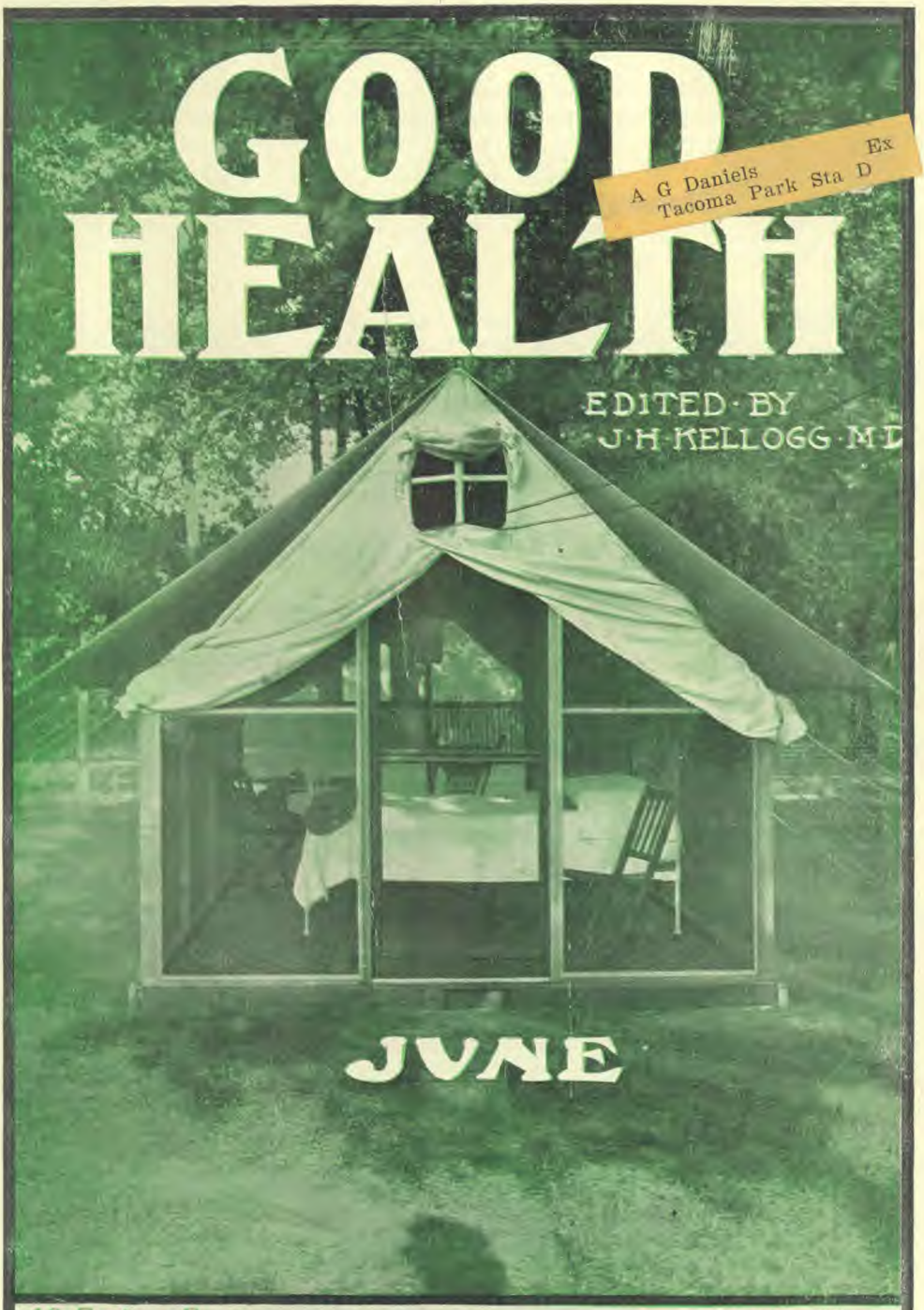
GOOD HEALTH

EDITED BY
J. H. KELLOGG, M. D.



JUNE

10 Cents a Copy $1.00 a Year

OUTDOOR LIFE NUMBER

Entered at the Post-office in Battle Creek, Mich., as Second-class Matter

CONTENTS

JUNE, 1906

To Subscribers:

We have just been making a change in our method of mailing which has involved the printing of a new mailing list. Please look at the label on your magazine. See if the name and date of expiration are correct. In case of error notify us at once so that we may refer to our old records and make corrections.

Good Health Publishing Co.

A NEW FIELD

OF USEFULNESS is now open to those who are interested in health principles and right living.

The world is breaking away from the bondage of conventionality. A new regime is coming into vogue. The interest in hygiene is growing everywhere. The housewife is recognized as the guardian of the health of the home, the controller of the conditions whereby the physical welfare of the inmates of the home may be promoted.

This growing interest in household hygiene has developed a new science which might be called **hygienic economics,** and the demand for women trained in the theory and practise of this new science is already so great and constantly increasing that the necessity for special opportunities for giving the necessary training has long been apparent. The effort to satisfy this need has led to the organization of the

Battle Creek Sanitarium School of Domestic Economy

This training school differs from all other schools of domestic science in the fact that the entire course, both theoretical and practical, has been developed in harmony with the one dominant idea of health. This, for example, is the only school where students can obtain a thorough knowledge of scientific dietetics and a practical knowledge of up-to-date hygienic cookery. Any intelligent, capable woman who has finished a course in this school can be assured that her services will be in demand.

The Battle Creek Sanitarium management is constantly receiving calls for those who can teach the principles and methods employed by this institution. In view of this fact, the management are offering three courses of study, as follows:

Course for Matrons and Housekeepers

This is a one-year course, and is especially designed for those who wish to fill positions as matrons or housekeepers of institutions. The course is thoroughly practical and up-to-date. Students are required to obtain actual experience in the subjects taught.

The subjects taught are as follows: **Household Chemistry, Household Bacteriology, Physiology, Sanitation, Home Nursing, Cookery, Serving, Household Economics, Household Sewing, Keeping of Accounts, Sanitary Laundry, Bible Study and Physical Culture.**

Students desiring to meet a part or the whole of their expenses can easily do so. The Sanitarium will give employment, at a reasonable rate, so that students working six or seven hours per day are able to meet the entire expense of the course, as well as board and room. The first term will begin Sept. 20, 1906. Tuition, $50.00.

Course for School of Health Teachers and Lecturers

This is a two-years' course, and is intended for those who wish to fit themselves for public work as lecturers, demonstrators, and teachers. This is a very thorough course, a number of the studies being taken at the American Medical Missionary College.

The School of Health and School of Cookery, which are always in session in connection with the Battle Creek Sanitarium, afford excellent opportunities for practical experience in public work under the direction of the teachers.

The subjects included in this course are as follows: **Chemistry (General, Organic, and Physiological) Physiology, Bacteriology and Hygiene, Sanitary Science, Medical Dietetics, Cookery, (General, Invalid, Institution), Serving, Household Economics, Voice Culture, Home Nursing, Advanced English, Bible Study and Physical Culture.**

Students will be able to meet the expense of board and room and perhaps a part of the tuition if desirous of doing so. The first term begins Sept. 20, 1906. Tuition, $50.00 per year.

Summer Course in Domestic Science

For the benefit of college students, teachers, and others who wish to spend their summer vacation profitably, the Battle Creek Sanitarium is offering a special course in Domestic Science. It includes just such things as every woman ought to know.

Below is an outline of the course, with the tuition for each subject when taken separately:

Cookery	$10 00	**Home Economics**	3 00
Sewing	3 00	**Physical Culture**	3 00
Sanitary Laundering	3 00		27 00
Home Nursing	5 00	**The entire course**	$15 00

The summer course extends over a period of ten weeks, beginning June 25, 1906, and ending Aug. 31, 1906. Students desiring to meet a part or all of their expenses can easily do so. The Sanitarium offers abundant opportunities to energetic young women for meeting such expenses. Those desiring further information should write to

MRS. M. S. FOY

Battle Creek Sanitarium
BATTLE CREEK, MICHIGAN

The author's labors are deserving of the highest praise. I most heartily recommend the work for study and convenient reference.
Benjamin Harrison

Merrill and Baker's Failure

I am familiar with the merits of Ridpath's History of the World, and commend it to the scholar, as well as to the plain people generally
Wm. McKinley

Places in our hands the remainder of their greatest publication

Ridpath's History of the World

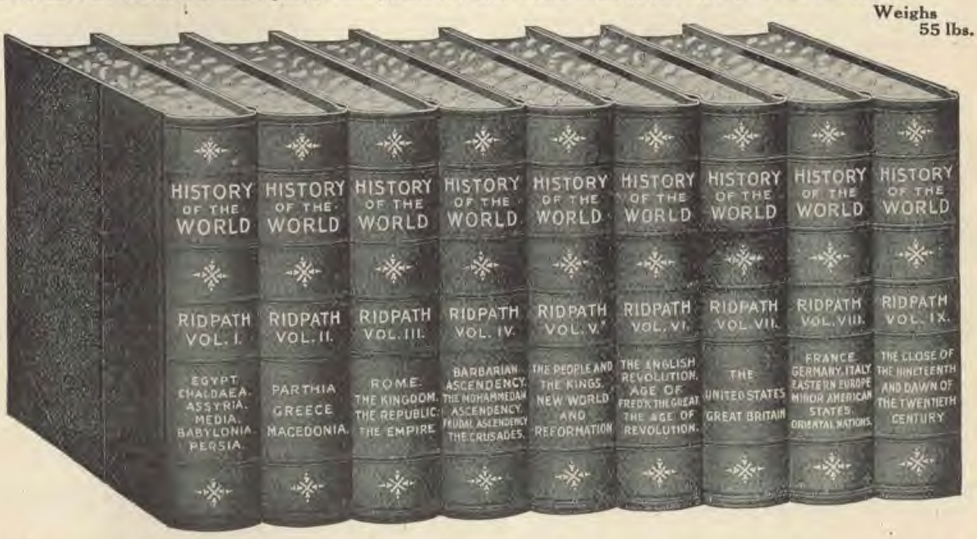
9 Massive Royal Octavo Volumes, 4,000 double-column pages, 2,000 superb illustrations.
Brand New, latest edition, down to date, beautifully bound in half Morocco

At LESS than even DAMAGED SETS were ever sold

We will name our price only in **direct letters** to those sending us the **Coupon** below. **Tear off the Coupon, write name and address plainly, and mail to us now before you forget it.**

Dr. Ridpath is dead, his work is done, but his family derive an income from his History, and **to print our price broadcast** for the sake of more quickly selling these few sets, would cause **great injury to future sales.**

Weighs 55 lbs.



RIDPATH takes you back to the dawn of history, long before the Pyramids of Egypt were built; down through the romantic, troubled times of Chaldea's grandeur and Assyria's magnificence; of Babylonia's wealth and luxury; of Greek and Roman splendor; of Mohammedan culture and refinement; of French elegance and British power, to the rise of the Western World.

He throws the mantle of personality over the old heroes of history. Alexander is there—patriot, warrier, statesman, diplomat—crowning the glory of Grecian history. Xerxes from his mountain platform sees Themistocles, with three hundred and fifty Greek ships, smash his Persian fleet of over a thousand sail and help to mould the language in which this paragraph is written. Rome perches Nero upon the greatest throne on earth, and so sets up a poor madman's name to stand for countless centuries as the synonym of savage cruelty. Napoleon fights Waterloo again under your very eyes, and reels before the iron fact that at last the end of his gilded dream has come. Bismarck is there—gruff, overbearing, a giant pugilist in the diplomatic ring—laughing with grim disdain at France, which says: "You shall not." Washington is there "foursquare to all the winds," grave, thoughtful, proof against the wiles of British strategy and the poisoned darts of false friends; clear-seeing over the heads of his fellow-countrymen, and on into another century, the most colossal world-figure of his time.

He covers **every race, every nation, every time,** and holds you spellbound by his wonderful eloquence. Nothing more interesting, absorbing and inspiring was ever written by man.

Ridpath should be in your home. It is a work that you will value as long as you live and read over and over again.

$1
Brings the Complete Set
Balance Small sums Monthly

200,000
Americans own and love Ridpath

Send Coupon NOW

FOLD HERE, TEAR OUT, SIGN AND MAIL

6-06
Mail coupon To-day

WESTERN NEWSPAPER ASSOCIATION
204 Dearborn St.
Chicago

Please mail without cost to me, Ridpath Sample Pages and full particulars, as offered in Good Health.

Name .....

Address .....

VACATION SEASON

"SEE AMERICA FIRST"

Spend your vacation in Colorado, which is brimful of attractions—where the exhilaration of the pure dry air enables you to live the genuine outdoor life—where game is plentiful—where the streams are teeming with trout, and where you will see the most famous mountain peaks, passes and canyons in America.

During the tourist season the

Denver & Rio Grande Railroad "Scenic Line of the World"

will make special low rates from Denver, Colorado Springs, Manitou and Pueblo to all the scenic points of interest in Colorado and Utah. Our booklet, "Vacation Estimates" tells you about the many wonderful places in Colorado—Colorado Springs, Manitou, Pike's Peak, Royal Gorge, Marshall Pass, Ouray and Glenwood Springs—and the cost to see them.

A Thousand Miles Around the Circle or a trip to Salt Lake City and return are unsurpassed in scenic attractions—and inexpensive

Open-Top Observation Cars, SEATS FREE Through the Canyons during the Summer Months

Write for free descriptive literature to

S. K. HOOPER, Gen'l Passenger Agent
Denver, Colorado.

R. C. NICHOL, Gen'l Agent
242 Clark St., Chicago, Ill.

Become A Vegetarian

AND become stronger, healthier, happier, clearer-headed—and save money. Learn about Vegetarianism through

The Vegetarian Magazine.

The Vegetarian Magazine stands for a cleaner body, a healthier mentality and a higher morality. Advocates disuse of flesh, fish and fowl as food; hygienic living and natural methods of obtaining health. Preaches humanitarianism, purity and temperance in all things. Upholds all that is sensible, right and decent. Able contributors. Has a Household Department which tells how to prepare Healthful and Nutritious Dishes without the use of meats or animal fats. Gives valuable Tested Recipes and useful hints on HYGIENE, SELECTION OF FOODS, TABLE DECORATION, KITCHEN ECONOMY, CARE OF COOKING UTENSILS, etc. Full of timely hints on PREVENTION AND CURE OF DISEASE. Gives portraits of prominent vegetarians, and personal testimonials from those who have been cured of longstanding diseases by the adoption of a natural method of living. TELLS HOW TO CUT DOWN LIVING EXPENSES WITHOUT GOING WITHOUT ANY OF LIFE'S NECESSITIES. EXPLAINS THE ONLY WAY OF PERMANENTLY CURING THE LIQUOR HABIT. WAYS TO INCREASE MUSCLE AND BRAIN POWER. Valuable hints on Child-Culture—how to inculcate unselfishness, benevolence and sympathy in children. A magazine for the whole family. Uniquely printed, well illustrated. Pages 7 by 10 inches in size. Published monthly. Sent postpaid to your address, 1 year, for $1; 6 mos., 50c; 3 mos., 25c; 1 mo., 10c. No free copies.

BOOKS YOU OUGHT TO HAVE

Why I am a Vegetarian, J. Howard Moore	$ .25
24 Reasons for Vegetarian Diet	.05
The Philosophy of Diet	.25
Meatless Dishes	.10
Hygeia Cook Book, Dr Heard	.50
Moral Basis of Vegetarianism	.02
For War or Peace, Which?	.10
Cleanliness the First Principle of Hygiene	.10
Clerical Sportsmen, J. Howard Moore	.05
Vegetarianism from Principle	.25

THE VEGETARIAN MAGAZINE, CHICAGO, ILL.

The Superior Quality of this powder makes it one of the best for the treatment of—

Prickly Heat
Nettle-Rash
Chafed Skin
etc., etc., etc.

It is an excellent remedy for PERSPIRING FEET, and is especially adapted—

FOR

INFANTS

—

Delightful after Shaving

—

Price, postpaid, 25c per box

—

AGENTS WANTED

WING PIANOS

Are Sold Direct From the Factory, and in No Other Way

You Save from $75 to $200

When you buy a Wing Piano, you buy at wholesale. You pay the actual cost of making it with only our wholesale profit added. When you buy a piano, as many still do—at retail—you pay the retail dealer's store rent and other expenses. You pay his profit and the commission or salary of the agents or salesmen he employs—all these on top of what the dealer himself has to pay to the manufacturer. The retail profit on a piano is from $75 to $200. Isn't this worth saving?

SENT ON TRIAL

Anywhere

WE PAY FREIGHT
No Money in Advance

We will place a Wing Piano in any home in the United States on trial, without asking for any advance payment or deposit. We pay the freight and all other charges in advance. There is nothing to be paid either before the piano is sent or when it is received. If the piano is not satisfactory after 20 days' trial in your home, we take it back entirely at our expense. You pay us nothing, and are under no more obligation to keep the piano than if you were examining it at our factory. There can be absolutely no risk or expense to you.

Do not imagine that it is impossible for us to do as we say. Our system is so perfect that we can without any trouble deliver a piano in the smallest town in any part of the United States just as easily as we can in New York City, and with absolutely no trouble or annoyance to you, and without anything being paid in advance or on arrival either for freight or any other expense. We take old pianos and organs in exchange.

A guarantee for 12 years against any defect in tone, action, workmanship or material is given with every Wing Piano.

Small, Easy MONTHLY Payments

In 37 years over 40,000 Wing Pianos have been manufactured and sold. They are recommended by seven governors of States, by musical colleges and schools, by prominent orchestra leaders, music teachers and musicians. Thousands of these pianos are in your own State, some of them undoubtedly in your very neighborhood. Our catalogue contains names and addresses.

Mandolin, Guitar, Harp, Zither, Banjo—The tones of any or all of these instruments may be reproduced perfectly by any ordinary player on the piano by means of our Instrumental Attachment. This improvement is patented by us and cannot be had in any other piano. WING ORGANS are made with the same care and sold in the same way as Wing Pianos. Separate organ catalogue sent on request.

YOU NEED THIS BOOK

If You Intend to Buy a Piano—No Matter What Make

A book—not a catalogue—that gives you all the information possessed by experts. It tells about the different materials used in the different parts of a piano; the way the different parts are put together, what causes pianos to get out of order and in fact is a complete encyclopedia. It makes the selection of a piano easy. If read carefully, it will make you a judge of tone, action, workmanship and finish. It tells you how to test a piano and how to tell good from bad. It is absolutely the only book of its kind ever published. It contains 156 large pages and hundreds of illustrations, all devoted to piano construction. Its name is "The Book of Complete Information About Pianos." We send it free to anyone wishing to buy a piano. All you have to do is to send us your name and address.

Send a Postal To-day while you think of it, just giving your name and address or send us the attached coupon and the valuable book of information, also full particulars about the WING PIANO, with prices, terms of payment, etc., will be sent to you promptly by mail.

Cut or tear out this coupon and mail to us, after writing your name and address at bottom. We will promptly mail book and other information.

WING & SON
W. 13th St., New York

Send to the name and address written below, the Book of Complete Information about Pianos, also prices and terms of payment on Wing Pianos.

WING & SON

350-370 West 13th Street., New York

1868——37th YEAR——1905

SANITARIUMS

The following institutions are conducted in harmony with the same methods and principles as the Battle Creek Sanitarium.

CALIFORNIA (St. Helena) SANITARIUM, Dr. H. F. Rand, Medical Superintendent, Sanitarium, Napa Co., Cal.

NEBRASKA SANITARIUM, College View, Lincoln, Nebr. W. A. George, M. D., Superintendent.

PORTLAND SANITARIUM, West Ave., Mt. Tabor, Ore. W. R. Simmons, M. D., Superintendent.

NEW ENGLAND SANITARIUM, Melrose, Mass. C. C. Nicola, M. D., Superintendent.

CHICAGO SANITARIUM, 28 33d Place, Chicago, Ill. Frank J. Otis, M. D., Superintendent.

IOWA SANITARIUM, 603 E. 12th St., Des Moines, Iowa. J. E. Colloran, M. D., Superintendent.

TRI-CITY SANITARIUM, 1213 15th St., Moline, Ill. S. P. S. Edwards, M. D., Superintendent.

PARADISE VALLEY SANITARIUM, City Office and Treatment Rooms, 1117 Fourth St., San Diego, Cal. Sanitarium, Box 308, National City, Cal.

LOMA LINDA SANITARIUM, Loma Linda, Cal. J. A. Burden, Manager.

TREATMENT ROOMS, 257 S. Hill St., Los Angeles, Cal. J. R. Leadsworth, M. D., Superintendent.

GARDEN CITY SANITARIUM, San Jose, Cal. Lewis J. Belknap, M. D., Superintendent.

MADISON SANITARIUM, Madison, Wis. C. P. Farnsworth, M. D., Superintendent.

SPOKANE SANITARIUM, Spokane, Wash. Silas Yarnell, M. D., Superintendent.

TREATMENT ROOMS, 201 Granby Block, Cedar Rapids Iowa
R. L. Mantz, M. D., Superintendent.

BUFFALO SANITARIUM, 922 Niagara St., Buffalo, N. Y., A. R. Satterlee, M. D., Superintendent.

NASHVILLE SANITARIUM, Cor. Church and Vine Sts. Nashville, Tenn.
O. M. Hayward, M. D., Superintendent.

PROSPECT SANITARIUM, 1157-1161 Prospect St., Cleveland, Ohio.
F. A. Stahl, Superintendent.

TACOMA SANITARIUM, 426 S. C St., Tacoma, Wash. T. J. Allen, M. D., Superintendent.

COLORADO SPRINGS SANITARIUM, 126 N. Cascade Ave., Colorado Springs, Colo.
T. J. Evans, M. D., Superintendent.

KANSAS SANITARIUM, 3200 W. Douglass Ave., Wichita, Kans.

UPPER HUDSON SANITARIUM, Hadley, N. Y. E. F. Otis, M. D., Superintendent.

HINSDALE SANITARIUM, Hinsdale, Ill. David Paulson, M. D., Superintendent.

MIDDLETOWN SANITARIUM, 46 to 48 E. Main St., Middletown, N. Y.
B. B. Kline, M. D., Superintendent.

TREATMENT ROOMS, 565 Main St., Springfield, Mass. Chas. S. Quail, Manager.

ROCHESTER TREATMENT PARLORS, 156 Monroe Ave., Rochester, N. Y.

SEATTLE SANITARIUM, 1313 3d Ave., Seattle, Wash. Alfred Shryock, M. D., Superintendent.

PEORIA SANITARIUM, 203 3d Ave., Peoria, Ill. J. E. Heald, M. D., Superintendent.

GLENDALE SANITARIUM, Glendale, Cal. W. Ray Simpson, Manager.

PENNSYLVANIA SANITARIUM, 1929 Girard Ave., Philadelphia, Pa
H. B. Knapp, M. D., Superintendent.

TREATMENT ROOMS, 58 Madison Ave., Detroit, Mich. Dr. Jean A. Vernier, Manager.

FOREIGN

SURREY HILLS HYDROPATHIC INSTITUTE, Catherham, Surrey, England.
A. B. Olsen, B. S., M. D., M. R. C. S., Superintendent.

LEICESTER SANITARIUM, 80 Regent St., Leicester, England.
F. C. Richards, M. D., M. R. C. S., Superintendent.

CALCUTTA SANITARIUM, 50 Park St., Calcutta, India. R. S. Ingersoll, M. D., Superintendent.

PLUMSTEAD SANITARIUM, Cape Town, South Africa. Geo. Thomason, M. D., L. R., C. S., Superintendent.

CHRISTCHURCH SANITARIUM, Papanui, Christchurch, New Zealand.

KOBE SANITARIUM, 42 Yamamoto-dori, Nichome, Kobe, Japan.
S. A. Lockwood, M. D., Superintendent.

GUADALAJARA SANITARIUM, Apartado 138, Guadalajara, State of Jalisco, Mexico.

SANITORIUM DU LEMAN Gland (Vaud) Suisse.
P. A. De Forest, M. D., Superintendent.

SKODSBORG SANITARIUM, Skodsborg, Denmark. J. Carl Ottosen, A. M., M. D., Superintendent.

SYDNEY SANITARIUM, Wahroonga, N. S. W., Australia. D. H. Kress, M. D., Superintendent.

FRIEDENSAU SANITARIUM, Post Grabow, Bez. Magdeburg, Germany.
A. J. Hoenes, M. D., Superintendent.

KIMBERLEY BATHS, 32 Old Main St., Kimberley, South Africa.
J. V. Wilson, Mgr.

Health Food Restaurants

Eating-houses where food prepared in accordance with the principles of rational dietetics and scientific cookery may be obtained are now open in the following places:—

RESTAURANTS

HYGIENIC COMPANY, 1209 G. St., N. W., Washington, D. C.

HYGEIA DINING ROOMS, 5759 Drexel Ave., Chicago, Ill.

PURE FOOD CAFE, 403 E. 11th St., Kansas City, Mo.

GOOD HEALTH CAFE, 143 N. 12th St., Lincoln, Nebr.

VEGETARIAN CAFE, 19 East Bijou St., Colorado Springs, Colo.

VEGETARIAN CAFE, 814 Pine St., St. Louis, Mo.

VEGETARIAN CAFE, 259 South Hill St., Los Angeles, Cal.

PORTLAND SANITARIUM ROOMS, Mt. Tabor, Oregon.

RESTAURANT, 2129 Farnum St., Omaha, Nebr.

VEGETARIAN CAFE, 214 Union St., Seattle, Wash.

VEGETARIAN CAFE, S. 170 Howard St., Spokane, Wash.

CROFTON'S PURE FOOD AND VEGETARIAN RESTAURANT, 193 Devonshire St., Boston, Mass.

THE LAUREL, 11 W. 18th St., New York City.

HYGEIA CAFE, 203 3d Ave., Peoria, Ill.

VEGETARIAN CAFE, 105 6th St., Portland, Oregon.

VEGETARIAN CAFE, 45 Hunter St., Sydney, N. S. W.

STORES

PURE FOOD STORE, 2129 Farnum St., Omaha, Nebr.

BATTLE CREEK SANITARIUM HEALTH FOOD DEPOT, Chas. S. Quail, 565 Main St., Springfield, Mass.

HEALTH FOOD STORE, J. H. Whitmore, 118 Miami Ave., Detroit, Mich.

BOSTON HEALTH FOOD STORE, W. F. Childs, Room 316, 100 Boylston St., Boston, Mass.

N. E. SANITARIUM FOOD CO., 23 Wyoming Ave., D. M. Hull, Mgr., Melrose, Mass.

HEALTH FOOD STORE, 156 Monroe Ave., Rochester, N. Y.

NEBRASKA SANITARIUM FOOD CO., College View, Nebr.

Begin to live right to-day. If you will live the life and eat the foods our experts recommend, sign the Coupon at the top of this page, and mail at once.

If you wish to receive copy of book mentioned in this advertisement, write your name and address in margin above, tear off this corner, and mail to Battle Creek Sanitarium Co., Ltd. Dept. 93. Battle Creek, Michigan.

TEAR OFF HERE

You Live as You Eat

If you are sick and want to be well—

If you are well and want to keep well—

If you feel the need of greater physical and mental strength, with more nervous vitality—

If you are tired of taking harmful and useless drugs and medicines—

WRITE TO-DAY FOR OUR FREE BOOK

on "The Battle Creek Idea."

This book is the result of thirty years of experiment and research by the world s foremost dietitians.

It points a way to health, based on correct diet, that has been **tried** and **proved** by over half a million people.

It tells you how you can apply, in your own home, the same principles of right living that have made the great Battle Creek Sanitarium so famous and so successful.

It is a clearly written, beautifully illustrated health story that every man and woman should read, who values perfect physical and mental development.

You may be on the road to abounding and abiding health this time next month, if you will take the trouble to **write us to-day.**

Do not ask **why;** get the book and let it speak for itself. Use postal or above coupon, and address

BATTLE CREEK SANITARIUM CO., LTD.
DEPT. 93 BATTLE CREEK, MICH.

A University of Health

THE old artificial method of treating disease by exclusive drug medication is rapidly passing into history. The era of physiologic therapeutics — nature remedies — has happily dawned upon mankind. The president of a large medical society recently stated that "the methods upon which we have been depending for so many years are all failing us, and the medical profession is turning away from these things to *the natural remedies.*"

In the Lobby

Hundreds of prominent educators are advocating the principles of the Return-to-Nature Movement — a movement not merely "back to the land," but back to the natural and right methods of life in every respect — as a cure for the many maladies induced by over-civilization, and as the only preventive of race extinction.

The Battle Creek Sanitarium is the fullest development and the most advanced and scientific representation of this Return-to-Nature Movement. It is the center from which the light of the simple, healing, life-saving truths shines out to the world, and has been aptly termed a University of health. For thirty years past thousands of men and women from all parts of the United States and from for-

eign countries have come here for relief from physical suffering and instruction in the principles of natural, healthful living.

At the great "World's Fair" held at St. Louis in 1904, the educational character of which was universally recognized as its leading feature, the work and principles of the Battle Creek Sanitarium were fully represented. One whole day was set apart by the Fair authorities as distinctively "Battle Creek Sanitarium Day." It was acknowledged on all sides that no other event of the kind had attracted anywhere near the attention accorded to the Battle Creek celebration — a mark of the esteem in which the truth represented here is coming to be held by the thinking world.

The key-note of the Battle Creek Sanitarium system is simplicity of life, a return to nature in principles, and the utilization of those great powers and agencies through which all living things are created and maintained, and which alone are able to cure. It traces its origin back to the beginning of human experience, and is a new departure only in the sense that it is a turning away from the prevailing artificial, abnormal, perverted ways, back to the old, the natural, the true, the divine order of life.

The work of the Battle Creek Sanitarium has been to gather up all natural remedies, ascertain their medicinal value, and harmonize and systematize all these agencies for the treatment of disease and the maintenance of health.

The outdoor life, the air cure, the application of light, both sunlight and electric light in various forms, the employment of electricity, medical gymnastics, the scientific use of water by the varied and elaborated methods afforded by modern hydrotherapy,—all have their place in the Return-to-Nature Movement represented in the Battle Creek Sanitarium system. Thirty years' experience has developed a well-defined and thoroughly scientific system of natural or physiologic therapeutics, which embraces all that is known to be good of curative methods.

Of the more than five thousand patients treated annually at the Battle Creek Sanitarium, the majority are more or less permanently relieved of chronic ailments which are incurable under the conditions in which they ordinarily live. A large number of those visiting the institution are sent by their family physicians, that they may enjoy the benefit of such a regimen, treatment, and training as the intelligent and progressive physician would be glad to give the patient at home, but can not for lack of facilities, or inability to control his life and habits as fully as necessary for his restoration to health.

The educational character of the work of the Battle Creek Sanitarium is its most prominent feature. Chronic invalids are not only lifted out of the valley of disease and started again on the highway of health, but are taught how to walk therein — how to maintain their restored health. The physical bankrupt is not only brought to the point of solvency, but is taught how to increase his bank account of health.

Health, like disease, comes gradually, by a process of growth and change. A permanent cure requires a change in the patient, a regeneration of tissue and a constitutional reconstruction which can be secured only by the physiologic method.

The Sanitarium methods are graduated to meet the needs of the feeblest, who are by degrees trained back to perfect health. Each physician, nurse, and

attendant is a trainer, an expert in the most effective and certain methods of lifting one who has fallen into invalidism and insufficiency up to health and vigorous activity.

The vital organs must be trained out of perverse, morbid ways, to vital, healthful activity. Weak and unsteady nerve centers must be enabled to re-accumulate the store of energy which has been exhausted, thus re-acquiring tone and balance and fitness for the duties demanded of brain and nerve. The whole program is honest, earnest work for health, and all possible hindrances are removed.

Strenuous health requires good muscles and erect carriage. In the magnificent gymnasium the patients gather three or four times daily for muscle and chest training.

In the Mechanical Swedish Movement Department a dozen ingenious machines knead and rub, percuss and vibrate in a way better than can be done by human hands. The movements rest tired nerves, warm cold hands and feet, stimulate sluggish viscera, and help to dissipate aches and pains and other common invalid discomforts.

The Outdoor Gymnasium, with swimming pool, sand pile, etc., provides seaside advantages and sports. With skilled instructors and absolutely safe conditions any one can learn to swim in a few days. There is no better method for developing the lungs, stimulating the digestive organs, ensuring sound sleep and steady nerves, and forgetfulness of peristaltic and other invalid woes. Large indoor swimming pools make it possible to engage in this invigorating and health-giving sport in all weathers and all seasons.

The treatment of each case is guided by exact data afforded by exhaustive microscopic and chemical examinations of the blood, the gastric, urinary, and other secretions, in the splendidly equipped laboratories of the institution.

Most chronic maladies are due to wrong conditions of life, and can be cured only by correcting these conditions. Physiologic therapeutics require, first of

Men's Indoor Swimming Pool

all, the removal of causes. This may demand of the dyspeptic that he exchange his ordinary complicated dyspepsia-producing bill of fare for a simple and wholesome dietary.

The culinary laboratories of the Sanitarium compound tasty foodstuffs which are digested and assimilated in half the time of ordinary foods, rapidly building up the blood and tissue — a boon to stomachs worn out by hard usage. By chemical examinations the nutritive needs of each patient are accurately determined, and a prescription which he may trust guides him in the selection of what his case requires, from the host of tempting dishes deftly prepared by skilled chefs.

There is no hospital suggestiveness, but a social, homelike atmosphere. Combined with city advantages are beautiful country surroundings where walks and drives may be taken daily. There is no place in the Sanitarium system for "blues" or homesickness. The patients are so busy getting well that the air is charged with optimism and the contagion of health.

From stereograph, copyright 1906, by Underwood & Underwood, N. Y.

PATIENCE AND GENTLENESS IS POWER—*Leigh Hunt.*

GOOD HEALTH

A Journal of Hygiene

VOL. XLI JUNE, 1906 No. 6

Health Lessons From the Earthquake

THE awful catastrophe on the Pacific Coast which destroyed nearly two thousand lives, rendered 300,000 homeless, and wiped out half a billion dollars' worth of property, has thrilled the whole world with horror, and started a tidal wave of sympathy from every corner of the globe.

The history of the world records few such startling episodes. Every sane person must be profoundly impressed by this evidence that our foundations are exceedingly shaky and unreliable.

The moral lesson from this is evident. Are there not also some practical hygienic lessons which may be gathered from among the broken fragments and smoking embers of what was once a beautiful city.

One lesson is evident:—

THREE HUNDRED THOUSAND PEOPLE HAVE FOUND OUT THAT THEY CAN LIVE OUT OF DOORS, AND THAT OUT OF DOORS IS A SAFER PLACE THAN INDOORS.

People who have all their lives slept on beds of down, protected by thick walls of brick or stone, barricaded against the dangerous (?) air of night, have found that it is possible to spend a night upon an unsheltered hillside without risk to life, and it is more than likely that, as in the case of the Charleston earthquake, not a few modern troglodytes who scarcely ever saw the light of day before, have been actually benefited by being forced out into the fresh air and the sunshine.

The great tent colonies improvised by the military authorities with such promptness under the efficient management of the able General Funston, may become the permanent homes for some of the thousands who are now for the first time in their lives tasting the sweets of an out-of-door life. Man is an out-of-door creature, meant to live amid umbrageous freshness, his skin bathed clean by morning dews or evening showers, browned and disinfected by the sun, fed by tropic fruits, and cheered by tropic birds and flowers. It is only through long generations of living under artificial conditions that civilized man has be-

come accustomed to the unhealthful and disease-producing influences of the modern house to such a degree that they can be even in a small measure tolerated. But this immunity is only apparent. An atmosphere that will kill a Hottentot or a baboon in six months, will also kill a bank president or a trust magnate — *sometime*. And if these tent dwellers get such a taste of the substantial advantages of the out-of-door life that they refuse to return to the old unwholesome conditions of anti-earthquake days, they will profit substantially by their experience, terrible though it has been. It takes earthquakes and cyclones and tidal waves to jostle us out of the unnatural and degenerative ruts into which conventionality is always driving us.

What advantages has the man in the brown stone front over the man in the tent? Only these: A pale face instead of the brown skin which is natural to his species; a coated tongue, no appetite, and no digestion, instead of the keen zest for food and splendid digestive vigor of the tent dweller; an aching head and confused mind and depressed spirits, instead of the vim and snap and energy, mental and physical, and the freedom from pain and pessimism of out-of-door dwellers; early consumption or apoplexy or paresis or cancer of the stomach or arteriosclerosis,— the dry rot of the body which stealthily weakens the props and crumbles the foundations of the citadel of life.

The people of San Francisco are getting, incidentally, a lesson in the simple life, which they, as well as all the world, may profit by. The simple army ration will be the most wholesome food the majority of these people have eaten in many years; infinitely better it is than the luxurious and stomach-spoiling comestibles of the hotels and the restaurants. There's no time for pies and cakes, patés, ragouts, deviled things, and fancy dishes. Bread is the desideratum,— bread and water the universal needs.

How simple our necessities become when filtered down to actuality by some drastic circumstance like an earthquake or a great conflagration. Why not learn from this object-lesson the great fact of life's simplicity and lop off a lot of the superfluities for the future and thus become in the end enriched by the present loss and calamity? Necessary food, pure water, pure air, shelter, and suitable clothing,— these are the real necessities, and their cost is small. The actual cost need not exceed one hundred dollars a year for every human being. How many spend more than this amount on their poor bodies every week, and to their injury! Most of our maladies are the result of our luxuries,— our *cultivated* necessities.

Among the tens of thousands who throng the hillsides about San Francisco Bay many thousands have been long accustomed to the use of beer, wine, tobacco, tea and coffee, possibly opium and other narcotics. These things are not included

either in the government ration or in the Red Cross lists of supplies. Those who have imagined these fascinating drugs were indispensable to their existence have had a chance to discover that they can get along without them. Possibly some, having made this discovery, will decline to return to the thraldom from whose chains the earthquake shook them free.

An earthquake is indeed a terrible calamity, at least such a one as that which recently visited the strip of coast fifteen miles wide by three hundred long of which San Francisco is the center. But there are calamities worse than earthquakes and great fires. 'There are things more terrible still, more appalling in their consequences, more terrific in their destructiveness to human life, — less open and noticeable, it is true, but really all the more awful in their insidiousness.

The latest returns tell us that the total loss of life by the earthquake and the fire foots up less than 2,000. This number has been many times greatly exceeded. For example, in the Lisbon earthquake of 1755, 60,000 perished. The Calabria earthquake of 1783 killed 32,000. In 1896 a tidal wave forty feet high produced by earthquake killed 27,000 on the coast of Japan. At Martinique 40,000 perished. But these disasters are nothing,— they are but drops in the ocean, when we think of the daily and hourly tribute of human victims to disease. Here are the figures: —

37,500,000 persons die each year
103,000 persons die each day
4,300 persons die each hour
70 persons die each minute
1 person dies each second

Every thirty minutes, then, more people die than were killed by the earthquake. Most of these are the victims of preventable disease. In the United States alone 416,000 persons die annually of pneumonia, 413,000 persons die of consumption, 144,000 persons die of apoplexy, 130,000 persons die of cancer,— more than a million persons dying of four diseases only, all of which are preventable. If the earthquake is terrible because of the loss of human life, here is something almost infinitely more terrible. Day and night this vast procession of corpses,— one hundred thousand a day,— each with its funeral car and weeping mourners, passes down the highway of life to new-made graves. We have become accustomed to the funeral dirge and the mourner's wail. Our hearts are calloused to the stricken mother's grief and the motherless child's lament. *We take death from disease as a matter of course and stand stupidly by waiting our turn.*

The public starts with awe when the newspapers publish the statement that a woman, three days before it occurred, proclaimed in the streets of San Fran-

cisco the destruction of the city. The scientists claim a higher place in the public confidence and respect by calling attention to the fact that they have long predicted the occurrence of a severe seismic disturbance on the Pacific Coast. But here is a prediction which we will make which involves consequences infinitely more terrible both in loss of life and property than did the San Francisco disaster,— and it shall as certainly come to pass: —

ONE HUNDRED THOUSAND PERSONS WILL DIE TO-MORROW!

Reader, try to comprehend the terrible meaning of this. An army of corpses large enough to people a great city! And the real awfulness of this is that half of these people need not die; possibly nine-tenths of them might be readily saved. Ignorance, neglect, wrong habits, wrong eating, pernicious fashions,— a thousand preventable causes are all working this terrible slaughter. Earthquakes are bound to come; there is no way of preventing them. But they do not come often, and they do little damage when compared with the awful harvest of death which results from preventable disease.

San Francisco will rise again. But the world of humanity is sinking, dying, — forty millions a year going down to death. Will humanity rise and cast off this thraldom of ignorance, this heavy yoke of disease, or will it continue to sink down, down to deeper degeneracy and final race extinction? Reader, you and I must help to answer this question.

J. H. Kellogg

The Endless Procession

FOREVER and ever the train goes by,—
The train of the marching years;
Sunshine and starbeam and cloud in the sky,
And under them smiles and tears.
Never pause, but on and on,
The grave years pass along,
With their battles lost and their victories won,
And their mighty, motley throng.

* * *

We stand on the place To-day has given,
To make or to mar our lot;
We may fill it up to the brim with heaven,
Or blur it with stain and blot.
Bravely may toil for the good and true,
Earnestly strive and pray;
But the good or the ill we all may do,
Must be done in the span of To-day.

—*Margaret E. Sangster.*

Outdoor Life in Large Cities

BY MARY HEATH

WITH the coming of the summer the natural desire to get out of doors to breathe the fresh air and see the blue sky over our heads, moves us all. There is an exodus of the fortunate ones to the country, but many city dwellers can not get away to the fields, and they are, in most cases, the very people who most need the pure outdoor air and exercise. In the tenement districts the problem presents the greatest difficulties. The hot, crowded, sometimes windowless rooms grow unbearable, and the sidewalks and streets are black with men, women, and children — especially the latter — trying to get a breath of air.

For these people Uncle Sam has provided in all our large cities public parks and playgrounds. To these playgrounds especially, the children flock in such numbers that they have to wait their turns to get in. These little parks are equipped with sand-boxes and swings for the babies, and with gymnastic appliances for the older children. In some cities, as in Washington and New York, a director is stationed in each playground, and the boys and girls are given some very helpful physical training. Often the different grounds form "teams" for different games, and contests are held with other teams. The winners of these contests are given as prizes handsome buttons, which they wear very proudly.

Besides these playgrounds there are in many of the coast cities, recreation piers built out over the water, and these also have proved a great boon to the poor. Here mothers bring their little babies for a whiff of salt air, and here, in the hottest weather, many tenement-dwellers bring their mattresses and spend the night. Often music is provided in the evenings, and the young people feel that

they are getting a little social life.

For the better class of city dwellers, who still are unable to go to the country, there are other means of getting outdoor life, chief among them the larger parks, as Central Park, New York, etc., the trolleys, and the beaches. Take the trolleys! What a blessing they are to the city folk! A ride out of the heart of the city to the fields acts like a tonic! I know of one young mother who made very profitable use of them last summer. Unable to leave the city, and anxious that her baby should have plenty of fresh air, she took him every day, after her household duties were attended to, for a trolley ride. Sometimes they rode to the Park, and sat there a while; sometimes to the seashore, where his majesty the baby rolled in the sand; sometimes there was only time for the ride into the suburbs and back again. It did both mother and child a world of good. No country baby could have been browner, rosier, or plumper than this little city tot was by fall.

On the Beach

Many of us could get out of doors more, even in the city, if we would only get away from the notion that we can not spare the time. Make the time: your health demands it. In summer, everybody ought to loaf a little each day. If you can't quite reconcile your conscience to absolute idleness, take your sewing or a book to some quiet, shady nook in the park, and work or read while the children romp on the grass. How children do enjoy actual contact with the turf, by the way! I saw a small tot the other day, evidently in the park for the first time of the season, step from the path to the grass, and an absolutely blissful expression spread on his features as he felt the sod under his feet.

For those who live in a house with a bit of ground to call their own, — even a city garden, tiny as it may be,— there is no excuse if they do not spend much time outdoors. First of all, there is a chance to make a garden. Here is an excuse for lots of good exercise, a reason to

spend much time out of doors. Besides the pure physical pleasure of actual contact with the earth, the garden maker reaps an added reward in the beauty he produces out of chaos.

Then, too, a part of the back-yard can be fixed up as a room, and all the family can enjoy it. I know of one such room which is occupied on every pleasant day. The yard is shady in the afternoon, but for the morning there is an awning stretched from the house to the clothes posts, and under it are set daily three rockers and a small sewing table. Here the grown folks sit, in the hottest weather only in the afternoons, but later in the fall often for the greater part of the day, and sew or read, while three children run in the grass or dig in their own particular "flower beds."

Pleasant outdoor rooms may be made on shed roofs. A floor of narrow boards should be laid over a tin roof for the protection of the tin, and the addition of a railing and an awning are advisable. Here, members of a household can sit and enjoy the fresh air, and keep occupied at the same time.

However we manage it, we all ought to get plenty of outdoor life, in summer especially. We shall be amply repaid for all effort made by the resulting benefit to health and spirits. And, after all, there is no reason to mope indoors because we can not get into the country!

A Tiny City Garden

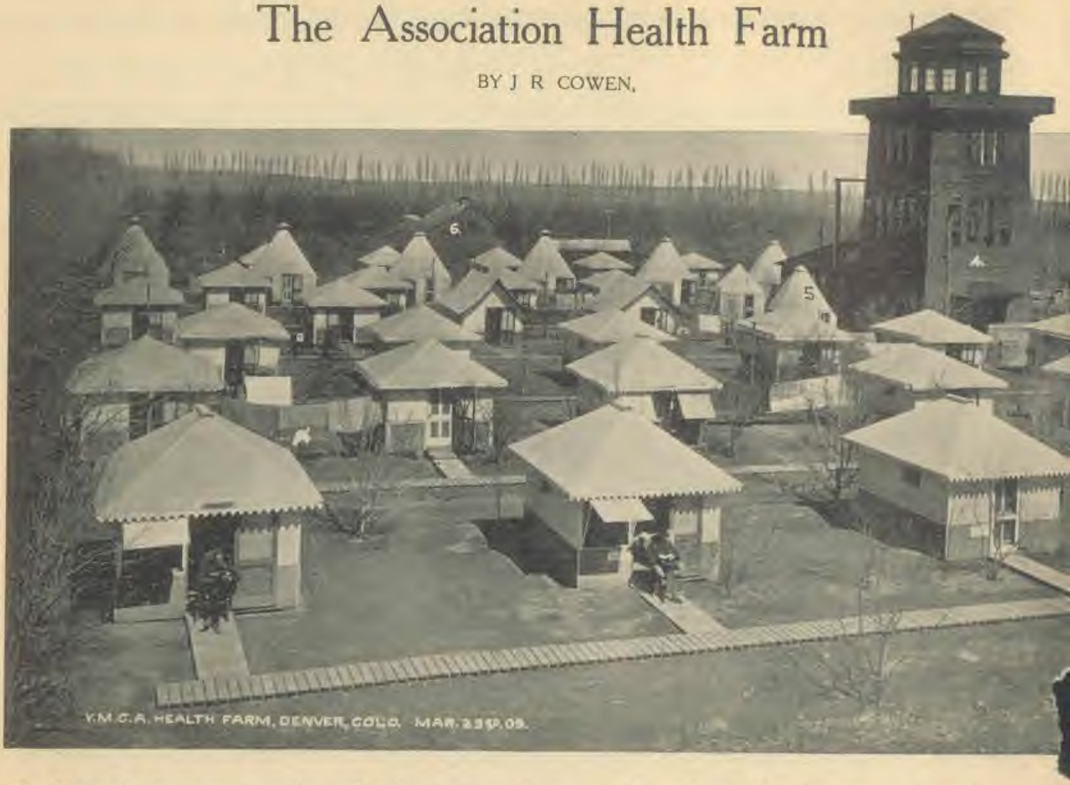
Nature's Friendship

To him who looks on nature as a friend—
Who loves her varying moods, whate'er they be,
Of calm and glorious sunshine, or the free,
Wild sweep of winds, that toss about and bend
The branches of the mighty oaks, or rend
Their great hearts wide—to him, the mystery
Of life is not so great—he holds the key
To much that others can not comprehend,
And finds a miracle in every bird,
Or creature wild—an endless spring
Of joy, and as the seasons come and go,
And Nature's wooing voice is clearer heard,
Rejoicing in the best, he learns to fling
Aside as worthless much—for room to grow.

—*Bessie Andrews Dana.*

The Association Health Farm

BY J R COWEN.



ONE of the most unique institutions which the modern open-air treatment of pulmonary tuberculosis has called into being is the Association Health Farm at Edgewater, Colo., established by the Denver Young Men's Christian Association in May, 1903. The need which existed for such a place had long been forcing itself with growing emphasis on the attention of the Association in that city, because the health question has always been an important one in Denver, and no organization has ever seen more of the sorrowful side of it than the Y. M. C. A. Consumptive young men are always coming to Denver in large numbers from every section of the country in search of health, but they have not always the means to keep them while finding it, nor is there anywhere many of them can go to receive the treatment they require at a price they can afford to pay. The result is that while their funds last they are forced to live in cheap boarding-houses in the city, where the air and surroundings are anything but conducive to their recovery, and then when their money is spent, they are compelled to go to work at a critical time, under conditions that generally result in lessening or entirely destroying their chances of getting well. It was to extend a helping hand to young men thus circumstanced that the Association Health Farm was started; and the work it has accomplished since its inception gives abundant proof not only of the real want which it supplies, but of the valuable work which such an institution is capable of accomplishing.

The Association Health Farm is situated six miles west from the center of Denver, on a ridge of ground about 250 feet above the level of the city. The Rocky Mountains, forming an unbroken chain, extend for 120 miles north and south. They are plainly visible through-

At Edgewater, Colorado

A Farm Resident from Dublin, Ireland

out the entire distance, and are less than twenty miles away at the nearest point. The foot-hills leading to them are within seven miles of the Health Farm. Large shade trees bound the Farm on the west and north sides, affording protection from the sun in summer and from the winds in winter. Two irrigation ditches, one of them bisecting the Farm at the north end, supply the necessary water. The natural surroundings are, therefore, very favorable, and have their good effect on the patients, to whom this aspect of the Farm environment never fails to appeal. The Farm consists of thirty-four acres, all devoted to fruit culture, with the exception of ten acres of vegetable gardens, and such of the land as is utilized for the tent colony and buildings. Apples, plums, cherries, and peaches are the fruits grown.

The present equipment consists of forty-six tent-cottages of three different designs; a two-story brick building, formerly the residence of the donor of the Farm, and now utilized as a dining-room and as living quarters for the household staff; a four-story water tower with a cistern of eleven thousand gallons' capacity; an engine house and machine shop; a large barn with accommodation for horses, cows, and vehicles, five chicken coops with runs; and a crematory for the disposal of all sputum.

The tent-cottages are plainly but comfortably furnished. They have a hygienic spring bed, plenty of bed clothes, chiffonier, rug, washstand, table, chairs, etc., and each resident is given the exclusive use of one tent.

The Farm stock includes five horses, seven milch cows, and some two hundred fowls.

The vast majority of the residents come from the East, though every section of the country has been represented at the Health Farm, which shows the national character of the work it is carry-

ing on. Canada, England, Ireland and Scotland, Armenia and Palestine, have also been represented.

A charge of twenty-five dollars monthly is made for board and tent, but as this sum falls five dollars short of what it actually costs to keep a man, there is a deficit on every resident, which has to be made up chiefly by outside contributions, as it is not realized by the sale of produce and other resources of the Farm. All residents undergo a period of absolute rest after they come to the Farm, and are under the close observation of the resident physician, who devotes all his time to the work.

An Association Tent-Cottage

Since the opening of the Farm, 247 patients have been received. Twenty-four of this number returned for a second period of residence. One hundred and eighty-six, or 75 per cent, improved; 40, or 16 per cent, had the disease arrested when they left; and 105, or 42 per cent, were working when last heard from. Seventy-five worked on the Farm all or part of the time while there. Seventy of the total number were incipient cases; 4 had the disease arrested upon arrival; 138 were advanced cases: 30 were far advanced and 5 were non-tubercular.

It is the policy of the management to give all the light work of the place to the residents, and this privilege enables them to at least partially pay their way, besides providing them with healthful mental distraction. When working they are, of course, under the supervision of the resident physician. When the exercise is found too much for them, they are instantly relieved. Each department contributes a little work for the men, so that there is a chance for the mechanic and carpenter as well as for the farmer and gardener. At the present time ten men are on the permanent working list, and from now on to the late fall, when the fruit and garden produce has all been harvested, there will be a great deal of casual work for many others.

The two main features of the Health Farm work are the medical and industrial.

From what has been said before about the equipment it will be seen that the Association Health Farm is in no sense a sanitarium, and does not pretend to offer hospital treatment to its residents.

There is no staff of nurses; no laboratory; not even an administration building. It is simply an ordinary farm outfit, with a tent colony added, and equipped to meet the needs of its work just as far as its limited resources have permitted. Still, while there is little of the institutional character about it, it provides the fundamentals in the treatment of tuberculosis, and the medical results show that when these have been given to the patient, the rest is generally a matter of secondary consideration. The air is perfect, with the prevailing winds west; the surroundings are pleasant; the tents are thoroughly hygienic and typical of outdoor life; the diet is generous and of the right kind; the sanitation is good; and the methods of the resident physician in getting into personal contact with every individual resident are very effective. Naturally this kind of treatment leaves a great deal to the patient himself; there is no savor of luxury about it; it is rugged; but it develops individuality in the man, and brings him into closer touch with the real simple life than he could ever get with a nurse to wait on him, and something to pander to his every whim. The Health Farm offers the real open-air treatment which ensures the best results, and invites the co-operation of the patient himself.

In the Orchard

The industrial side of the Health Farm work is of considerable importance, and will assume a larger part in the work as the institution develops. It is, moreover, of very practical value, since it enables the Farm to come to the relief of men at a time when their money is running out, and when they are confronted with the alternative of taking up situations beyond their strength or becoming subjects of charity.

Interior View of One of the Tent-Cottages

The social features of the Health Farm life have such a prominent place that homesickness and discontentment are practically banished from the camp. Up to recently the social work was done by committees elected bi-monthly for

that purpose; now the body of the residents are actively identified with it, by the establishment, with the hearty concurrence of the management, of a unique system of municipal government which promises striking results, and which is very successful in interesting the men in their surroundings and their fellows. A consumptive colony with a mayor is a novelty, but it is an established fact at the Health Farm; and nothing can illustrate better the splendid spirit of fellowship and co-operation which animates the men in their relation to one another and to the management than the fact that they have been able not only to make, but to administer their own social laws with benefit to the Farm at large. Outside the civic government there is a reception committee, which helps new men to get acquainted and receives visitors, and an entertainment club, which provides occasional diversion in the way of debates, contests, concerts, etc. A large tent, 20 x 40, the gift of New York railroad men, serves as a general recreation room and assembly hall, and is stocked with an abundant supply of reading matter, including the leading newspapers and magazines of the country, as well as a small library.

As a department of the Young Men's Christian Association, the Health Farm is, of course, conducted under Christian auspices, which provide the resident with a series of elevating influences that seldom fail to appeal to his higher nature, and prove a lasting force for good in his life. Thus moral and physical regeneration often go on side by side, without any intrusion of maudlin sentiment, or methods savoring of a house of correction.

Altogether, the Association Health Farm is unique both in its establishment and methods, and is carrying on a work really national in its scope. It has now passed the experimental stage, and has securely established itself as an enterprise of the Young Men's Christian Association capable of great expansion, and eminently worthy of the support of the community at large.

"Two irrigation ditches . . . supply the necessary water"

What the White Race May Learn From the Indian

BY GEORGE WHARTON JAMES

IV

Boy Carrying His Baby Sister

IN the treatment of younger children by those who are older, the white race may learn much from the Indian. While it must be confessed that Indian youth are cruel to the lower animals, I have never seen, in twenty-five years, an older child ill-treat a younger one. There seems to be an instinctive "mothering" of the little ones. The houses of the Hopis are built on the edges of frightful precipices, to fall from which would be sure and certain death; yet, although the youngsters are allowed to play around with the greatest freedom, such are the care and constant oversight of the little ones by those who are older that I have never known of an accident.

There seems to be none of that impatient petulance among Indian children that is so common with us; no yelling or loud shouting, and certainly no bullying or cowardly domineering.

Then, too, there is a very sweet and tender relationship existing quite often between the very old and the very young. I know this is not unusual or peculiar to the Indian, but I deem it worthy of note here. I have often seen a grandfather going off to his work for the day in a cornfield with his naked grandson on his back, and the youngster clung to the oldster with an affection and confidence that were absolute.

It should also be observed that respect and reverence are nearly always paid to age. In a council the young men will invariably wait until the old men have spoken, unless they are definitely called upon. If a cigarette is offered to a young man in the presence of his elders, he will not enjoy it until the older ones have lit theirs and taken a few puffs. A girl or young maiden will not sit down until places are found for the older ones and they are comfortably seated, and, of course, the same rule applies to the boys and youths.

It may also seem strange to some of my readers that I insist that the native Indian is inherently honest. I did not use to think so, and I know of many

Photo by G. Wharton James

Acoma Indian hospitably carrying my food supplies up the steep trail to the village above

dishonest Indians. But as a rule these are the ones that are partially civilized. They have had so many things given to them without rhyme or reason that they come to regard all things of the white men as theirs. Scores of times I have left my wagon, laden with provisions and other materials, such as cameras, camera plates, clothes, etc., and I have been gone for a week or a month. As I now write I can remember only twice that anything was taken. Once a young man, who had been to our schools, broke into a box of oranges that I had taken as a great luxury after a desert tramp, and ate several of them. I soon learned who the culprit was, made complaint against him, had him brought to my camp, and asked him why he stole my oranges. It must be remembered that it is an unwritten, but well-understood, law of the desert regions that a truly hungry man is always allowed to help himself to needful food, but without waste or extravagance, and with due care for the owner or those who may come after.

This young man claimed that he had taken my oranges because he was hungry. I gave him the lie direct; for, said I, "Had you been hungry, you would have been willing to eat meat and potatoes and bread. Instead of that you went prowling around until you smelled these oranges and then you stole them. In future, even if you are hungry, you must keep away from my wagon and camp, for if ever you touch my things again, I shall see that you are severely punished." It was a stern reprimand, yet in this case it seemed to be necessary.

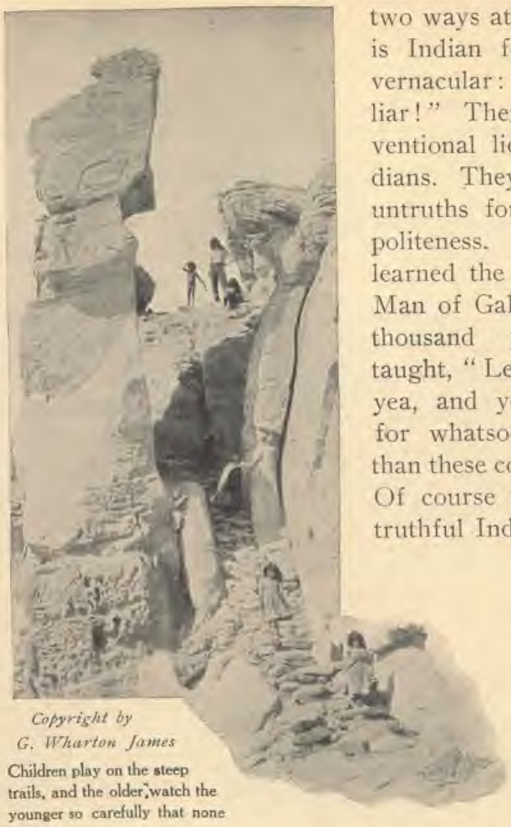
The other time that things were taken from me was when I had promised certain women and girls some calico and bead necklaces in return for something they had done for me. Foolishly I showed them the bag in which the calico was. My hostess was also to be a participant in the distribution of favors. While I was away on a several days' exploring trip she took it into her head that she ought to have the first choice, and, as I had promised the piece to her, there would be no harm in taking it. When she had made her own choice, and told of it, of course she could not protest against the others making theirs, so, when I returned to my Indian home I found the bag pretty well looted. It was not long before, little by little, the whole story leaked out. When I was sure, I told my host, and informed him that I wanted every piece of calico and every necklace returned instanter. In twelve hours everything was back in place, as if by magic. Then for several days I kept the promised recipients in a "state," for I intimated that their conduct was so reprehensible that I doubted whether I should give them anything or not. This made them very anxious, and when they "dropped

Photo by S. W. Matteson, Denver

To be polite she will tell you that the design means whatever you suggest

in," two or three at a time, I took the occasion to tell them how I resented their helping themselves to my things while I was absent.

With these two exceptions, in twenty-five years' experience I have met with nothing but perfect honesty. (No, now I remember, a small whip was taken from my camp many years ago, but when I complained, it was found and returned.) I have left camera plates by the score in boxes that could have been opened and the results of my months of labor destroyed by nothing but idle curiosity. But when I have explained that I was going away and expected everything to be untouched on my return, I had no fear, no misgivings, and invariably found everything in perfect order when I came back. I doubt whether I could leave things where the whole population of any of our American cities could get at them and find them untouched after a week's or a month's absence.



Copyright by G. Wharton James

Children play on the steep trails, and the older watch the younger so carefully that none are hurt

Another thing the white race might learn from the Indian, and it would be well for them if they did, is the virtue of frankness. If an Indian likes you or dislikes you, he lets you know. There is no pretense, no hypocrisy, and in his speech he indicates his feelings. Then, too, he is not offended by plain speech. If he lies and you tell him so, he honors you; and if you lie, he will not hesitate to say so. Making the fingers of both hands as a tongue on each side of the mouth, he says: "You talk two ways at once," which is Indian for our ruder vernacular: "You are a liar!" There are no conventional lies among Indians. They do not speak untruths for the sake of politeness. They have learned the lesson of the Man of Galilee, who two thousand years ago taught, "Let your yea be yea, and your nay nay, for whatsoever is more than these cometh of evil." Of course there are untruthful Indians, but with the major part their word is never broken. I would just as soon take the simple word of most of the Indians I know as that of the most upright and honored of the old-fashioned Southern gentlemen. And I would no more think of insulting the Indian by putting his integrity in speech on the same plane as that of the ordinary society or business man or woman of America than I would insult the lion by calling him a wolf. Strong words, but true, and capable of demonstration. Too often Indians who come in contact with the whites learn to lie, but the pure, uncontaminated, uncivilized Indian hates a lie and a liar as much as the proverb says the devil hates holy water. I shall never forget the impression made in the court-room at Flagstaff, Arizona, when Bigworten, a Navaho Indian, who had been charged with murder, and who had sent word to the sheriff that it would be useless to hunt for him as he could never be found, but

Copyright by G. Wharton James

Hopi little mother carrying the baby

that, if he was wanted, he would come in when the trial began,— I say, I shall never forget the marvelous impression caused by the proud stalking into the court-room of this old and dignified Indian, and his speech to the judge: "Though I am sore wounded, and the journey over the desert has been dreary and long, and has well-nigh killed me, I gave my word that I would be here,— the word of a Navaho that never was broken — so here I am. Do with me as you will, so that you do honestly."

Several times, with perfect confidence, I have risked my life in exploring trips, on the mere word of an Indian that he would be at such a place at a certain time with food and water. And such has been my experience that now I never hesitate to accept the simple word of any Indian who has an ordinarily good reputation.

And yet there is a peculiar twist to the mentality of many Indians that needs comment here. When a stranger is questioning an Indian about anything that she (or he) deems of no great importance, as, for instance, the meaning of a certain design on a basket, the Indian conception of politeness leads her to give you the reply your question seems to call for. For instance, if you see a zigzag design on a basket and you ask her, "Is this to represent lightning?" she thinks that is what you want it to represent, so she says, "Yes!" Ten minutes later and her questioner asks, "Is this the ripple of the sunshine on water?" Again with the same thought uppermost in her mind, that she must be polite to her questioner, that that is the answer asked for, she says, "Yes!" And so on with a dozen different questioners and all of them with a different interpretation of the same symbol, her answer would be "yes" every time. This, however, is not untruth. It is because the white questioner does not know that his is not the method of extracting truth from an Indian. He has asked for a certain answer and he has it.

(To be continued.)

Copyright by G. Wharton James
Havasupai girl learning to make baskets

"HOWEVER, it is not fitting that he who is superior to fear should be controlled by avarice; nor that he who is unconquerable by labor should be conquered by pleasure. Wherefore these things should be perceived, and greed for money shunned; for nothing is so characteristic of narrow and small mind as the love of riches; nothing more honorable and generous than to care nothing for them if you don't have them; or, if you have them, to employ them in benevolence and generosity. Ambition, moreover, is to be shunned, for it robs one of liberty, the attainment of which ought to be the highest endeavor of all men of noble spirit." — *Ciceronis Officia I, 68.*

"IF in the smallest way you are trying to help somebody, then you have become a co-worker with God, and are a part of the infinite worth of the universe."

AMONG all the fine arts, one of the finest is that of painting the cheeks with health.— *Ruskin.*

"THERE is never a pain that hides not some gain,
And never a cup of rue
So bitter to sup but what in the cup
Lurks a measure of sweetness, too."

Boys' Clubs

BY EMMA WINNER ROGERS, B. L.

BOYS are the most neglected members of the community if we take them as a class. No one seems to have any use for them but to keep them out of the way. They are noisy, always hungry, and often rude. Their natural energy, initiative, and inquisitiveness make them a source of anxiety to parents, policemen, and the average citizen who has not the imagination to see his future ruler in the restless street boy. And the number of them is something appalling to the thoughtful citizen who has a warm place in his heart for boys and who realizes the physical and moral deterioration incident to their neglected lives.

Go through some of the tenement streets, and contiguous streets of shops, any evening when the weather is not extremely cold, and nearly every corner will have its gang of boys, and many more passing on the street, in groups of three or four, on their way to join their particular gang, or to a cheap show downtown or to some other attraction on the streets or at the theaters where their hunger for stirring sights and sounds may be gratified. They flock by ages, in gangs of from six to fifteen boys, and meet regularly on certain corners, unless they happen to belong to clubs. At the corner they confer as to the evening's diversion. A few who can afford it go to the cheap theater, taking a ten-cent seat in the top gallery. The rest stand around talking, rolling and smoking the inevitable cigarette, or walk a little, or drop into a neighboring settlement hall or gymnasium. One or two may be so lucky as to have the price, twenty-five cents, of a ticket to a ball, where it is great fun to go and look on.

Anything to be out on the streets or where there is choler, movement, and cheer after grimy workshops, stuffy tenement rooms, or the dull monotony of the schoolroom. They seldom go home until nine-thirty or ten o'clock and often much later. One ever-present ambition of these groups of boys, whether

they happen to average nine or eighteen years of age, is to have a club of their own where they can go every evening and Sundays, as older and wiser people do. They are children of their generation without a doubt.

The boys of whom I am speaking are from the families who compose three-fourths of the population of every community,— the working people, so-called. We have a false way, probably due to ignorance and indifference, of looking at and thinking of life and people generally, as if the business and professional classes made up the community, and it was run specifically for their benefit; whereas they are but a small fraction of the people, and the chief concern of the community is, or ought to be, with the large majority who make up its population, and to whom life is a serious struggle nearly always.

These boys live on the streets in their leisure, partly because their tenement homes are cramped and crowded. They generally have from five to thirteen brothers and sisters each, and their homes are four- or five-room flats in a building housing eight to twenty families. The noise, the confusion of family life under these conditions, drives the boys to the streets for room and recreation. Love of companionship and the amusement and excitement of the ever-changing street drama draw them there also, while the custom for boys, even very young ones, to practically come and go as they please, night or day, leaves them at the mercy of street contamination. When one remembers the tenderly nurtured and well-guarded lives of the boys in good homes, the wonder is how large a number of decent workingmen grow up from the tenement homes and the street playgrounds, in spite of evil environment. They do not escape contamination, early disillusion, the use of vulgar and profane language, the early habit of tobacco chewing, and smoking cigarettes and pipes, and too many fall victims to the saloon and its attendant evils; but native goodness, and home, and school, and church, and social influences bring the majority of the boys to a reasonably sturdy manhood, with many of the aspirations that tend to honorable living.

While they are little fellows, the streets are their playground, but at fourteen years of age they go to work. Working, in many of our States too careless of young human life, ten hours a day, the street life appeals to them as

Courtesy of Charities and the Commons

The Ever-Changing Street Drama Draws the Children There

a rest and refreshment and change after hard labor in factory or shop. After supper, therefore, they go out, and in summer it is easy and pleasant enough to find diversion on the streets or in trips together to other streets, or to the parks or fields or the shore.

But in winter, put their hands never so deeply into their pockets, and button the worn coats never so tight, it is cold comfort, and the corner not cheerful as a meeting place for long, and the deep problem of their evenings is how to form a club and find a place to meet every evening and Sundays, and have

Under the Viaduct

some of the associated life that other and richer people have. It is a little pathetic the joys they look forward to in establishing themselves as a club. There is practically no social life among the poor except funerals and an occasional ball, and the longing of young lives for association and enjoyment seeks the satisfaction of these natural instincts in the club.

Rent is the great bugbear, and how to get a stove and fuel, and something to sit on. Their needs are few and simple: a warm place to meet where they can talk or play games with their chosen comrades, a place in which to rally to go out for a long Sunday afternoon walk, or to see a baseball game, and to which they can come back in the evening to talk it over and nibble on some smuggled refreshments. But one soon finds out, if poor, that a place, a fire, and a light cost money. The cost is prohibitive to the schoolboys of the working class as a rule, and a heavy tax on the working boys themselves unless a large number of them join or they have sympathetic help from outside their number.

Working boys turn in their weekly earnings to the family exchequer and receive a quarter or fifty cents back as spending money. Out of this must come during the week all the indulgences, which cost money. The club, then, means to the boys a sacrifice of other pleasures, such as the cheap theater, or cigarettes, or baseball games, or cheap literature. But so eager are they for a little social life and a home feeling in their coming together, and their sense of possession and position as club members is so gratified, that they cheerfully pay over to a common fund from fifteen to twenty-five cents a week to secure the club privileges. Their club quarters must be even then a small flat, or some attic rooms, or a basement below a store.

If the settlements were twenty times

At Coney Island

as numerous as they are, it would largely help to meet this natural and wholesome demand for a social meeting place for boys. Or if the churches had not generally moved from the vicinity of the poor, they might well open their doors nightly and furnish at cost a warm, cheerful meeting place for the boys. Certain rooms in the schoolhouses might be used evenings for boys' clubs, under proper supervision, if the community was really concerned for the welfare of its young citizens. The night schools render a very valuable service, but of course reach only a few, and these the best and most ambitious, and they are open only for a third of the year. The problem is so big in our country, with its endless chain of poor and ignorant newcomers, that perhaps we demand too much of the city and its institutions. But certainly the needs of this new multitude are pressing, and no less the needs of the Americanized working people who are struggling to maintain American standards of life in spite of this invasion. The community must be extra diligent if it would maintain a high standard of intelligence and morals among its young citizens.

Life and Death

So he died for his faith. That is fine—
  More than most of us do.
But, say, can you add to that line
  That he lived for it, too?
In his death he bore witness at last
  As a martyr to truth.
Did his life do the same in the past
  From the days of his youth?
It is easy to die! Men have died
  For a wish or a whim—
From bravado or passion or pride.
  Was it harder for him?
But to live—every day to live out
  All the truth that he dreamt,
While his friends met his conduct with doubt
  And the world with contempt.
Was it thus that he plodded ahead,
  Never turning aside?
Then we'll talk of the life that he lived.
  Never mind how he died.

—*Ernest Crosby, in The Standard.*

"The Joy of the Wilds"

BY WINIFRED BENNETT

THE sun shone through the broad windows of the brick Annex, on rows of cotton-stoppered test-tubes, jars of alcoholic specimens, microscopes, and the many other things of a laboratory. A broad-shouldered, vigorous young woman was working over a drawing when the door opened to admit the postman.

"One from headquarters for you, Miss Carlton."

"Ah! Thank you!" and cutting the flap with a scalpel she read—

WASHINGTON, D. C.
Bureau of Mycology, Dept of Agriculture.

Miss Johanna Carlton,
Room 414, Annex.

MY DEAR MISS CARLTON: Acting upon my recommendation, the Department has decided to send you to the south shore of the Upper Peninsula of Michigan to complete the identification of the fleshy fungi upon which you made so noteworthy a report during your vacation last summer.

Knowing the locality, you will be much better prepared to undertake this work than any one whom we could send. Should you feel, however, that the task involves too many

hardships in that wild country, I wish you to feel at liberty to refuse the appointment, as it will in no wise affect your position here. Your salary will be one hundred dollars a month, transportation furnished, with whatever outfit you see fit to select from the laboratory, and you will start as soon as the ice leaves the lakes open for transportation. Let me know your decision at once.

JOHN STEVENS, Ph. D.

"Hump! like the rest of them, he thinks a woman can't rough it," and the girl smiled a grim, wise smile.

"If the Doctor could just guess what all this means to me, he might look at it differently" — she said, to the microscope.

"And a hundred a month. That's as good as a thousand in the woods," she continued — to the test-tubes, this time.

"Now! Teddy shall get well in spite of all the doctors and physic in Christendom," and she thumped the table joyously until all the test-tubes bumped their wooly heads, and the microbes in them shrank in fear into their gelatin cultures.

It was a very dignified and quiet young woman who left the laboratory, but an entirely different one as regards behavior who, a half hour later, burst into a room at the top of a Washington boarding-house, occupied at her entrance by a tall, pale young woman, busy with her papers.

"Teddy! Teddy!" she was crying. "It has come; it really has! In a week's time you and I will be on our way to the north. Think of it! Out of this boiling, broiling, dusty atmosphere for a whole summer, and up where you'll get your health once more."

"What's up now, Johann?" asked the worker, without raising her head. "Lottery tickets, or a prize competition?"

"Neither, you old scoffer. It's the real, bona fide thing. The chief has

"The steady 'put-put' of the exhaust echoed over the quiet waters"

sent me up to the southern shore of Racquette Bay to study fungi for the summer, and you're going along. No, I don't care what you say; you've got to go. My salary continues, and that's more than enough for two in the back woods. Moreover, think of the material you can get.

"Now, Teddy, listen, we will build a little house down on the shore just big enough for the two of us, and the waves will sing us to sleep every night, and the pine trees will murmur their world-old, mysterious tales until even you must sleep. There will be no more doctors, dear,— just sun, air, and water, with nothing to do but dream the whole day long, until such time as your dreams must be scribbled on paper. Such

cream as we will have, and such fruit, too; for last year when I was there we had just the finest things to eat, that came from a nearby farm."

"But, Johann, who is to do all the labor? You, even, are not strong enough to build a house, and I can not help you. Bob Roberts, you remember, was in a surveying party up there and he said the men were pretty tired of the wilds before they reached home. Besides, Johann, I might not be so well as I am here."

"Nonsense, haven't I been up there? Don't I know what I am going into? You see it isn't as though we couldn't do any other way than to build this shack. We can live in town if we must, but we won't if we can help it.

"Come, be a good girl, and say you will go, dear. Since you spoke of him, I think Bob Roberts might be able to help us get together the necessary outfit. I think I'll write him this very night. He has a launch in Detroit that I have run dozens of times, and I know he would rent it, since he is going west."

"Dr. Mackay was here to-day, Johann. He says there is no certain cure for 'pernicious anemia,' as he calls my difficulty."

"Teddy, if you will just give up these doctors and come with me into old mother Nature's laboratory, I can put your quarts of medicine and tonics to shame. It's been three years now since you overworked in college and you haven't been well since. Ted, why didn't you spend more time with me in the 'Varsity gym' instead of humping up over musty old books in the library? But I'll forgive you everything if you will just come along with me to the wilds."

"Well, Johann, since it will probably be my last chance to have an outing with you, I'll go, if you will promise not to work too hard on my account."

A week later the two girls stood on the deck of a Mackinac boat; while in the hold a graceful eighteen-foot steel launch, a tent, gasoline stove, two small trunks, and a chest of tools, all bearing the tag of J. Carlton, Racquette Bay, Mich., testified to the reality of the undertaking.

After several days on the boat and a transfer to a smaller craft, they were landed, freight and all, on a rickety lumber dock just as the sun rose out of a mass of misty clouds and gleamed redly upon the dark forests.

"What a wilderness Paradise," said Teddy. But Johann only drew in deep breaths of pine-scented air and murmured a contented assent.

"Over there by that lone, spire-like balsam, with the hardwoods back of it, is our 'home to be,' Ted," said Johann, as she watched the deck hands lowering the launch into the water.

Every one aboard this little upper lake freighter had been much interested in the two girls who were venturing into the wilds unattended by a man, but each and every number of the crew from the captain down had been helpful. One roustabout had brought gasoline for the launch, from one of the small towns, and as the work of their own vessel left them idle except when landings were made, they knocked the crate off the launch, set it up on bolsters, and, under Johann's instruction, soon had the engine running and the propeller whizzing at a terrific pace, just to satisfy their curiosity and to assure Johann that all was in working order.

When the launch was in the water, the trunks and other baggage were swung aboard and with many shouts of:

"Good luck to you, girls," the vessel cast off, leaving the two alone.

An hour later they stood on their own beach with the tent unloaded.

Johann had camped too often to be a novice at the erection of a tent, so by noon the tent was complete with mosquito-netting lining, and two hammocks with blankets, for beds. The floor was strewn with balsam tips which Teddy had found delight in cutting from the large branches Johann brought her. Only the problem of unloading the trunks and stove remained, and in time these were landed on the drift-strewn shore.

"Such trees, such depths of moss and fern"

The problem of food for that day was solved by the remains of the lunch they had carried on the boat. In the afternoon Johann walked to the farm and made arrangements to obtain eggs, milk, and fruit of the good woman, all of these to be delivered by the seven-year-old girl of the family.

These articles would form their chief food, Johann decided, for she meant to put Teddy on as nearly a natural diet as that young woman would permit. So while Johann told Teddy that a diet of nuts, fruit, milk, eggs, etc., would largely eliminate the problem of cooking, she planned well-balanced meals of cereals, fruits, and nuts, that she hoped would aid her friend more than drugs could possibly do.

During the first week the girls spent most of their time exploring and collecting fungi for the Government herbaria. Never had Teddy seen such trees, such depths of moss and fern, such masses of wintergreen. One day on a sheltered north bank they found remnants of gray snow and near it branches of arbutus that both declared the most beautiful Nature had ever produced. They made pillows of balsam, and waste baskets of birch-bark. Teddy got some flower seeds to plant near their tent, and altogether they were as happy as lovers.

One night it rained, and the tent floor was wet, indeed, the following morning. Some of the clothing encountered a part of the deluge, and the day in the sogginess of the tent was severely cold. Johann worried about Teddy, piled her with blankets, and gave her hot lemonades, but Teddy came through beautifully. The launch, however, seemed to have taken a severe cold, and refused to work, though Johann tinkered over the engine half a day.

The girls decided to explore near home that day, and started out in short skirts and rubber boots. Never was day more beautiful, or forest grander than this dark, majestic wood with its hemlocks, its giant, spire-like balsams, and, in the more open places, fair, white birches like dainty spring brides. Thrushes and vireos were busy in the tree-tops; warblers flitted busily about, and once they saw a familiar house wren dart into a knot-hole.

Johann found dozens of the bracket fungi, that live on tree trunks and whose under surfaces offer a tempting medium to every boy artist. She showed Teddy the thousands of little pin-point openings on the lower surface of these fungi and explained that these were the doors of small spare chambers. Then as they came into an old "cutting" still littered with brush, they saw a puff ball, larger than a cabbage head, just before them.

"Here is our luncheon, Teddy, dear," called Johann.

"Why, I did not know puff balls were edible!"

"Well, they are most delicious when properly sliced, dipped in egg and crumbs, then cooked. And this one shall grace our table this noon, because it is much too large to be preserved."

"Perhaps we would better return to camp now," said Johann, "as we have really gone a long way this morning."

On the way back, Johann explained that she would have to go to market during the week as they needed a barrel of gasoline for the launch. Teddy became eager at once, for to her the bay was a never-ending joy.

"Let's go to-morrow, early in the morning, before the bay gets rough," she begged, and Johann agreed at once.

The girls were up with the sun next day and ready for the trip to the city before the chill was gone from the air. But the sunshine was so warm and the water gleamed so brightly that they decided to start at once, eating their breakfast "on ship board." The meal consisted of strawberries, hard bread rolls, nuttolene sandwiches, and hard-boiled eggs, with cold spring water to drink. Both girls declared they had never enjoyed any other meal so much as this one, where the calm blue bay stretched before them, with the great golden pathway of the morning sun breaking into a molten trough in front of their little craft; while the steady "put-put" of the exhaust echoed over the quiet waters.

Some days later a neighboring farmer delivered their barrel of gasoline and looked over the camp.

"Say, be you the toad-stool lady?"

"Yes. Why?"

"What ye doin' it fer?"

"The government."

"Wal Uncle Sam shure has some high-ferlutin' notions, but this thing of sendin' a woman out to collect toad-stools seems like purty small pertaters to me. How much do you git, now?"

"Oh, about twelve hundred dollars a year."

"Wal, don't that beat all! What's the sense in it?"

"Well," answered Johann, "many people like to eat fungi, and we publish bulletins of the poisonous and edible varieties for these people. Others are raising 'toad-stools' as you call them, for the city market, where they sell for from forty to seventy-five cents a pound. But the government is interested in fungi because of their destructive growth on timber and fruit trees, and is endeavoring to find a means for killing such forms as destroy valuable products of the country. Look at that tree trunk over there. A small piece of bark was knocked off by a falling limb, and from this old wound a little shelf-like fungus is growing. That fungus is simply the fruit of a plant that is growing into the heart of the tree and gradually destroying it."

After further explanation by Johann, the farmer admitted her defense of the Agricultural Department to be logical, and said as he left the camp,—"Wal, young woman, I admire your spunk, coming up here all alone, and if ye ever git stuck, jes' call on me to help ye out."

The days passed. Teddy grew brown and sturdy, and Johann reveled in her wonderful "finds."

They found the deadly *Amanita* whose poison is so insidious that some days may pass before it attacks the nervous system and kills its victim.

Teddy discovered that most pink-gilled fungi and practically all black-spored ones were harmless, and these became additions to their regular meals, as parts of gravies, soups, or sauces.

Meanwhile, Johann collected and dried material throughout the season. She found the rare *Annularia,* and one day came upon a *Lactarius* with another fungus growing as a parasite upon it. These specimens were most carefully prepared and forwarded at once to headquarters for fear some damage might come to them.

August passed with its beautiful days and cool evenings, filled with the songs of insects where once the woods had throbbed with the melody of bird song. Early in September, Johann found great patches of the excellent black-spored fungus called the Shaggy Mane, and this accentuated the coming autumn, for the species is essentially a fall form. The same day Teddy brought in branches of flaming red maple leaves, and as the girls looked out across the bay, they knew the end of this vacation was very near at hand.

"Johann, this is the most beautiful place in all Michigan," murmured Teddy. "Is there not some way in which we could buy this little wooded knoll and the spring?"

"I understand that this is still State land and open to colonists, and I think we could manage about the residence requirements, if you really wish to buy here."

So in time the deal was made, and in the shortening days the collections were packed and camp "struck." On the last morning, as Johann dove from the end of the dock, into the cold northern water, as was her daily habit, she was surprised to hear a great splashing behind her, and was startled to see Teddy plunge in, full length, and then rush out and up the beach at a pace Johann could not overtake. When they reached the camp, all breathless and panting, Johann noticed the vigorous strength of Teddy's muscles as she dressed, and the healthy reaction following the bath, and knew in her heart that Teddy had found health as well as happiness in the wilds.

"The girls . . . knew the end of this vacation was very near at hand"

Investments in Health

BY MRS. E. E. KELLOGG

WITH Nature in the blithe mood of June,—

"When brooks send up a cheerful tune,
And groves a joyous sound,"

it is no hardship to heed the oft-repeated mandate, "Live out of doors."

This is an opportune time to cut loose from health-restricting indoor habits and get into closer touch with a natural, simple way of living.

It is evident that the Creator intended man to spend his time in the open air, since his first home was a garden, and his first business an out-of-door occupation.

With every little child life begins anew, and the natural tendency for open-air living asserts itself. The acme of bliss for the child is to get outside the confines of apartments and dwellings, where he can walk on the grass, dig in the dirt, dabble in the water, and feel the glow of the sunlight and the freshness of the breeze. Man, the child matured, though disciplined by years of metropolitan existence to live indoors, still often finds within himself a natural longing to exchange the prison walls of the house for a canopy of murmuring trees.

Scarcely would one make a better health investment than some simple manner of living out of doors during the next few months. For those whose circumstances admit there is no more enjoyable way of becoming at one with Nature than to "camp" in some quiet, pleasant spot beside a wooded lake or stream in which one may take a morning dip, and swim and boat to heart's content; or near some grand old woods where ferns and flowers unmolested grow

A Bedroom Tent in the Back-yard with Wire Screen Frame
(A Connection with the House Lighting System Made Possible the Lighting of the Tent by Electricity)

Screened Bedroom Tent, Showing Screened Tree-Top Bungalow for Outdoor Sleeping

in wild profusion to tempt one forth upon long tramps hunting for new treasures of leaf and blossom.

In selecting a location for a camp it is important that it be near a good supply of pure drinking water. The tent (preferably one with a roof or fly) should be pitched over dry ground having a natural drainage, and so placed as to be open to the south breezes and the eastern sun. To protect the occupants from mosquitoes, flies, and other insects, there should be a curtain of netting for each opening. Additional screens of netting to cover the bed or the hammock while one sleeps, will be found a precautionary measure of value in many localities.

A floor of boards slightly raised from the ground so that the air can circulate underneath it, thus preventing much accumulating moisture, will add to the cleanliness of the interior and the comfort of the occupants, especially in times of rain. If such is impracticable, a ditch dug around three sides of the tent to convey away the water which may fall from the roof of the tent is desirable. If no floor is to be used, it is advantageous that the ground be leveled off and well pounded down.

As to other equipage the needs will vary with circumstances and location. In general, the less luggage one carries, the better. Comfortable beds may be made where pine or hemlock is obtainable by placing thick layers of boughs so that the leaves will overlay the top, then covering with a thin mattress or doubled blanket. The boughs admit a passage of air under the mattress and also protect it from the earth's moisture. Fresh layers of boughs should be provided very often, and to gather the twigs for one's daily bed affords a pleasurable and wholesome exercise.

A small sheet-iron camp stove is almost a necessary accessory for cooking and heating purposes, although a small blue-flame oil stove or even a pocket alcohol stove may serve the purpose. One who has tried it says: —

"In the absence of those appliances, a trench about twelve inches wide and eighteen deep, and eight feet long, in which to build a fire, makes a very convenient camp stove. The vessels used for cooking can rest on the edges of the trench, thus exposing them to the fire, and serving the purpose well."

"To warm your tent, dig a hole in one corner about a foot and a half deep, and the same in diameter. Heat medium-sized stones as hot as can be made in a fire outside; put them in the hole with smaller ones to fill in; turn a galvanized bucket over them and pack earth tight around the bottom of the bucket, and you will have a warm, comfortable stove."

A small steam cooker or one or two double boilers are advantageous if much cooking is to be done, as they help to economize stove space. However, one of the greatest advantages to be sought in camp life, is to do away with all possible work over a hot stove in warm weather. A fresh-air-sharpened appetite is easily pleased. Everything tastes good when eaten out of doors. The simplest, most nutritious food that can be prepared with the least cooking, may well be the rule.

Sanitarium health breads packed in tins so as to be impervious to dampness, protose, malted nuts, with fruits, berries, and the fresh eggs and garden vegetables one can generally obtain from near-by farmers, provide the foundation for delightful and wholesome bills of fare, necessitating very little labor to make ready. For refrigerator purposes, a box sunk in the overflow of a spring or in the moist sand may be used.

One's dress for such occasions should be a freedom suit,— free from the trammels of fashion, and free from constric-

tion of any organ or portion of the body.

It is quite as important that care be observed in relation to sanitary measures when one is camping as when one is at home. Dish water and waste water should not be thrown upon the ground near the tent. For the disposal of garbage, a good plan is to dig a hole three or four feet deep, some distance from the camp, into which the scraps and refuse may be thrown, and at the close of each day entirely covered with a few shovelfuls of fresh earth.

Personal hygiene should likewise be maintained. The cold morning bath should be the rule. A sun bath each day, ample exercise, simple food, and abundant sleep, added to the intimacy of Nature, makes a camp life a never-to-be-forgotten joy.

Not to every one comes such an opportunity for camp life, but, happily, one can get as much pleasure and quite as much benefit from living in a tent in some shady corner of a well-kept back yard or under the branches of some near-by tree at home. The house and its cares may be left behind, and one's domestic matters arranged upon the same simple basis as if one were miles from town. A tent with framework and wire screening like the one illustrated, admits of the possibility of having homelike environments out in the open air, and makes most delightful summer quarters for outdoor life.

Out-of-door Life at Home

BY KATE LINDSAY, M. D.

NEARLY fifty years ago Florence Nightingale described the ideal hospital bed as a hammock hung under a tree, with an umbrella to keep off the sun; for only thus could the air inside the hospital equal in purity that outside.

To plan for outside home life means making provision for sleeping out of doors and for the daily work to be done outside of the restrictions of four walls.

In a recent article in the *American Review of Reviews* entitled "The Visiting Nurse as a Social Force," it is stated that the nurses employed by the city to work among the poor for the stamping out of tuberculosis exert all their resources in finding out-of-door bedrooms for this class of patients, always, if possible, separating the infected from those who as yet show no active evidences of the invasion of the great white plague. The nurses stretch awning over the roof to keep off rain and [illegible] and utilize all piazzas, broad window ledges, and even fire-escape platforms for sleeping apartments for this class of patients, who are so many in number that neither hospital nor sanitarium accommodations are equal to meet their need for an out-of-door life. The sadness and the failure of this most worthy philanthropic enterprise lies in the fact that it still leaves the other members of the tenement family to live in the foul, infected house air, and in an environment where they will most certainly sooner or later also become tubercular.

Instead of waiting for anemic store clerks, bookkeepers, stenographers, and factory employees to become the so-called shunned T. B.'s before turning them out-of-doors for the night, it would seem a much wiser economy and much more likely to eradicate tuberculosis to have them sleep in the open air before the invasion of their bodies with an army of

rapacious, almost invincible, microbes.

The dweller in the slums is not the only foul-air victim; neither is tuberculosis the only contaminated-air disorder. Foul-air dangers lurk in the isolated farmhouse and artistic suburban residence, and even the "stately halls with frescoed walls" of the millionaire are liable to foul-air infection, and thus the life of the pampered child of wealth and fashion endangered. Bacteria and bacilli are no respecters of persons. Downy beds of ease and tapestry-adorned walls, overheated and unventilated, are just as productive of foul-air disorders if close and unaired as are the humbler apartments of those possessed of but a scant remnant of the world's wealth.

The success of any scheme for human betterment, morally, mentally, or physically, depends upon securing human cooperation by convincing the intellect of the truth or falsity of any widespread belief. The almost universal notion that night air is dangerous has predisposed, more than any other one cause, to the shutting of every door and window at sunset to keep out malaria. Notwithstanding the fact that all air analyses show that outdoor night air is much purer than day air, the old fear of night air still remains, and is responsible for much infection from foul air, because outdoor and indoor workers in summer and winter — all alike spend their sleeping hours in ill-ventilated bedrooms. After false ideas about the harmfulness of fresh air are eradicated, plans should be devised and utilized for arranging outdoor sleeping apartments; plans should also be devised for keeping the body warm in cold weather without an overamount of bedclothing; and for the health and convenience of the millions of middle class and more or less humble domestic home workers, provisions should be made for doing the housework as much as possible out of doors, away from the kitchen heat and odors of cooking food. Out-of-door recreation for the family should also be provided for. Could all sedentary workers spend the seven to nine hours of sleep in a clean, outdoor atmosphere, many of the evil effects of indoor sedentary work would be neutralized. The shop, office, or factory employee, after sleeping in the pure night air, would awake invigorated for the day's demands and duties. Beginning the day aright, with a keen normal appetite for healthful food, he would be able to utilize his working energies without either structural damage to the tissues, or intellectual or moral degradation.

Houses built with broad verandas, ample enough to allow plenty of space for outdoor bedrooms, kitchens, and dining-rooms, and a clean, well-arranged back-yard for warm-weather living and outdoor sport, could be devised for the use of all farmers' families and village and suburban residents with more or less ground space and houses of not more than two or three stories. For the city tenement there will be need of clean courts and the utilizing of roof space and verandas. Every projection wide enough for a bed can be used for sleeping quarters, not only for the tubercular, but for the uninfected. Such projections need a firm foundation, and a high strong railing to prevent falling over into the street; wire screening should be used to keep out biting insects in hot weather, and awning should be put up to keep off rain or snow, and secure the needed privacy. The question of keeping warm in bed out-of-doors in cold weather is not yet satisfactorily solved. An overamount of covering is not advisable; while often failing to keep the body warm, it impedes the circulation and respiration by its weight, as well as hinder-

ing skin ventilation, and so contributing to the retention of surface waste excretions. Every one knows the comfort of well-aired, smooth, and freshly made beds, and how the restless invalid becomes quiet when changed to such a couch. Fresh air from mattress and covering replaces the foul atmosphere saturated with body excretions, and revives and soothes the debilitated skin surface, which needs a pure, clean atmosphere as much as the respiratory organs need fresh air to inhale. The writer, who has been making some experiments in sleeping out of doors, both in summer and winter weather, believes there is a solution of this problem in the utilization of the heat storage system just now being experimented upon for culinary and motor purposes. A layer of felt or some non-conducting fabric laid over the bed springs, and over that an ordinary wool mattress heated thoroughly on the register, forms a very satisfactory heat storage apparatus, as the writer can testify from experiment on zero nights. The cotton top mattress and upper bedding need only be warmed and the bed made up just before occupying it. Important as is sleep to the human race, but few experiments have been made to ascertain normal, sleep-inducing conditions. The temperature and purity or foulness of the bed air surrounding the body during sleep has never been scientifically studied; hence there are but few recorded facts in relation to proper sleeping environment. All know that old, soiled, hard-packed mattresses and comforters, and an illy made bed and soiled linen, combined with a dirty skin, make sleep unrestful. We can all appreciate the discomfort of a mackintosh cloak and rubber shoes, especially indoors. We also know the comfort and restfulness of a well-made, well-aired, clean bed, but it is surely equally important to have the airing going on when the bed is occupied. It is all-important that the bed covering should be chiefly clean air strata, which are good heat non-conductors.

Out-of-door living is only in an experimental stage, and aerotherapy in its infancy, and no doubt many more therapeutic uses of air will be made in the future. The air bath may take the place of the water bath many times to reduce fever. As a sedative, a tonic, and for many other purposes, it is easier to give a cold air bath than a cold water bath in the home. People are slowly learning that out-of-door life is health-promoting to all classes of persons because of the cleanness of the air. The ancient Romans erected their theaters, temples, and greatest public buildings without roofs, only an adjustable canopy, as can be verified by the Colosseum and Pantheon in Rome. The houses were built square around open courts, mosaic paved; and amid fountains, palm trees, and flower beds these old pagans spent their leisure time in the sunshine and fresh air, and reposed on their couches at night. The Forum was a great paved open court surrounded by roofed-over colonnades. It served for many purposes; all the public meetings were held there, and all the legislative and judicial proceedings were conducted out-of-doors, as well as all marketing and other business. The open-air life is just as important in the United States of America as it was for those ancient conquerors of the world. Our climate in many States is even more favorable for open-air life than is that of Italy. We have our porches and back-yards to take the places of the covered colonnades and open courts. We may not be able to adorn the back-yard with fountains, statuary, and palm trees, nor support our porch roofs with fluted marble columns; but the lawns can be well

kept, and the flower beds gay in the summer time, and the back yard as well as the front kept clean and sanitary at all seasons of the year,— a place suitable for daily open-air work and recreation through all the warm season of the year, and the porches may be used for sleeping apartments all the year, as well as for work rooms and dining halls at least parts of each season.

Swimming for Health Culture

BY ADELE LEONTINE SINGER

WHEN the ancient Romans wished to express extreme contempt for a man's ignorance, they exclaimed, "He can neither swim nor write!" In Roman estimation, swimming came first, because, forsooth, of what avail is writing to a drowning man? They esteemed swimming as the best exercise to develop strength, courage, and beauty of body, and considered it indispensable to a good education. They believed in the symmetrical development of the body; and swimming is the very "cream" of exercises for bringing about this desired end. As a means to the prevention and cure of disease it has not received nearly its just share of attention. There is hardly a chronic ailment which it would not benefit. First and foremost among its inestimable advantages is that it is an absolutely symmetrical exercise; that is, the entire muscular system is employed in its use, in the same manner with both sides of the body. The limbs, the chest, the abdomen, the back; in short, the whole body is thoroughly exercised in correct swimming. It is at the same time the safest of exercises in that there is no danger of straining any one muscle from overuse, of developing one side or one limb more than another, or of injuring internal organs.

Fig. 1. Rest position

Fig. 2. Spreading out the arms until they form a straight line with the shoulder

Let us examine the movements required in swimming. First, the position of the swimmer in the water: He should lie flat on his chest and stomach, the legs perfectly straightened, heels touching, the arms extended full length before him, palms touching, fingers and thumbs close, so that the hands will form good oars by which to push back the water and thus propel the swimmer. It requires very little motion of the right kind merely to keep on the surface of the water, and it ought to be the duty of every parent or guardian of a child to instruct the little one as soon as possible in the simple art of sustaining itself in the water. Untold accidents would thereby be prevented, and the now dreaded liquid would no longer be regarded so much in the light of an enemy to life.

God intended us to swim; in proof of

which assertion I would cite the numerous instances in which man in primitive conditions sustains himself in the water without any difficulty the first time he

Fig 3. Flex the knees by drawing them up under the abdomen

is thrown into it by accident or by the design of an enterprising parent. The South Sea Islanders are all magnificent natural swimmers, and as much at their ease in water as on land. Thus we see that civilized man has to a great degree lost the inestimable benefits of the water so abundantly provided by the Creator. Swimming with us, instead of being the natural exercise for practical, every-day use, has degenerated, if I may so express it, into an art or a science which most of us acquire only after long practise. Let not this statement, however, discourage any one from attempting to learn swimming, as one can enjoy its immense benefits long before he becomes an expert.

To revert to the movements necessary in swimming: After assuming the correct position, let the beginner practise first the arm movements. The chest should be well lifted, and should never be quite deflated of air; I can not too strongly emphasize the necessity of deep, full, regular breathing with every motion in swimming. If the chest is well lifted and the abdomen drawn in, the body forms a bow which is canoe-like in its buoyancy. Now separate the arms by turning the palms away from each other and spreading out the arms until they form a straight line with the shoulders. Keep the fingers firmly against each other all the time. A deep inspiration should accompany this movement. Now bend the elbows until the hands meet under the chin, the fingers pointing forward, having turned the palms until they meet again; then extend the arms forward and the original position is reached.

These movements are made in three counts. Rest position is the starting-point, and is always reached on count three. On count one, the arms are spread as first described; count two, hands under the chin, palms touching; on count three, the arms slant forward with energy. It is very important that at this last count there should be a pause for rest. If the swimmer breathes well, he can lie on the water absolutely motionless for a short time and take a rest between strokes. This rest is the secret of the easy, graceful, enduring swimmer. It is a fact that when a thing is done easily and gracefully, it is done right.

Fig. 4. Kick the feet out toward each side with force

This is a natural law, and applies to any physical exercise. A good swimmer is always a graceful swimmer.

The leg motions are especially valuable for those who have inactive digestive organs. They induce a thorough, yet not violent, exercising of the abdomen, and undoubtedly assist in the restoration of prolapsed viscera to a proper position. Practise this motion, at first bracing the body on a board or against any firm place by leaning on it with the hands.

Lie perfectly flat, chest well lifted, breathing deeply with the movements of the limbs. First movement, flex the knees by drawing them up under the abdomen, not simply bending the knees and throwing the feet up, a mistake made by all beginners and poor swimmers. Second movement, kick the feet out toward each side with force, straightening out the limbs and bringing the heels together. At this point the body is perfectly straight, hands touching, heels touching. Upon the force and decision of the shooting forward of the arms from under the chin, and the kicking back of the legs from under the abdomen depends the length and effectiveness of the stroke. A good swimmer should make a stroke as long as his own body. The best way to teach a person to swim, is to give him at first what may be called a "dry" lesson; that is, have the movements performed out of the water first, then suspend the subject by a rope fastened to a belt around the waist and let him practise the movements separately in the water, being very particular about the breathing and the rest at count three. In combining the leg and arm movements, the arms start at one, the leg motions coming in with counts two and three.

When well done, swimming is an art. It is not to be learned in a week, but any one may have all the physical benefit of the exercise practising in shallow

First arm movement

Second arm movement

water with a life-preserver at first, and gradually weaning himself from this, learn to support the body in the dreaded water, which is really the greatest means we have to health and life.

Many make the great mistake of remaining in the water too long. A weak person should stay in not more than five minutes the first time, gradually increasing the time to fifteen minutes, which might be the limit for any one below normal vitality. The writer never occupies more than twenty minutes in fresh water or half an hour in salt water, and the entire time is spent in vigorous swimming, accompanied by breathing that fills every cubic inch of lung capacity. Years of this exercise have developed a chest far above the average

in breathing power, and assisted wonderfully in the development of the entire muscular system.

The mental effect of swimming, on invalids able to practise it, can not be surpassed. The exercise is so absorbing and interesting that "peristaltic woes" are forgotten for the time, and those

Third arm movement

who have slack appetites and slow digestion will receive marked benefit.

Swimmers have a poise and carriage of body, a self-control, and a courage gained so largely by no other exercise. It is of course best to learn in childhood or early youth, but I counsel every one, no matter what his or her age may be, if able to do so, to pursue the art of swimming even "if it takes all summer." Never hold the breath when learning to swim, or raise the arms out of the water, or struggle. Try to believe that you are lighter than water, and that unless unnatural actions prevent, it is bound to hold you up, just as it would a small vessel built on right principles.

In closing, I would lay special stress on the importance of swimming for women. Take off your corsets and heavy skirts, never to put them on again; beautify your figure and put life into your flabby muscles by a daily practise of swimming.

Stay in the water until the exercise has put you into a glow, then dry rapidly, finish the good work by a short walk in the sunshine, after which lie down for a short time. Do this steadily a few months, and you will indeed be a "new woman" in the right sense of the word.

O GRACIOUS Mother, whose benignant breast
Wakes us to life, and lulls us all to rest,
How thy sweet features, kind to every clime,
Mock with her smile the wrinkled front of time!
We stain thy flowers,—they blossom o'er the dead;
We rend thy bosom, and it gives us bread;
O'er the red field that trampling strife has torn
Waves the green plumage of thy tasselled corn;
Our maddening conflicts scar thy fairest plain,
Still thy soft answer is the growing grain.

—*Oliver Wendell Holmes.*

Camp Life

BY E. E. ADAMS

NATURE is everywhere inviting the world-weary who have been "long in city pent," to her maternal bosom for rest and recuperation. She is continually calling us to —

"Leave the hard heart of the city, with its poverty of pity,
Leave the folly and the fashion wearing out the lives of men;
Breathe the breath of life blown over upland meadows white with clover,
And with childhood's clearer vision see the face of God again."

This Song of the Out-of-Doors, "The Call of the Wild," becomes increasingly insistent as the need for a return to a natural life increases. "It is at once a promulgation and a recognition of the great law of preservation."

The instinctive impulse to heed this call has of late years led many to forsake their heated house cages during the summer months and pitch their tents wherever they could find a convenient camping spot nearer to Nature's heart. The tent colonies outside the principal cities, established primarily for the open-air treatment of tuberculosis, have demonstrated the feasibility of tent life for a protracted period, and of its marvelously beneficial effects.

When one is camping out for the whole season — from late spring until early autumn,— it will pay to take pains to secure the most comfortable conditions possible. The demand for tents has led to a large variety of comfortable and hygienically constructed kinds being placed on the market, and a moderate sum will purchase one which will be as convenient as an ordinary bedroom. For protection from the weather a double-walled tent is desirable.

The floor of the tent should be raised a foot or two from the ground to ensure ventilation beneath, which will keep it dry and fresh. For additional warmth, the floor may be covered with the closely woven mats used on the similarly constructed floors of Japanese houses.

The Oriental sleeping arrangements — a mat spread on the floor — are also the most convenient for tent life. But unfortunately most Westerners have been educated into the idea that orthodox repose can be taken only at an elevation of several feet from the floor, and in the midst of a cumbersome and insanitary accumulation of mattresses, pillows, comfortables, etc. "It would surpass the powers of a well man nowadays to take up his bed and walk," says Thoreau, "and I should certainly advise a sick one to lay down his bed and run." Few invalids, or healthy people either, however, are ready to forsake their beds in this summary fashion. A compromise may be effected by the use of the folding camp bed constructed of wood and canvas. If the tent is required for use

during the day, this can be folded up and set aside, while the blankets and sheets are stretched out on a line to air in the sunshine and wind. If the tent is used only as a sleeping apartment, a small iron bedstead with springs will perhaps be most suitable.

The necessary furniture should be of light construction, and the plainer and simpler, the better. A washstand may be obtained, fitted with mirror and towel rack, and having space for all toilet articles, which may be closed up and converted into a convenient table for use during the day.

When the camping covers only a few weeks, the conditions and style of living will of course be more primitive. If the tent is not a double-walled one, take a few strips of extra canvas to put on the sides most exposed to the weather. They should be stretched a few inches from the tent as a protection from the rain. Plenty of rope will be needed, not only for fixing the tent, but for putting up lines — one within the tent for hanging up the clothing at night, and several without for the airing of bedding, and the drying of bathing suits, damp clothing, dish towels, etc.

A writer in the *Outlook* recently sang the praises of the dunnage bag as a substitute for a trunk when going on a camping excursion. This is "a cylindrical canvas bag, four feet high, with a round bottom and an open top which can be lashed shut with a cord. It holds as much as a steamer trunk; you can't break it or tear it; you can stuff it in any size and shape, and it adapts itself as the boa-constrictor does to the lamb he has just swallowed. In camp it was our bureau, our seat when the ground was wet, our back when it was dry, and always our pillow at night."

Plenty of blankets and warm underwear should be taken, as the nights in the country are likely to be cold even in the hottest weather. The city houses and streets store up an incredible amount of heat, and nights which in town are oppressively hot may be fresh and bracing in the open country. A thick sweater will be found a most acceptable garment for both men and women. A rubber sheet will be useful for the bed.

A camp stool or two will be found useful, but seats are not indispensable, as these can be improvised from tree stumps and mounds.

An adequate equipment of dishes and cooking utensils is necessary in order to avoid discomfort at meals. There is no good reason why things should not be

done " decently and in order " in camp, as well as in the home life. The washing up, done out of doors, with the lake or river for a dish pan, is a simple and enjoyable process. The dishes should be of granite or agate ware. Take a fair supply of dish towels and dish cloths.

A sheet of white oilcloth makes a tablecloth which can be kept scrupulously clean with very little trouble. A box of paper napkins, which can be burned when soiled, will do away with the necessity for other table linen.

Provision must be made for damp and cold weather, which the camper is liable to experience at any season of the year. On wet days when the camp fire is not available, acceptable heat will be furnished by a portable kerosene stove, which may also be used for cooking.

A lantern for use outside the tent at night, and a good reading lamp for use within, are necessary.

The clothing should be simple and plain, but neat and suitable. The camp ground is no place for draggle-tailed skirts, nor for the wearing out of disreputable finery. Short skirts that will not readily soil, and shirt waists of varying thickness, will be found the most suitable garments for women; and for men, the knickerbocker suit of rough serge or tweed, with thick golf stockings. One or two pairs of strong, easily fitting shoes should be included in the camp wardrobe, as there is sure to be considerable walking.

Spruce, fir, or hemlock trees on the camping ground will furnish the best material for bed making. The camper previously quoted gives a detailed description of the best method of making the bed from hemlock boughs. " For a bed, which has to provide for itself springs as well as mattress, you can not afford to lose the delicious elasticity of the boughs by breaking them up. We kept ours three feet long, and when we had collected what seemed to me a pile fully twice as large as would go into the tent at all, Jonathan began to plant the bed—literally to plant it. He started near where the head was to be, and prodded the cut end of each bough down firmly into the earth, leaving the feathery ends inclined a little toward the head. When he reached the foot, our bed was represented by a dense mass of tossing green spray nearly three feet high. On this he threw smaller branches, for extra padding, though nothing less than a foot long, for the little twigs sift through at once, and do no good. Finally, he spread a rubber sheet (rubber side down, of course) over the whole, and tucked its edges under the rebellious mass of fragrant boughs; then the blanket over this, and there was our bed. It needed airing and shaking up now and then, like all beds. We often found the under side of our rubber sheet soaking wet in the morning, and the boughs overfragrant from the condensed moisture; but we hung up our sheet, turned up the tent flaps, and let the breeze blow under."

Dish water and slops of all kinds should not be emptied continually in the same spot, as in this case the ground is likely to become offensive in a short time. A judicious distribution of the water, or carrying it some distance from the camp before emptying, will avoid this nuisance.

It has been said of camp life that it too often merits the description given of Ceylon's Isle,—

> " Where every prospect pleases,
> And only man is vile."

There is no good reason why man's sojourn in his natural habitat should defile the face of Nature, any more than that of any other animal. Some simple precautions are all that is necessary in order to avoid the unwholesome features of ordinary camp life.

A Useful Out-of-door Exercise for Women

DOING something that is of use enhances the value of exercise. A walk with a purpose invigorates one far more than aimless sauntering through fields and lanes, although the distance traversed be the same in both instances.

The manual labor necessitated in the keeping of a house in order, the sweeping, bed-making, and other varied household tasks, affords most beneficial muscle drill if done with proper care as to body poise and individual strength. Said Mrs. Harriet Beecher Stowe, "A woman can not work at dressmaking, tailoring, or any other sedentary employment without enfeebling her constitution, impairing her eyesight, and bringing on a complication of complaints; but she can sweep, cook, wash, and do the duties of a well-ordered house with modern arrangements and grow healthier every year. The times when all women were healthy were the times when all women did housework a part of every day."

The one drawback with housework as an exercise is that it is work which must largely be done in a house, within confines of walls instead of out in the open, in the free fresh air. Some purposeful exercise out of doors is a great desideratum.

Gardening has had its attractions for womankind ever since the world began. It is an occupation both health-giving and educational, and one is indeed fortunate who is so situated that she may spend hours each day engaged in some form of this most fascinating employment.

Not every one owns space for either a vegetable or a flower garden, but a majority of those who own their homes in the country or suburban towns and villages have more or less of grassy lawn around the house, the care of which can furnish profitable exercise for mind and muscle. The trimming of shrubs, the weeding, the sprinkling, the training of growing things, — all contribute to health and strength. One of the chiefest and most frequently demanded tasks, the cutting of the fast-growing grass with a lawn-mower is an all-round exercise to be coveted by any woman desirous of beauty and vigor.

A light-running mower should be used, and kept in perfect condition by being frequently oiled and cleaned, so that no over-strenuous exertions are necessary. To obtain the maximum benefit from the exercise, the dress should be short enough not to interfere with freedom of movement, and loose enough not to hamper full breathing. If the grass is to be cut while the dew is on it or when the ground is damp, rubber boots are a valuable acquisition to one's outfit.

Keep in good poise, and push the mow-

er with the whole body, throwing shoulder force into each movement. Do not attempt too great a feat at first. Increase the stent from day to day. Rest when wearied, and change occasionally from one task to another, as from grass cutting to raking with its long arm movement, thus bringing into play a different set of muscles.

E. E. K.

Flies as Carriers of Disease

SEEMINGLY the most puzzling problem may, after all, be the simplest; the most subtle disease the easiest controlled, after once we lay bare its causative agent. We actually turn up our noses at yellow fever now, for all the interest is gone. Puh! the mosquito; why, how simple! And typhoid fever? why, we know all about that! The plague, malaria, and dengue? Insects—flies, mosquitoes, fleas! We know all about that, you will say; but, even though you know, let me ask you, how do you apply such knowledge? How many of you make yourselves active in the suppression of diseases conveyed by insects? As I look into your faces, I doubt if there is a single man among you free from guilt, free from running an open incubator for the propagation of disease-carrying flies. I refer to your stables, where the manure is thrown out in a pile and left to answer nature's means of hatching out the fly. And, being guilty of this public nuisance yourselves, I am certain that not one of you has ever written a warning word or raised a protesting voice against this affront to common decency.

I shall not weary you with a description of the genealogy of the fly or of his anatomy, or his nearly human instincts of liking company. You know all about him — how he follows you to the table occasionally, in spite of the most careful housekeeper, tasting your coffee, taking a bath in the cream, playing Bre'r Rabbit and Tar Baby in the syrup. He's a very domestic, playful creature, the fly, but he's not clean; he is dirty, this insect is. Born on a dunghill, his nature reverts to the filthy as soon as your back is turned. Even though you allow him the grace of your company, he imposes upon your confidence, and when you are not looking, he wallows in waste barrels, paddles in dirty water, wades knee deep in the offal of cattle, feeds upon all kinds of conceivable filth. And if he is sojourning in the country and the sanitary arrangements are imperfect, as they too often are, he whets his appetite for the dinner which he will try to take in company with you by a formal visit to the privy. Oh, he is a gourmand, this fiend, the fly! He will tackle anything to eat or drink from typhoid soup *a la* Chicago to sputum jelly *a la* t. b.

This pestiferous insect has many chances to communicate disease from one person to another or to plant the infectious saprophytes upon food. In cholera epidemics, it has been demonstrated that flies became the medium of infection by planting the vibrio upon food, both by contact from their feet and wings and from their dejecta, which are loaded with bacteria. Wherever large bodies of men go into camp, typhoid fever is nearly certain to break out, even though the water supply is carefully protected from contamination. Such outbreaks are due to fly infection of the food supply. Sporadic cases of typhoid fever in coun-

* Extracts from a paper read before the California Public Health Association.

try settlements are more often the result of fly infection than of water infection.

Tuberculosis is one of the most puzzling of our contagious diseases, and the manner of its spread from one person to another is one of the hardest problems before the sanitarian to-day. You believe, and I believe, that it is a respiratory disease, borne into our lungs by means of contaminated dust, but I believe probably more than you do. I believe that the greater sources of infection by the bacillus come about by means of the fly planting sputum on food from its wings and feet and dejecta. This is not something new; it is an old theory. Spillman and Househalter called attention to the possibility of infection in tuberculosis in this manner several years ago. Hoffman fed flies with sputum and recovered bacilli from their fecal matter. Heyward has recently reported a series of experiments covering the ground more fully than Hoffman.

Typhoid fever, cholera, and tuberculosis are the most prominent of the infections conveyed by the fly. I believe that several diseases, and especially plague and leprosy, may be conveyed in the same manner. Kitasato has demonstrated that plague develops from feeding experiments, and there are many strong reasons for the existing belief that leprosy is an ingestion disease. Personally, I believe that plague is spread commonly by means of body parasites, though there is little doubt that many cases originate from infection by the way of the intestinal tract; but with leprosy, I am firmly convinced that the disease is caused from eating infected food, and, if this is true, then this contagion is most likely planted upon such food by flies that obtain the infection from open sores and the nasal and bronchial mucus of old cases, which is said to teem with bacilli.

Now, let me picture to you some of the habits of the fly, and then we shall see if it is unreasonable to believe that he is an important factor in the spread of disease. Turn about you and see the swarms of flies upon decaying vegetable matter — in the garbage cans, on the manure piles, everywhere. Watch the flies swarming upon the filth of the streets, such as sputum and spit, and bones and decaying vegetables. Follow him further, and see him alighting upon the candy offered for sale by the street venders, and on all the fruit at the stands, specially the grapes and dates. Don't tarry here too long, for you will be disgusted, and will cease to eat fruit flavored with fly-specks; keep right on in the quest after this insect's habits, and notice the bakery where you buy your bread and cakes and pies — flies there to put on the finishing layer. And the meats, have you observed how they are carried in open wagons through the streets without protection, covered with flies, and then hung up in the shop where these same flies and others swarm upon them? Cooking this meat does not change the fact that this is simply nasty. There is no word for it.

Then, after you have been in the butcher shops, keep right on to the restaurant kitchens, and alleys back of them, especially the cheap ones.

And we must go into the shops and homes of the poor — those unfortunates whose houses are not protected by screens to keep out flies. There you will indeed be disgusted! Flies everywhere! In the children's mouths and noses; in the house, out of the house; on the food left there upon the table, which is never cleared; on the food left over, and which the children eat at all times between meals; in the milk pitcher; in the soup; in the molasses; in and upon every conceivable thing! But at this point I feel that you are beginning to doubt. You are saying to yourselves that it is true

that the fly is filthy, but, you are even now saying that the food is cooked, and that the process will kill any bacteria that might have been planted by flies. Ah, but you forget and overlook the danger. It is granted that cooking will destroy all of these bacteria readily, but it is not here that the danger lies. It is the food which has been cooked and upon which the fly afterward alights that is the real danger, and the longer this food remains uneaten after this contamination, the greater the probability that a colony has grown, thereby increasing the dosage of infection. For you must see that in cholera, say, where the fly planted but a few bacilli on potatoes or a bread pudding, or something left over from a meal, a rapid growth would follow in a few hours' time, increasing thereby the number of bacteria enormously.

This is no idle picture of the dangers from fly infection. I have spent considerable time in watching flies, and we know that their dejecta alone contain millions of bacteria. I have furthermore paid particular attention to their habits in homes of the poor, for here is where there is the greatest danger. The poor nearly universally leave their tables set with cold food left from the previous meals. Flies assemble in great numbers upon this food, and from time to time the children run in and help themselves, the remainder of the food being served at the next meal. Now, let us suppose that there is an open privy on the premises or near by, but — there is no need for me to paint the picture further. You know where that fly has been. If there are cases of typhoid fever about, all the more probability that the fly will carry the infection to others. In the Philippines it was hard to check cholera because the flies contaminated the foods and sweet stuffs sold by the venders. And if typhoid fever and cholera, why not tuberculosis and leprosy? Just spend some of your time watching flies after sputum and spittle in your streets. Now, if there is a consumptive near who is careless, as most of them are, is it unreasonable to believe that flies take this sputum and deposit it on grapes and dates and candies which you and your family eat? or that, in the homes of the poor, they would not pick up the sputum of a case, either in that house or from a near-by one, and deposit the bacilli on the left-over food?

There is no need for me to go on indefinitely enumerating things which you know to be possible and probably — yes, actual — but about which you are more or less indifferent.

Why not try to get started a movement to compel livery stables and dairies to properly care for the manure?

Also, urge upon every one the screening of houses, and especially of food, and when you buy food, patronize those stores that try to be clean.

Make an effort to compel some of the filthy sellers of candy, fruits, breads, and pastries to protect their articles from fly contamination.

As sanitarians, lend the helping hand to the ladies in their efforts to make the city officials enforce the garbage contracts. Last of all, as the saying goes, let each of you who keep horses sweep before your own doorstep.— *Dr. J. O. Cobb.*

Hydrotherapy Hints

Some of us who speak condescendingly of the water-wagon are making a great mistake not to clamber aboard with all possible haste. It's the best preserved vehicle in the procession. Pure water is one of the richest gifts Nature has provided for us, and we ought to be more familiar than we are with its almost health-giving possibilities.

Give hydrotherapy a fair chance, and see what it will do for you. Get more water into your system. Drink copious drafts of it. Avoid iced drinks in hot weather, and take little or no water with your meals, but at other times drink it freely. The wiry Japs, who appreciate the benefit of flushing and cleansing the system regularly in this way, are said to average a gallon a day.

Get into it often. Once daily should be the minimum for a man in normal health. Experiment until you find what temperature is best for you. Take your morning plunge in tepid water if your system does not react properly after a cold bath. Above all, carry out your water-program faithfully and persistently. So shall you help along the process of your physical regeneration, and thereby bring yourself appreciably nearer to the all-around manhood which is our aim and our ideal.—*Frank Andrews Fall.*

Six Mosquito Rules

It is possible to rid the premises of mosquitoes if one will undertake the work systematically. The municipal authorities may accomplish wonders, but after all the burden of extermination rests with individuals, with the housekeepers. Dr. Quitman Kohnke, president of the New Orleans board of health, has formulated the following "once a week," six simple rules for the extermination of the pest. It would be a move in the right direction for every housekeeper to post these rules conspicuously and to apply them religiously:—

1. Once a week, pour into every water surface on your premises not removable by drainage or stocked with fish, or screened from mosquitoes. a quantity of kerosene equivalent to one ounce (two tablespoonfuls) for each fifteen square feet of water surface.

2. Once a week, pour into the privy vault five cents' worth of crude carbolic acid, or five cents' worth of copperas dissolved in water, or five cents' worth of kerosene.

3. Once a week, empty and refill all vessels containing water, upon which oil should not be placed, such as fire buckets provided in cotton presses in accordance with insurance requirements.

4. Once a week, pour kerosene or crude petroleum (about one pint) where it will flow through your drain gutter into the street gutter.

5. Once a week, report to the board of health the presence of any stagnant water in vacant lots or any condition in the neighborhood not easily remedied by yourself or your neighbors, and keep on reporting *once a week* until you get the nuisance abated or a satisfactory explanation.

6. Once a week, read over these rules and see if you have not neglected something that should have been done, and persuade your neighbor to do as you do.—*Good Housekeeping for May.*

DR. BREWER, of the St. Vincent Institution in St. Louis, says: "It can be asserted with great certainty that the boy who commenced to use cigarettes at ten will drink beer and whisky at fourteen, take morphia at twenty-five, and spend the rest of his lifetime alternating between cocaine, spirits, and opium."—*The Quarterly Journal of Inebriety.*

EVERY night labors to undo the physiological mischief of the preceding day—at what expense, gluttons may compute if they compare the golden dreams of their childhood with the leaden torpor-slumbers of their pork and lager-beer years.—*Dr. Felix Oswald.*

"A FEW more smiles of silent sympathy, a few more tender words, a little more restraint in temper, may make all the difference between happiness and half-happiness to those I live with."

Our Walking Club

The Locust Family

BY JULIA ELLEN ROGERS

The Glory of the New England Elm in June

JUNE is the month when certain trees, familiar to most of us, cover themselves with large, fragrant flowers in great profusion. These showy trees include the catalpas, whose white or tinted flowers are followed by long pencil-like pods, green in summer, and often hanging, a foot or more in length, until midwinter. Basswoods, whose white flowers are literally dripping with nectar when summer is at its zenith, are among the showiest of these summer trees. We *see* them, *smell* them, and *hear* them, for the fragrance goes out to meet us while yet the tree is far off, and often the hum of the bees guides us before the creamy flowers on their pale-green leafy blades are clearly seen. "Linden" and "bee-tree" are common names of these trees.

Hawthorns extend their blossoming period into June, and the bees divide their

attention between these nectar-laden blossoms and others. Chief among June-blooming trees are the members of the locust family.

Locust flowers are almost always of the sweet pea type. We shall soon learn to associate this flower form with pods, such as pea vines bear. Locusts are pod-bearers, and relatives of peas and beans, clovers and alfalfa — all plants of unusual value, furnishing food for man and beast the world over. Examine a pea blossom and a clover blossom, red or white. There the five petals — the large *standard,* erect, and flaring; the *wings,* irregular and spreading to form the sides; and the bent *keel* formed by the union of the two lower petals. Go to a locust tree, and this flower form is repeated.

The Clammy Locust
(*Robinia Viscosa*)

Besides the flower and fruit, which are the most obvious characteristics of the locusts, we may note certain other trails of different genera, or family subdivisions. The locust (*Robinia Pseudacacia*) usually called "yellow" or "black" in this country, has sharp, stout thorns set in pairs at the bases of leaves and twigs. These spurs are only "skin deep," but they are formidable enough to give young locusts some popularity as hedge plants. They give the trees a rugged aspect in winter, which the rough, dead-looking bark emphasizes. Branches show swellings, the work of the borer, whose ravages spare neither trunk nor twigs in these later years. This insect has practically taken locust posts out of the market. This is one of the most valuable kinds, for sound locust wood does not decay when exposed to soil and water. Even though harassed by this enemy, the black locust grows wild, choosing stream borders, where it forms thickets. Many have been planted as roadside trees where their offspring now fill the intervals between parent trees. In June the feathery, many-leafletted foliage is a beautiful and graceful background for clouds of fragrant bloom that conceal all the tree's shortcomings and defects.

The clammy locust (*Robinia viscosa*) is a little tree which is native to the mountains of North Carolina. The flowers are tinted pink, and the red stems and calyces are covered with a sticky wax. This tree is so rich in coloring at the time of blossoming that it is planted widely in all the Eastern United States as an ornamental. Growing naturally on mountains, it is hardy in the Northern States.

The bristly locust (*R. hispida*) is the

common, shrubby, red-flowered locust of our gardens. Its young shoots are densely hairy, and the flowers are unusually large and fine.

The most beautiful of all the locusts is a tree native to the lime-stone slopes of Tennessee and Kentucky, but hardy in cultivation in New England and southern Canada. It is the yellow-wood (*Cladrastis lutea*), usually called "Virgilia" in nurserymen's catalogues. The bark is smooth and gray like that of the beech. The slender twigs droop at the tips, so that the leaves and the long flower clusters are pendulous, and very flexible and graceful.

The honey locust (*Gleditsia triacanthos*) is distinguished from other locusts by the fact that its thorns are branched, and often a foot in length. They frequently cluster so thickly on the trunk of a tree as to form a barricade against the boldest climber. Among the upper branches the thorns are smaller and scattered. Each one is a branch, modified to a thorn. A leaf often comes out on one of these thorns, proving the truth of the statement just made. In early summer the thorns appear, and many are leafy like any other twig for a few days; afterward the leaflets shrivel. This is worth looking for.

The flowers are inconspicuous in size and color, and regular, not pea-like in form. The purple pods have a curving shape, and cling to the tree until well into the winter.

The leaves of honey locust are often twice compound. What do I mean? The leaflets are very small. This fact enables the sunlight to filter through, even to the center of the tree's dome in summer. Unlike most trees, leaves grow on honey locust twigs quite to the center of the dome. Compare this with the foliage distribution on a maple of large size, and broad leaves.

Who has seen the little redbud tree (*Cercis Canadensis*) that covers itself with rosy pea blossoms before the leaves in April? It is now hung with its dainty green pods, among the simple, round leaves.

The coarsest of the locusts is the Kentucky coffee tree (*Gymnocladus dioicus*). Its branches are club-like and stiff. Its flowers are regular, not pea-like, and its pods are so heavy as to injure any one who chances to be walking under the tree when the fruit is dropping. The beans are as large as hazel-nuts and hard as stone. "In Revolutionary times they were ground and used as a substitute for coffee." This is hard to believe, though given on good authority. The tree is adorned in summer with leaves sometimes a yard long, each composed of from forty to sixty leaflets. The flowers are in bloom in June, but they are purplish and small, making little show, although the clusters are not small, and they are borne on the ends of twigs.

A sweetish edible pod of an oriental locust tree is sold on the fruit-stands in American cities under the name, "St. John's bread." Who can explain that name?

"ALL green and fair the summer lies,
Just budded from the bud of spring,
With tender blue of wistful skies,
And winds which softly sing."

Little Brothers of the Air

Gone —
A voice, from the anthem of dawn!
So golden a voice and so gay,
So blithe o'er the birth of the day!
Ah! who would be fain to adorn
Herself — by thus wronging the morn?

Lost —
A wing, that, unclipped, should have crossed
The sky, in free joyance of flight,
To soar in the blue out of sight!
Amid all the trophies of earth —
To make, in the Heavens, such dearth!

Stilled —
A throbbing heart, spring would have thrilled,
Though slight, with what ecstasy strong,
Of mating and nesting and song!
Yet she of the warm human heart,
Hath herein borne unwitting part!

Slain —
No softlier word doth remain —
A bird of too glowing a crest —
Too brilliant a bloom on its breast!
Alas! doth she dream what is done,
In wake of her will, 'neath the sun?

— *Edith Hope Kinney.*

Birds in June

BY BELLE M. PERRY

THE high tide of the bird season is passing all too soon. Every day is precious now. Are we watching the housekeeping proceedings and parent care of one or more bird families? Then we know right well that from earliest dawn to sunset much of interest is going on, and, the best we can do, many pages in each chapter of the wonderful story will of necessity be missed. And we realize only too well that we must wait a whole year for another season of golden opportunity. Would we might cajole Mother Nature into an indefinite extension of this rare month!

The nesting season of the most commonplace bird is full of intensely interesting revelations. Even our common robin redbreast (which is really a thrush, and the robin babies have the speckled breast of the thrush family) has ways of its own in carrying on the activities of this season that are as fascinating as a fairy book, and the story may be read by any one who is able and willing to pay the price in time and patience.

Have we a robin family in our special study list? Then we have no doubt discovered for ourselves whether Madam Robin has the final say about where the nest shall be made and is herself chief architect and builder of the little mud structure. And we have discovered, too, if it is really true that the bulk of the burden of feeding and caring for the hungry brood, when the little ones are once hatched, falls to the father's care.

Maybe we have made some interesting discovery of what a bird will do under stress of some pressing need, for emergencies and tragedies are the every-day experience of the bird world. If some unusual revelation has been permitted us, let us tell the story of it to other bird students through some bird magazine. Even a beginner may be able to contribute something worth while in original observation. I heard with much interest a few years ago the story of the cleverness of a male robin in the exigency of an accident to his mate before the nest was built. The peculiar form of the nest he made and its unusual location, together with the fact that the female was never to be seen, attracted the notice of a

near-by family. They became much interested, and determined not to miss the denouement. Different members of the family took turns watching. One morning the male was discovered escorting his mate (one of whose wings had been hurt) in a laborious way and on foot to the completed nest, which was easily accessible from the ground and was provided with a peculiar lean-to attachment that had excited much curiosity. The maimed robin, with her husband's help, was finally able to reach the nest, when it was found that the lean-to had been made for the support and protection of the injured wing.

What finer household devotion is to be found than is constantly exhibited in bird families! No human devotion can exceed the care and self-sacrifice of parent birds for their little ones. The way they will work, early and late, through the hot summer, to provide them with food, compels both sympathy and admiration. And the patience and wisdom they reveal in teaching their babies to do for themselves is rarely equaled in our human world. When the task is at last over, and each youngster is able to provide for himself, the parents are in sad need of a season of rest and quiet. No wonder the singing ends with the coming of the unceasing labor of the hot midsummer days. And when we realize that their feathers have become so worn and tattered with the summer's work that they must grow a new fall traveling suit, which means another heavy draft on their vitality, we can forgive our birds for withdrawing from human haunts after the nesting season, and leading the simple life as far as may be, before the trying fall migration.

Truly, the life of the birds is a hard one, in many ways, and when we consider what their presence in the world means to human beings, apart from their great service as insect destroyers, we may well feel under obligation to serve them in all ways in our power. Theirs is a public benefaction, and the public should look out for the food and water supply of birds in ways now sadly neglected. Our State law has long encouraged the setting out of trees on public highways by giving each farmer a chance to pay one-fourth his road tax each year in that way, allowing twenty-five cents per tree. And I am glad to know that the interest of club women in Michigan in this matter has resulted in many farmers availing themselves of the privilege in the present year. The State should now go a step further by offering a special inducement for the planting of those trees that provide bird food as well as those that afford them shelter from cold and storm,— the evergreens. I can not resist emphasizing a suggestion made in a former article by adding a further word about evergreens; the birds need them so much, and these trees have such fine possibilities in decoration of home grounds and as windbreaks where protection is needed. When once we have learned to let them grow in their own stately and beautiful way, instead of ruining their beauty by trimming off the lower branches, and when we use them where they should be, as backgrounds, screens, etc., instead of putting them into disrepute by placing them in front yards, then will evergreens be recognized at their true decorative value. Any one who gives them a fair chance is sure to have a growing love for and appreciation of these trees.

I wonder how many who read this are really acquainted with the finest kinds, as the Norway spruce, white pine, Colorado blue spruce, etc. A habit of observing trees may well go with bird study. It will add much interest to our excursions. Perhaps we have often passed some of the most beautiful trees without even seeing them. Suddenly we become

awake to the beauties of the tree world, and, behold, what wonderful discoveries are at every hand! This thought came to me forcibly one day in early March, when I found a last year's oriole nest hanging so close to earth from the branches of what I supposed was a white poplar a few blocks away that I determined to get it. The nest was secured and with it a small branch of the tree, when I discovered from the buds that it was a Balm of Gilead. After standing it in a jar of water for a few days, indoors, it was covered with beautiful crimson catkins, fully two inches long. What a glory this fine old tree must have added to the spring at its blossoming time for many years for those who had eyes to see! The catkins soon dropped off, and the pretty, poplar-like green leaves came out. One day I lifted the branch from the water to show to a caller and found that my Balm of Gilead had thrown out a number of little rootlets, thus showing its willingness to grow from cuttings. Let us get acquainted with our tree neighbors.

We should have especial care at this season about keeping the birds' drinking and bathing dishes well filled, and also have a lookout for prowling cats. Our present law for the protection of birds is inconsistent in that it fines a man for killing one song-bird and allows him to keep unmolested any number of cats, whose chief business in life during the nesting months is to destroy the birds wholesale. If you have a neighbor who tolerates a cat just because it is there, be enough of a friend to the helpless bird babies to see that the cat is disposed of. Watch out for birdlings that have tried their wings too soon. Enlist the interest of children in this work. One day last summer some little girls brought me a young Baltimore oriole that had fallen to the ground from a white poplar tree in whose topmost branches he had been cradled. We constructed an emergency hospital from a market basket, fitting tightly between its sides and ends a network of maple twigs and branches. The grip with which the young thing clung to our fingers led me to believe that the only assistance he needed was to be placed on a safe branch in a tree. However, the basket, which was securely tied up in the branches of a maple tree, was used instead, to be on the safe side. The mother bird kept near during our proceedings and seemed to understand that we were helping her out in her trouble. The same basket did good service a number of times during the summer. One day a little boy brought us a female goldfinch that had been stunned by flying against a window. It was placed in the basket, and in an hour had recovered and flown away.

Every unused bird-cage in a neighborhood may well be ready now for an emergency shelter of an unfortunate bird baby. Hung in a tree, the parents will usually feed the nestling until it is able to fly. In case they do not, it should be fed and watered many times daily until it is able to feed itself. Be careful about handling a bird. Let it cling to your fingers instead. One can soon make friends with almost any bird baby by giving it the food it likes and resisting the impulse to take hold of it. The possibilities of delightful and successful bird study, especially with school children, by making pets of a few of each species thus saved from the clutches of the house cat, are most fascinatingly set forth by Dr. Hodge in his valuable pamphlet, "Our Common Birds," to which I referred last month.

A very delightful way to observe birds in June is from a hammock in some neglected old orchard. One's note book will be sure to record many interesting observations.

The little chipping sparrow and the catbird are good kinds for the beginner to include in a list for special study, as both are so friendly to people, and it will hardly be difficult to locate a nest of each.

How to Dodge Old Age

When Nero advertised for a new luxury, a walk in the woods should have been offered. 'Tis one of the secrets for dodging old age. For nature makes a like impression on age as on youth. Then I recommend it to people who are growing old against their will. A man in that predicament, if he stands before a mirror, or among young people, is made quite too sensible of the fact; but the forest awakes in him the same feeling it did when he was a boy, and he may draw a moral from the fact that it is the old trees that have all the beauty and grandeur.— *Emerson.*

Tea and Coffee Drinking

BY J. H. KELLOGG, M. D.

PROBABLY very few of the millions who daily make use of tea and coffee as a beverage are aware of the fact that these common drugs contain from three to six per cent of a deadly poison. The amount of tea and coffee imported annually into the United States alone is more than one billion pounds, or five hundred thousand tons, containing more than fifteen thousand tons of poison so deadly that twenty grains might produce fatal results if administered to a full-grown man at a single dose,— amounting to more than ten billion deadly doses, or six times as much as would be required to kill every man, woman, and child on the face of the earth.

The question is asked, "Why, then, are not these deadly effects more apparent, and more frequently manifested?" In reply it may be said, first, that the poisonous effects of the use of tea and coffee are so widespread and so well-nigh universal that this very fact serves to conceal the injury done. The bad effects which really follow from the use of tea and coffee are attributed to other causes, such as overwork, sedentary habits, climate, germs, and other influences which may indeed be incidentally involved, but are not primary in their influence. Further, we will say that the poisonous effects resulting from the use of tea and coffee are very decidedly manifest to one who has given thought to this question, and has made careful observations in relation to it. The sallow complexion, common among women of the higher classes who have reached middle life, the almost universal nervousness among American women, and many common digestive disorders, and the increasing prevalence of nervous or sick headaches, afford to the experienced physician ample evidence of the toxic or poisonous character of tea, coffee, and the allied beverages, cocoa and chocolate. The well-known effect of these drugs in producing wakefulness, banishing as if by magic the sensation of fatigue, affords sufficient evidence of their poisonous character. No one would doubt for a moment the poisonous nature of a drug capable of producing irresistible drowsiness in a person who is not weary. The power of a drug to produce wakefulness in a person who is strongly inclined to sleep as the result of fatigue, is equally evidence of its poisonous character.

Again, the fact that a person who is accustomed to the use of tea or coffee finds himself nervous and uncomfortable when the usual cup is dispensed with, is another proof of the poisonous character of these common beverages which is very frequently in evidence. "I must have a cup of tea or coffee for my breakfast; I am good for nothing without it for the whole day," is an expression which one often hears. The conclusion to be drawn from this experience is not

that the coffee or tea is necessary or beneficial, but the very reverse. The evidence of its harmful and poisonous character is conclusive. No such results follow the incidental temporary withdrawal of ordinary food substances to which one has been accustomed. It is only artificial stimulants or narcotics the withdrawal of which is accompanied by such unpleasant effects.

Tea and coffee contain, in addition to caffein, tannic acid and various volatile poisons. Roasted coffee also contains caffein. Each of these poisons produces characteristic harmful effects. The volatile oils give rise to nervous excitability, and after a time provoke serious nervous disorders. Caffein is a narcotic, which has been shown to diminish the activity of the peptic glands and to interfere with digestion.

Wolfe has shown that three grains of caffein, an amount which might easily be furnished by an ordinary cup of tea or coffee, greatly impairs the quality of the gastric juice, lessening its total acidity.

Robert showed that both tea and coffee interfere with the action of the saliva upon the starch of the food, and may even wholly destroy its effect. Dr. Wood proved that the daily use of a decoction prepared from one ounce of tea leaves produces decidedly poisonous symptoms.

A German physiologist found the digestion to be reduced one-third by the use of tea. The tannic acid of tea not only interferes with the digestion of starch, but also prevents the proper digestion of albumin.

The fact that coffee, or some similar substance, is very widely used, does not lessen the force of the argument against it. An intelligent observer residing in Brazil declares that almost the entire country is in a perpetual state of semi-intoxication from the free use of coffee. There are several civilized countries where a similar state of things exists.

Cold Mitten Friction

METHOD: Dipping the mitt into ice water or other very cold water, the attendant wets and rubs the surface of one of the patient's arms until reddened, redipping the mitt once or twice, going over the surface rapidly, then dries it thoroughly, taking special care to secure good reaction. The other arm is then treated, and then in succession the trunk, legs, and back

Friction Mitten

Tea drunkards are reported to be very common in England and Australia, especially among the poorer classes.

The best means of ridding one's self of the tea or coffee habit is to adopt a dry dietary, making free use of fruits, especially fresh fruits, also stewed fruits and fruit juices. Flesh foods and animal broths and extracts unquestionably excite the nerves, and create a demand for the soothing effect of a narcotic. Hence, a person who desires to free himself from the alcohol, the tobacco, or the tea or coffee habit, must first of all dispense with flesh foods of all sorts. Condiments must also be discarded, as these irritate and excite the nerves, creating a desire for the soothing effect of some narcotic drug.

The nervousness and irritability which follows the withdrawal of the accustomed drug may be wonderfully relieved by the prolonged warm bath at a temperature of 93° to 96°. The duration of the bath may be indefinite; several hours if necessary. If there is palpitation of the heart, or a rapid pulse with a feeling of distress through the chest, this may be relieved by the application of an ice-bag over the heart, by sponging the spine alternately with hot and cold water, or applying first hot and then cold compresses to the spine, alternating every minute.

Rubbing the whole surface of the body with the hands, dipping them frequently in cold water, is an excellent means of re-enforcing the heart. The wet-sheet pack will sometimes secure quiet, and even sleep, when other measures fail.

The cold mitten friction and cold towel rubbing should be applied two or three times a day for the purpose of toning up the nerve centers. An abundance of outdoor exercise, relief as far as possible from ordinary cares and worries, and a nutritious, easily digestible, and unstimulating diet, are other measures which are important.

The use of substitutes is a snare and a delusion. A hot beverage, made from roasted cereals of some sort, may be tolerated, but it is better to avoid even this, so that the habit of drinking at meals may be overcome, thus getting as far as possible away from temptation.

The Composition of Human Dust

An examination of human dust shows that it is not a miscellaneous collection of earthy element, but composed of a few special forms of dust or matter. The following table shows the different kinds of substances and the amounts of each sort which enter into the formation of the body of a person weighing one hundred and forty-eight pounds (Marshall): —

	lbs.
Oxygen	116.56
Carbon	19.98
Hydrogen	13.46
Nitrogen	3.70
Calcium	1.93
Phosphorus	1.70
Potassium	.03
Sulphur	.22
Chlorine	.13
Sodium	.15
Magnesium	.001
Iron	.014
Fluorine	.118
Silicon	.0003

It must not be supposed that the elements above named constitute the whole body; they represent, rather, what is left after the living body has been destroyed, — the ashes of the body,— and may also be regarded as the dust out of which the body was originally formed, either directly or indirectly. While combined

in the body, they as little resemble the elements which the chemist handles as do the pigments which compose the coloring of a beautiful portrait or a landscape resemble the formless mixtures spread out upon the easel of the artist. The artist's deft fingers mingle and temper the raw material with which he works, and with patience and skill combine them on the canvas until a luminous face, a brilliant sunset, or a sparkling waterfall beams forth. So the divine Artist weaves from the humblest, crudest materials that exquisitely delicate and unsurpassingly beautiful fabric which we call the body.

An Individual Menu for One Day, Showing Amount Needed and Food Units for Each Article

BY ESTELLA F. RITTER

BREAKFAST		
Cherries	5 oz.	114
Foam Omelet	2 oz.	95
Breakfast Toast	1 oz.	124
Malt Honey	2 oz.	172
Total Calories for Breakfast		505
DINNER		
Cream of Spinach Soup	5 oz.	98
Bean Croquettes	6 oz.	230
Tomato Sauce	4 oz.	43
Whole-Wheat Bread	2½ oz.	178
Butter	¾ oz.	169
Caramel Custard	6 oz.	185
Whipped Cream	½ oz.	28
Total Calories for Dinner		931
SUPPER		
Date and Apple Salad	4 oz.	349
Nut Sticks	1 oz.	118
Grape Juice	6 oz.	142
Total Calories for Supper		609
Total Calories for Breakfast		505
Total Calories for Dinner		931
Total Calories for Supper		609
Total Calories for One Day,		2,045

Foam Omelet.— Beat the yolk of one egg to a cream and beat the white to a stiff froth. Add to the yolk one teaspoonful of breadcrumbs, one teaspoonful cream, season lightly with salt, and add one-third of the stiffly beaten white. Oil the omelet pan or an iron spider, gently pour in the omelet mixture; cover and place the pan on the range where the heat will be continuous. Do not stir, but carefully, as the egg sets, lift the omelet occasionally by slipping a broad-bladed knife under it. It should cook quickly, but not so quickly as to burn. From three to five minutes will generally be ample time. When slightly browned on the bottom, spread the remaining white on top; then put into the oven for a minute or two until the white is set. Fold at once and serve.

Cream of Spinach Soup.—To one tablespoonful or one ounce of cooked spinach pressed through a colander, add one-half cup or four and one-half ounces of rich milk. Add salt to season. Heat to boiling and serve.

Bean Croquettes.—Take two-thirds cup or four and one-half ounces of bean pulp (which is prepared by pressing well-cooked navy beans through a colander). To this add two teaspoonfuls of milk and salt to season. Form into croquettes. Beat one-half egg; roll the croquettes into four teaspoonfuls

bread-crumbs first, then into the beaten egg, and lastly into the bread-crumbs. Bake on an oiled pie tin in a hot oven until slightly browned.

Foam Omelet

Tomato Sauce. — Heat two and one-half ounces or one-third cup of strained stewed tomatoes to boiling and thicken with one-fourth teaspoonful of flour rubbed smooth in two teaspoonfuls of water. Let boil, cook slowly for five to ten minutes.

Caramel Custard. — Turn one-half ounce or two teaspoonfuls sugar into a stew-pan, and stir it over the fire until it becomes liquid and brown. Scald four ounces, or one-third cup of milk, and add the browned sugar. Beat one-half egg thoroughly, add to it one ounce or one-eighth cup of cold milk, and turn the mixture slowly, stirring constantly that no lumps form, into the scalding milk, continuing to stir until the custard thickens. Set away to cool, and serve in a glass with one-half ounce or one tablespoonful of whipped cream.

Bean Croquettes

Date and Apple Salad.—Wash and seed five dates, and pare, core, and dice two ounces or one-fourth cup of apples. Chop the dates and mix with the apple. Use Golden Salad Dressing, prepared with two teaspoonfuls of pineapple juice, two teaspoonfuls lemon juice, and one teaspoonful sugar. Heat in a double boiler, stir in one-fourth egg (beaten), and stir until it thickens. Beat until cool, and add to the dates and apple.

Nut Sticks.— Sift one ounce or three teaspoonfuls of flour into a bowl. Add one teaspoonful nut meal. Moisten with one tablespoonful of cream. Pour the cream into the flour slowly, a few drops at a time. When all the liquid has been added, gather the fragments of dough together, knead thoroughly. When well kneaded, roll the dough over and over with the hands, until a long roll about one-half inch in diameter is formed; cut this into two-inch lengths, prick with a fork, and place on a perforated tin. Bake in a slow oven until slightly brown.

Nut Sticks

RIGHT AND WRONG WAY OF DOING THINGS

Children's Department

The Bravest Boy in School

YOU'RE a sneak." "You're a coward." "You're a baby." Cyril Crossley, the little fellow thus addressed, was surrounded by a group of angry and excited boys. His bright, frank face was slightly paler than usual as this torrent of abuse was showered upon him, but, like a brave boy that he was, he stood firmly at bay.

"Coward!" he exclaimed. "I should like to know why?"

"Because you've not spirit enough to have a good lark when there's a chance."

"And pray, what courage is wanted," he demanded, "to go shooting stones at poor defenseless geese or ducks in a pond?"

"It isn't that, you stupid!" said Harold Wyman, the leader of the party. "It is that we are dared *not* to do it, and we are going to."

"No, indeed, you are quite wrong there," said Cyril. "You know we all promised Mr. Williams not to shoot at any dumb harmless creatures again with our catapults, and only to use them in the country. I *won't join you.*"

"Dumb harmless creatures, indeed!" rejoined Harold. "Do you call these geese harmless creatures — nasty, hissing, horrid wretches; besides, they'll soon gallop off, and the old farmer will be so savage when he hears what we have done. And isn't the common country near enough for our purpose? Besides, we will take care not to wear our school-caps, so he won't be able to find us out even if he does see us. Oh, do come; it will be ever such a lark."

But Cyril did not waver. "No," he said sadly. "It may be all right for you if you look at it in that light; but I can't and won't go with you."

Then began a storm of hissing and jeering, but all to no purpose; and presently the head master's entry put an end both to the recreation time and the teasing which Cyril was enduring.

"Now mind, boys, six o'clock sharp. Meet outside the white gates, and we will go and attack the enemy," said Harold, "all armed to the teeth, but with weapons concealed; no boy to be in his school-cap."

It was growing dusk that evening when the boys assembled, about a dozen in number, at the white gates which led to the farmer's field where the geese were expected to be found.

What was their dismay when, on creeping along by the hedge to get well within range, they discovered that the paddock where they were usually kept was quite empty.

"Not a duck or a hen or a pigeon, or even a dog, to get a shot at!" exclaimed Harold. "What a nuisance! We'll have to put up game of some kind, eh, boys?"

"Rather," was the brief but significant response.

"Look here, we shall have to separate," said Harold; "three of you go round that corner to the right, three to the left, and drive this way any fowls you may

find by the farm-yard. The rest will stay here and shoot the game as it is driven past."

No sooner said than done. A suppressed "hurrah" a few minutes later greeted the appearance of a little terrier pup which had been found by the right wing of the scouts, and was being driven cautiously along toward the main body.

"Now," exclaimed Harold, "no boy to be nearer than twenty yards; and when I give the command, all let fly."

At the first discharge, the puppy, howling with fright, ran toward the garden gate, but was driven back by the boys on guard in that direction.

At this moment a little girl ran out of the gate, exclaiming, "My puppy, my puppy, dear little Toby, what is it?" and the child sought to reach her little favorite. But the boys were excited, and heeded her not, and as they were all shooting recklessly at the puppy, the little girl herself was placed in great peril of being hurt.

At this moment a boyish form tore through the white gate and hastened to her rescue.

It was Cyril Crossley, who, having been down to the village on an errand for his mother, was returning, when the cries of the little girl and the dismal howling of the puppy caught his ear.

Taking in at a glance the nature of the attack, he shouted, "Shame, shame! you cowards, to attack a little child and a poor dog!"

"Stand clear and let the dog alone; we won't hurt the child," cried Harold.

"Not I," cried Cyril, as the dog crept instinctively up to him for protection. Then, taking the little creature in his arms, he faced the crowd of angry boys with a look of fixed determination upon his face.

"If you don't put down the pup we'll warm you up too," cried Harold.

The boys put stones in their catapults, ready to do their leader's bidding.

What they would have done I can't say, but the wheels of a cart were at this moment heard at the gate.

The boys fled in wild confusion, knocking over little Dorothy in their mad flight. Harold stooped to pick up the screaming child, and as he did so the farmer rushed breathlessly on the scene, exclaiming —

"You young rascals, here again! If I catch any of you I'll make an example of some one." Seeing Cyril in the dusk, and being too flurried to observe what he was doing, he seized him, and shaking him severely, exclaimed, "You be off this instant. I'll let your master know about this." So saying, he carried off his little one into the house, the puppy trotting along at his heels.

Cyril was so dazed for a moment that he could not collect his thoughts, and by the time he had done so, was far on his way home, his mother having told him to lose no time, as she was going out that evening. He determined, however, to ask her advice as to what he ought to do.

"Master Cyril, your mother's just gone," was the salutation with which Jane greeted him as she opened the door. "She waited as long as she could because she wanted to say 'good-night' to you, but had to leave about five minutes ago with your father to catch the train."

Well, it couldn't be helped, Cyril thought; he must brave it out to-morrow, but it was rather a bitter thought to him that probably he would be severely punished for a fault of which he felt himself entirely innocent.

There was a kind of uneasy feeling throughout the school the next morning. Everybody had a presentiment that something unpleasant would happen; no one knew what it was or how it would come.

About eleven o'clock, however, just at recreation time, the well-known form of the farmer was seen coming up the garden walk.

Many hearts felt a sinking sensation, and Cyril's beat with more than usual rapidity. Five minutes later Mr. Williams appeared, accompanied by Farmer Evans.

"I am more grieved than I can tell you," he said, when the boys, in answer to his call, gathered round, "to find that you have broken your promise to me in regard to the use of your catapults; grieved because I have hitherto trusted entirely to your honor, and can do so no more. I must punish those who have been disobedient, but wish to do so as leniently as possible. I will therefore ask all those who were concerned in the attack upon Farmer Evan's dog last night to come forward."

A painful pause ensued, but no one stirred. Mr. William's brow darkened.

"One boy at least we know," he said severely. "I ask *him* to confess."

Still no one responded, though Cyril Crossley, in spite of his innocence, felt the color mounting to his cheeks.

"Cyril Crossley," rang out the tones of the schoolmaster, in a voice that made many a boy quake, "you have been guilty of not only cruelty to a dumb animal (that is bad enough) and of breaking your word, which is worse, but of leading your companions to do so — which is worst of all; and now, when you have a chance of clearing your companions by a confession of your misdeeds, you are silent. I could never believe it of you. Nevertheless, I shall give you so severe a punishment as will be an example to prevent anybody here from following your evil course."

Poor Cyril! He felt as if his heart would break, but he determined that no word of his should get his companions into trouble. Perhaps he was wrong, but his resolution was taken that instant, and he resolved to abide by it, let the consequences be what they might.

He turned his head sorrowfully and looked at the pale faces of the boys beside him, to see if any were likely to come forward. They were, however, all too frightened to say a word. The only one who preserved his presence of mind was Harold Wyman, who at this juncture made a step forward.

But at that very instant the door was opened, and in came Mrs. Evans and Dolly, the terrier pup Toby being carried in the arms of the latter.

"I was just too late," she said, addressing Mr. Williams, "to speak to my husband before he came here, but I wanted to tell you what my little girl said to me as to the attack that was made upon us last night."

In the meantime a somewhat curious scene was being enacted before the company, which certainly did not form any part of an arranged program.

Dolly had run forward to Cyril and clasped his hand, crying, "Good boy; me love o' velly much; you kind to Dolly and Toby last night," while the puppy was rubbing itself against his legs with every appearance of joy.

"There, now," exclaimed Mrs. Evans excitedly, "that confirms what I was going to tell you. That boy, Mr. Williams, stood by my child and that poor dumb

creature when all the other boys were tormenting them; and I can't think how my husband made such a mistake."

"Mr. Williams," said Harold, stepping forward, "although I think I have acted about as badly as I could, yet before Mrs. Evans came in I was going to confess what we had really done. Now you know, and I don't need to tell you. If it is possible," he went on, the color rising to his cheeks, "I would like to bear all the punishment, for I was really the ringleader, and I should like to say what I expect we all feel, that Cyril has set us an example we shall all remember."

"Please, Mr. Williams," exclaimed the kind-hearted Mrs. Evans, "do let the boys off this time; I'm sure they will never be any more trouble."

"I can not quite comply with your request," said Mr. Williams, "but I will make the punishment as light as possible. And one thing I must say; what great pleasure it has given me to find I was mistaken about one boy whom I have always believed brave and noble and ready to do right in the face of all difficulties, and whom we all now know to be so. Indeed, I think him the bravest boy in the school."

"Three cheers for Cyril!" exclaimed one curly-headed little fellow enthusiastically.

Then there arose three ringing cheers for Cyril Crossley such as the school had never heard before.

F. J. C.

By the Editor

Minister Wu Ting-fang on the Simple Diet

ALL who are interested in the promotion of the principles of the simple life will be interested in knowing that ex-Minister Wu Ting-fang, who is so well known in this country as the popular Chinese Minister to the United States, has become a pronounced advocate of vegetarianism and the simple life. Some years ago one of the division chiefs of the United States Postoffice department, being broken down in health, became a patient at the Battle Creek Sanitarium and a convert to its principles. Mr. Bishop was so enthusiastic over the wonderful results which he experienced in consequence of his adoption of the simple principles and habits which he learned at the Battle Creek Sanitarium that he prepared for his friends in Washington a Sanitarium banquet at one of the leading hotels of the city, where he made his home. The guests included many of the notable people of Washington, among others, Minister Wu Ting-fang and Mrs. J. B. Henderson. The editor of this journal was also a guest, and made an address in which he presented the simple-life principles of the Battle Creek Sanitarium, and the movement of which for more than a third of a century this institution has been the center. Later Mrs. Henderson wrote a book telling in a thoroughgoing and most effective manner the principles of the simple life. A copy of this was sent to Minister Wu. Not long ago a prominent Philadelphia attorney received from Mr. Wu a letter, concerning which the following reference recently appeared in a leading newspaper: —

WU TING-FANG IN VEGETARIAN RANKS

FORMER CHINESE MINISTER GIVES UP MEAT AND DROPS ALL WINES AND LIQUORS

NO LONGER TAKES TEA AND COFFEE

Converted to Simple Life, He Writes, Through Teaching of Mrs. J. B. Henderson

The host of friends left behind him when Wu Ting-fang, one of the most noted diplomats of China, returned home from his duties as Chinese Minister to the United States, will be astonished to learn that Mr. Wu has given up eating meat and drinking tea and coffee, to say nothing of wines and "good red liquor."

When Mr. Wu was Minister here he was very fond of a good dinner, spiced with choice champagne, but in a letter received by a prominent Philadelphia attorney he announces that he has become a convert to the simple life through the influence of Mrs. J. B. Henderson, wife of former Senator Henderson. Mrs. Henderson recently caused a sensation among society folk in Washington by emptying in the gutter several thousand quarts of choice old wines and liquors which had been accumulated in her cellars for use at dinner and other functions.

In his letter to the Philadelphia attorney, Mr. Wu says: —

"You may be surprised to hear that I have assumed a new role, that of a diet reformer. The subject was brought to my attention in this way. Some time ago Mrs. Henderson, of Washington, D. C., wife of former Senator Henderson, sent me her book. In it she clearly proves that the eating of flesh, drinking of coffee and tea, as well as of alcohol, not to say smoking of tobacco, are the cause of all the ills that flesh is heir to. After reading her book carefully and also other books on similar subjects by doctors and experts, I have come to the conclusion that the way we are living is all wrong.

"So it will interest you to know that I am now living on a simple diet of nuts, vegetables, and fruit, with no flesh or strong drinks, champagne included, of which, as you know, I was once very fond.

"It is my intention whenever opportunity occurs to preach the doctrine; in fact, I have done so to the Empress Dowager."

It is interesting to note that vegetarianism and simple-life principles are no longer scoffed at as in former years. Intelligent, thinking men everywhere are recognizing the claim of this teaching to respectful consideration. Mr. Wu Ting-fang is one of the most intelligent and scholarly Chinamen who has ever visited this country. He has had a liberal education in the universities of Europe, and when Minister here he showed himself to be the intellectual equal of the ministers from European and other countries. The example of so eminent and influential a man will unquestionably lead multitudes in the right direction.

Why Not Eat Ice Cream?

Ice cream is a food, and ought to be digested. Moreover, it must be digested quickly, or it will make trouble, because it contains a quantity of barnyard germs which in the course of a few hours may be multiplied to millions. But the ice cream is cold, and it can not be digested; for Dr. Beaumont, looking through the window in Alexis St. Martin's stomach, discovered that when he swallowed a glassful of cold water, the stomach stopped work for more than an hour. When one eats ice cream, the stomach becomes numb with the cold, and can not work. It makes no gastric juice, and the muscles which should be at work to churn the food are paralyzed. The fat which is present lessens the secretion of acid in the stomach, so rendering the digestion more difficult, and the ice cream lies in the stomach until it becomes rancid, sometimes putrescent, and makes serious mischief.

If you want to take anything iced, let it be iced fruit juices, which do not require digestion, but are ready for immediate absorption and assimilation. Fruit gelée is another food which is already digested, and needs only insalivation. As soon as it is taken into the stomach it melts, becomes liquid, and passes on without causing any trouble.

Medical College Chair of Inebriety

It is worthy of note that the Boston College of Physicians and Surgeons has recently established a chair for lectures on inebriety. The faculty of this medical school have shown excellent judgment in the selection of Dr. T. D. Crothers, of Hartford, to fill the chair. Dr. Crothers has made a life-study of inebriety and the methods of treating this disorder and of various other maladies which arise from the use of alcohol. There is no man in this country, perhaps none in any other country, more competent to represent this subject in a medical school than Dr. Crothers.

Prof. Hans Meyer, of Vienna, has shown by experiments with tadpoles that alcohol and other narcotics act by combining with the lecithin of the brain cells in such a way as to destroy the structure of the cells, and so interfere with the action of the forces which are stored up in normal living cells.

Question Box

10,313. Insanity.— R. M. T., Wisconsin: "1. Can insanity be cured by baths and diet? The patient now is in an asylum. 2. His father and mother were first cousins. Is this a cause?"

Ans.— 1. Certain forms of insanity are greatly benefited by appropriate baths. This is particularly true of melancholia and mania. The acute forms of insanity generally recover under careful treatment, including baths, proper regulation of the diet, etc. Baths are now administered in well-organized insane asylums.

2. We are not prepared to answer this question.

10,314. Catarrh — Emptying the Bowels — Appendicitis.— Mrs. J. T. H., Missouri: "1. What home treatment will cure a case of catarrh of the head in a girl of fourteen who has had it for years? There is much hawking and spitting. She also has inflammatory rheumatism in a severe form during the winter if living in a low, damp locality, but is not affected if removed to a dry location. During the attacks her breath is very offensive, also the urine. Can a cure be effected or the attack warded off by diet even if living under unfavorable conditions? 2. What is meant by the phrase, emptying the bowels? 3. How much water is necessary to fill the entire colon of an adult? 4. Is it necessary that the entire colon be emptied daily? 5. In inflammation of the bowels or appendicitis, must the colon to the cecum be filled? 6. When one injection fails, should it be repeated immediately if the patient becomes tired? 7. When enemas and diet fail, is it admissable to take syrup of figs or olive oil and figs cooked together?"

Ans.— The patient's condition can be greatly improved by careful diet and proper treatment, especially by an outdoor life, daily cold bathing, avoidance of meats and rich foods, pastry, confectionery, and condiments. It is quite possible, however, that the services of a specialist will be required, as there may be growths or other changes in the nose which could be remedied by an operation.

2. Complete evacuation of the contents of the large intestine.

3. Two to four pints.

4. Usually not. Every other day is sufficient, except in cases of autointoxication from infection of the colon.

5. Yes.

6. Yes.

7. Enemas and diet will never fail unless mechanical obstruction exists, in which case a physician should be consulted.

10,315. Will Lemon Acid Counteract Uric Acid?— E. G. C., New Jersey, asks an answer to the foregoing.

Ans.— Fruit juices of all sorts are an excellent antidote for uric acid. Fruit juices and fresh vegetables contain a substance which, when taken into the body, aids in the destruction of uric acid.

10,316. Skin Disorder.— F. C. H., Missouri: "On my arms, legs, and trunk are red swellings exactly like mosquito bites, with intense itching. After the swelling subsides, the red blotch remains, then disappears. 1. What is this? 2. What is the cure?"

Ans.— 1. Nettle rash.

2. Hot saline solution, menthol liniment, and hot soda solution. The solution should be applied very hot. The treatment should be continued until the itching is relieved. The following lotions are also useful: —

DERMATITIS LOTION NO. 1

Carbolic Acid	1 dram
Listerine	1 dram
Rose Water	3 ounces
Alcohol qs. ad	6 ounces

DERMATITIS LOTION NO. 2

Ichthyol	2 drams
Lime Water	½ ounce
Oil of Sweet Almonds	½ ounce
Glycerine	6 drams
Rose Water	6 drams

10,317. Vaccination.— M. W. R., Washington: "1. What do you think of the views held by the Anti-Vaccination Society of America? 2. What is your opinion of vaccination?"

Ans.— 1. I have not made myself familiar with the work of this Association.

2. Vaccination without doubt conveys a considerable degree of immunity against smallpox. There are undoubtedly certain evils and risks connected with the practise.

10,318. Baldness.—M. L., Washington: "1. What treatment should be employed for baldness of fifteen years' standing? 2. Do you advise the use of a rubber cap worn at night with a wet compress? 3. What lubricant would you employ during a fifteen-minute daily massage? 4. Is Capillarias harmful? 5. Would the use of ice be better than to wash the head with cold water every morning? 6. Does diet in any way affect the growth of the hair?"

Ans.—1. Sunburning the scalp, either with the sun or with the electric light. Shampooing the scalp with a hot solution of resinol soap, followed with cold water and massage of the scalp daily, is also good.

2. Yes, in certain cases.

3. White vaseline, lanolin, or olive oil or almond oil are all excellent lubricants.

4. We know nothing about this lubricant.

5. Ice is more stimulating than cold water.

6. Anything which contributes to good digestion will favor the growth of the hair.

10,319. Chafing.—G. B., Indiana: "What will relieve chafing in a five-months'-old babe? It is especially troublesome on his neck and back of his ears and under his arms. He is hardly fleshy enough to cause this."

Ans.—Cleanse the parts with resinol soap, apply Lotion No. 2 given in the answer to 10,316, and afterward a liberal amount of talcum powder.

10,320. Baking-Powder.—M. N., California: "1. Are cream-tartar baking-powders harmless? 2. If not, why not? 3. Of what is grocer's cream tartar made? 4. Is it not as effective and healthful as the pure article? 5. Can graham flour be baked without yeast or baking-powder? 6. If so, how?"

Ans.—1. No.

2. They are chemical compounds which are not needed in the body, and are more or less injurious to the digestive organs, and a burden to the liver and kidneys for their elimination. Their use is quite unnecessary, as better bread can be made without them than with them.

3. Unless adulterated, cream of tartar is simply cream of tartar, chemically known as

potassium bitartrate,—a preparation of tartaric acid obtained from grape juice.

4. It should be the pure article.

5. Certainly.

6. There is a variety of ways, all of which are described in "Science in the Kitchen," "Every-Day Dishes," and numerous other health cook-books. The flour may be made into a stiff dough, well kneaded, and baked in the form of thin rolls, or may be beaten into a soft batter, made light with eggs, and baked in gem pans. A perfectly wholesome baking-powder is now manufactured by the Sanitas Nut Food Company.

10,321. Indigestion.—R. M., Oregon: "1. Why should one at twenty who exercises and takes good care of his health and has a good appetite, have coated tongue, and especially in the morning foul breath and sour taste in the mouth? His diet is fruits, beans, peas, oatmeal mush and milk, potatoes, onions, cabbage, but never meat. 2. Outline treatment."

Ans.—1. Because his resistance is low. There is quite likely indigestion, and possibly retention of fecal matters in the colon—a common cause of this condition.

2. Great care should be taken to masticate the food thoroughly. Swallow nothing which has not been well reduced to a liquid in the mouth. Adopt an active, out-of-door life. Take enough muscular exercise to cause vigorous perspiration and moderate fatigue daily. Take a cold bath every morning on rising. The moist abdominal bandage worn about the body at night is especially useful.

10,322. Lithia Spring Waters—Cocoa and Chocolate.—E. S., District of Columbia: "1. What are the therapeutic value and pathological effects of lithium, lithium salts, and the much-vaunted lithia spring waters? 2. What are the principal objections to cocoa and chocolate as a beverage?"

Ans.—1. In the opinion of the writer, lithium and lithium salts have no therapeutic value worth considering. The much-vaunted lithia spring waters are not better than ordinary hard waters.

2. They contain theobromin, which is a poison, and consequently likely to disturb digestion.

10,323. Stomach Trouble—Swollen Feet.—Mrs. A., Iowa: "1. For five years have had indigestion, constipation, and kidney trouble. My diet is raw eggs, baked potatoes, well-toasted bread, boiled rice and milk, with no improvement in my condition. What would you suggest? 2. Lately the upper part of my feet are painful, and my ankles swell. What is this?"

Ans.—1. Your case ought to be carefully studied by a thoroughly competent physician. You probably need treatments in addition to careful diet.

2. The symptom may be serious. Swelling of the ankles frequently indicates disease of the heart or kidneys. You should be examined by a competent physician at once.

PUBLISHERS' DEPARTMENT

NIAGARA FALLS

Some day you are going to see Niagara Falls. It is a duty you owe yourself, and sooner or later you intend to make the trip. When you do, it will be well for you to remember the

MICHIGAN CENTRAL

"The Niagara Falls Route."

BETWEEN THE

EAST AND WEST

All trains passing by day stop five minutes at FALLS VIEW STATION, directly overlooking the HORSESHOE FALLS, from the Canadian bluff.

From no other point can be had so fine a view of the entire panorama of the Falls, the rapids of the upper river and the gorge below. Stop-over allowed on through tickets.

Ask about the Niagara Picture.

NEW YORK CENTRAL LINES

W. J. LYNCH, Pass'r Traffic Mgr.

O. W. RUGGLES Gen'l Pass'r Agt.

CHICAGO

Sanitas Vibratory Chair

(Patented)

The only Vibratory Chair made. It gives vibrations to the entire body. Frequency and intensity may always be regulated by the operator. Equipped with foot vibrators, vibrating rod for hands and arms, as shown in illustration, and vibrating standard for the entire spine.

We also manufacture a small vibrator for local applications. It employs a regular one-eighth-horsepower electric motor (for either direct or alternating current). The most practical and powerful hand vibrator in existence. Fully guaranteed. **Price only $30.**

THERAPEUPTIC LAMPS

with **perfectly made** parabolic reflectors, giving a higher efficiency than any other lamp and at less than half the cost. Our **high power incandescent lamp** outfit sells for $10. Our arc lamp outfit, fitted with perfect parabolic reflector, standard, rheostat, switches and fuse block, complete, sells for $30.

Full particulars regarding these and others of our modern medical appliances freely given upon application. Address

MODERN MEDICINE CO.,
Battle Creek, Mich.

UNION PACIFIC OVERLAND ROUTE

How Luxury RELIEVES FATIGUE

When traveling long distances, nothing is more essential to comfort than exquisite decorations—elegant and pleasing color effects in tapestries. All such detail is provided on

The Overland Limited

Also electric lights, periodicals, newspapers, the latest books and news bulletins—making the trip to California via the

Union Pacific

a rare pleasure, instead of a tiresome journey.

For full information inquire of
E. L. LOMAX, G. P. A.
OMAHA, NEB.

1 CENT IS ALL IT WILL COST YOU

to write for our big **FREE BICYCLE** catalogue showing the most complete line of high-grade **BICYCLES, TIRES** and **SUNDRIES** at **PRICES BELOW** any other manufacturer or dealer in the world.

DO NOT BUY A BICYCLE from *anyone*, at *any price*, or on *any kind of terms*, until you have received our complete **Free Catalogues** illustrating and describing every kind of high-grade and low-grade bicycles, old patterns and latest models, and learn of our remarkable **LOW PRICES** and **wonderful new offers** made possible by selling from factory direct to rider with no middlemen's profits.

WE SHIP ON APPROVAL *without a cent deposit*, **Pay the Freight** and allow **10 Days Free Trial** and make other liberal terms which no other house in the world will do. You will learn everything and get much valuable information by simply writing us a postal.

We need a ***Rider Agent*** in every town and can offer an opportunity to make money to suitable young men who apply at once.

$8.50 PUNCTURE-PROOF TIRES ONLY $4.80 PER PAIR

Regular Price $8.50 per pair. ***To Introduce We Will Sell You a Sample Pair for Only*** **$4.80**

NAILS, TACKS OR GLASS WON'T LET OUT THE AIR

(CASH WITH ORDER $4.55)

NO MORE TROUBLE FROM PUNCTURES.

Result of 15 years experience in tire making. **No danger from THORNS, CACTUS, PINS, NAILS, TACKS or GLASS.** Serious punctures, like intentional knife cuts, can be vulcanized like any other tire.

Two Hundred Thousand pairs now in actual use. Over Seventy-five Thousand pairs sold last year.

Notice the thick rubber tread "A" and puncture strips "B" and "D," also rim strip "H" to prevent rim cutting. This tire will outlast any other make—SOFT, ELASTIC and EASY RIDING.

DESCRIPTION: Made in all sizes. It is lively and easy riding, very durable and lined inside with a special quality of rubber, which never becomes porous and which closes up small punctures without allowing the air to escape. We have hundreds of letters from satisfied customers stating that their tires have only been pumped up once or twice in a whole season. They weigh no more than an ordinary tire, the puncture resisting qualities being given by several layers of thin, specially prepared fabric on the tread. That "Holding Back" sensation commonly felt when riding on asphalt or soft roads is overcome by the patent "Basket Weave" tread which prevents all air from being squeezed out between the tire and the road thus overcoming all suction. The regular price of these tires is $8.50 per pair, but for advertising purposes we are making a special factory price to the rider of only $4.80 per pair. All orders shipped same day letter is received. We ship C.O.D. on approval. You do not pay a cent until you have examined and found them strictly as represented.

We will allow **a cash discount** of 5 per cent (thereby making the price **$4.55** per pair) if you send **FULL CASH WITH ORDER** and enclose this advertisement. We will also send one nickel plated brass hand pump and two Sampson metal puncture closers on full paid orders (these metal puncture closers to be used in case of intentional knife cuts or heavy gashes). Tires to be returned at **OUR** expense if for any reason they are not satisfactory on examination.

We are perfectly reliable and money sent to us is as safe as in a bank. Ask your Postmaster, Banker, Express or Freight Agent or the Editor of this paper about us. If you order a pair of these tires, you will find that they will ride easier, run faster, wear better, last longer and look finer than any tire you have ever used or seen at any price. We know that you will be so well pleased that when you want a bicycle you will give us your order. We want you to send us a small trial order at once, hence this remarkable tire offer.

COASTER-BRAKES, **built-up-wheels, saddles, pedals,** parts and repairs, and everything in the bicycle line are sold by us at half the usual prices charged by dealers and repair men. Write for our big **SUNDRY** catalogue.

DO NOT WAIT but write us a postal today. **DO NOT THINK OF BUYING** a bicycle or a pair of tires from anyone until you know the new and wonderful offers we are making. It only costs a postal to learn everything. Write it **NOW.**

MEAD CYCLE COMPANY, Dept. "J L" CHICAGO, ILL.

TAKE OFF YOUR CORSETS

LONG WAIST

IF your health does not receive your attention now, it will demand it later. And really what is the use of wearing corsets and taking chances when you can fulfill all requirements and still be perfectly safe without wearing them?

What is the use of suffering the agonies of corset wearing when you can dispense with them and look and feel twice as well? That is exactly what you can do. It is exactly what you have always wanted to do. The

GOOD HEALTH WAIST

solves the problem. No more agonizing shortness of breath; no more tight lacing; no more penetrating broken stays when this perfect waist is adopted.

You will enjoy your shopping, your walk, your ride, your calls, your housework when you give up the bondage of the corset for the freedom of the Good Health waist. You will wear it around the house and find it comfortable to work in. You won't have to take it off the minute you get home. It's as easy as an old wrapper and far more becoming.

The waist is washable and adjustable. You can make it larger or smaller by adjusting the shoulder straps and the oval elastic on either side. You can also regulate the length of the skirt with these adjustments.

We carry three qualities, medium weight jean twilled material, a lighter weight Batiste for summer, and a heavier weight Sateen.

PRICES

White or Drab Jean or Batiste		White or Drab Sateen		Black Sateen	
Bust Measurement	Prices	Bust Measurement	Prices	Bust Measurement	Prices
30-38	$1 25	30-38	$1 75	30-38	$2 00
40-42	1 50	40-42	2 00	40-42	2 25
44-46	1 75	44-46	2 25	40-46	2 50

CHILDREN'S WAISTS, (in White or Drab Batiste) Sizes 18-28 ..... $ 50

All other sizes can be supplied on short notice with waists made to order. Twenty-five cents should be added to remittance. We carry the even numbered sizes only.

DIRECTIONS FOR MEASURING

Take bust, hip and waist measures snugly over the undergarments. We have long and short waists. State which you want. The cuts show the difference.

For Children's Waists—Measure over clothing and deduct two inches; the size corresponds to the measurement at waist line.

This is just what you have been looking for. We have pleased hundreds. Why can we not please you? Order to-day.

SHORT WAIST

(DRESS DEPARTMENT)

Good Health Publishing Co.

BATTLE CREEK, MICHIGAN

The Largest and Most Thoroughly Equipped of Sanitariums

The Battle Creek Sanitarium management were the first to organize a thoroughly complete system of physiological therapeutics. Water-cures had existed before,—eclectic institutions, mineral springs, and similar establishments,—but the Battle Creek institution was the first to organize a system and method embodying all physiological agencies.

The fire which consumed the main building of the institution Feb 18, 1902, gave opportunity for complete reorganization and new equipment. The new structure is absolutely fire-proof; the mode of fire-proof construction employed was, of all so-called fire-proof constructions, the only one that stood the test of the recent conflagration in Baltimore.

One hundred and seventy-five rooms with private baths; six hydraulic elevators; electric lights; and private telephone in each room.

Spacious parlors on every floor, roof garden, dining-room and kitchen at the top. Beautiful outlook from every window.

Accommodations for eight hundred guests. Staff of thirty doctors; three hundred and fifty nurses.

Nearly forty years' experience in this institution has demonstrated that the great majority of chronic invalids of all classes, including many considered incurable, can be trained up to a state of healthful vigor by a systematic regimen based upon scientific principles, combined with a thoroughgoing application of the resources of hydrotherapy, phototherapy, thermotherapy, massage, Swedish movements, Swedish gymnastics, electrotherapy, and the open-air treatment, guided by the findings of bacteriological, chemical, microscopical, and other accurate methods of examination.

Special ward for surgical cases with perfect appointments.

Special departments for diseases of the eye, ear, nose, and throat, and in charge of experienced specialists.

For information concerning the facilities afforded, terms, etc., address

THE SANITARIUM, Battle Creek, Mich.

The Pennsylvania Sanitarium

An institute of physiological therapeutics, employing the well-known Battle Creek methods. Combines the best features of a first-class home with all the medical advantages of a modern hospital, and in addition has an unsurpassed collection of appliances, methods, and facilities for training sick people back to health and efficiency.

Health by training is not palliative, but means reconstruction of the whole body. This is what we set about to do for every one who visits us. For Booklet A, giving methods and detailed information, rates, etc., address —

Pennsylvania Sanitarium

1929 Girard Ave., • Philadelphia, Pa.