

GOOD HEALTH

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

A G Daniels Ex
Tacoma Park Sta D

SEPTEMBER

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.

USE THIS COUPON

GOOD HEALTH PUBLISHING CO.,
Battle Creek, Mich.

Gentlemen:—At no cost to me, please send your catalogue describing the Good Health Waist.

Name _____

Address _____



SHORT WAIST

In replying to advertisements please mention GOOD HEALTH.

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September, 1906

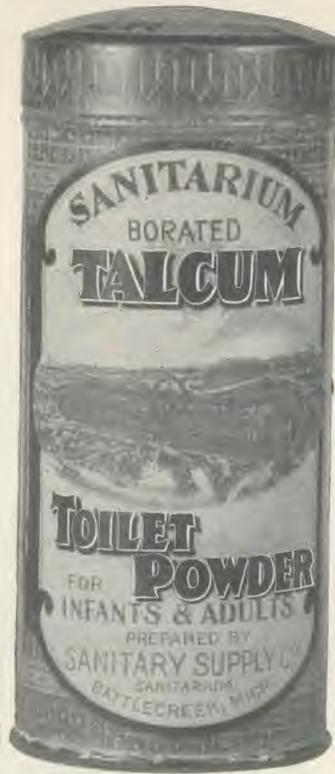
- The World's Daily Loss. By J. H. Kellogg, M. D.
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- EDITORIAL.

Kuyler's
**NOT LOWEST IN PRICE~
 BUT BEST!**



**CHEAPEST,
 BECAUSE BEST AND GOES FARTHEST.**

GROCCERS EVERYWHERE.



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.**

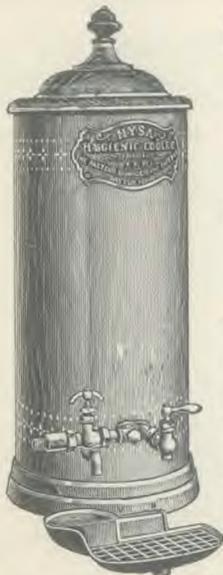
It is an excellent remedy for **PER-SPIRING FEET**, and 'is especially adapted—

**FOR
 INFANTS**

Delightful after
 Shaving

Price, *postpaid*,
 25c. per box

Agents Wanted



**NINE REASONS WHY
 The NYSA HYGIENIC
 WATER COOLER**

is the **MOST PERFECT** in the world:-

1. The materials used are the most durable.
2. The water reservoir is the best German Enamel Ware.
3. It is the only cooler made in which the water and ice are separated.
4. The quality of ice need not be considered as it is separated from the water.
5. It is made with a view of using the minimum quantity of ice in cooling.
6. It can be attached direct to the water supply filling automatically, or can be filled in the usual way.
7. It is the only cooler in which water can be cooled without changing its properties.
8. It is the only cooler arranged to connect with the sewer to carry off all waste.
9. It is the most ornamental, compact, convenient, economical, sanitary, durable and perfect water cooler in the world.



If you are interested, a postal will bring you complete particulars. Let us send you our current catalogue.

We make filters of

THE PASTEUR-CHAMBERLAND FILTER CO.

DAYTON, OHIO

Pure Water for Your Country Home

How an Abundant Supply Promotes Good Health

THE water problem—the important problem of your family's health, convenience and comfort,—is completely solved by the **Kewanee System**.

Its use absolutely guarantees you against the ills of the old style, imperfectly adapted attic tank and gravity tower systems.

Because, with the **Kewanee System** you have no more tanks in the attic to burst and flood the house; no more exposed water reservoirs; **no more germ-laden water to breed disease.**

* * * *

Tainted water is a fruitful source of disease—every one knows that.

And in perhaps 90 % of the instances where sickness has resulted from this cause, the water has received the germ poison **after** it has been drawn from its original source.

The great danger lies in **exposing** the water we drink for any considerable time as is done where it is drawn from gravity tanks, reservoirs, etc.

With the **Kewanee System** this is impossible, because the water is never exposed at any stage from its original source to the moment it flows from the faucet when you turn the tap. *

* * *

The **Kewanee System** is easily explained; it consists simply of having a **Kewanee Air-tight Steel Tank** located in your cellar or buried in the ground.

The water from **your own well or cistern** or other source is pumped into the **Kewanee Tank**.

When the tank is half full of water, the air which originally filled the entire space will be compressed into the upper half of it.

When the tank is two-thirds full of water, all the air will be compressed into the upper one-third.

At this point there will be a pressure of 60 pounds, under ordinary conditions.

An average pressure of 40 pounds may be maintained under ordinary conditions; this

will elevate the water in the service pipes about 90 feet.

And this strong pressure causes a healthful aeration of the water.

You see that the **method**, while perfectly simple, is based on a thoroughly scientific plan.

The **Kewanee Water Supply Company** was first to **apply** this principle successfully in supplying water, and after ten years of experience, the system has proved **entirely satisfactory.**

Over 5,000 Kewanee Outfits now in use.

* * * *

To give the necessary pressure for fire protection, the elevated tank must be located on the top of a tall tower, which is expensive, unsightly and dangerous.

The water freezes in winter, becomes warm, stagnant, and full of disease germs in summer, and at all seasons repairs are a big item.

The attic tank affords too little pressure for fire protection. Its weight is apt to crack the plastering and when it leaks (as it will), your house is flooded.

* * *

The installation of a **Kewanee Pneumatic Water System** in your country home means.

- plenty of pure fresh water,
- cool water in the summer,
- no freezing water in winter,
- absolute protection from fire,
- decrease in insurance rates,
- a plant that will last a lifetime,
- no expensive repairs,

It solves the country water problem completely.

Kewanee Outfits are made in sizes suited to the smallest cottage or largest building or group of buildings.

We guarantee every Kewanee Outfit to give perfect service.

Send for Catalogue No. 38

which shows where Kewanee outfits may be seen in operation—free if you mention this paper.



Kewanee Water Supply Outfit in Operation

KEWANEE WATER SUPPLY COMPANY,
 Drawer M M, KEWANEE, ILL.

\$33 TO THE PACIFIC COAST

Second-class one-way colonist tickets will be on sale via the Chicago, Union Pacific & North-Western Line to various points in California, Oregon and Washington, every day from September 15th to October 31st, inclusive.

Daily and Personally Conducted Excursions in Pullman Tourist sleeping cars, through to San Francisco, Los Angeles and Portland without change, in charge of experienced conductors whose entire time is devoted to the comfort of passengers. The cost of a double berth, accommodating two people if desired, is only \$7.00 from Chicago to the Coast.

Full particulars concerning these excursions can be secured by addressing S. A. Hutchison, Manager Tourist Department, 212 Clark Street, Chicago, Ill.

\$62⁵⁰ CALIFORNIA AND RETURN

This special low rate Chicago to San Francisco and Los Angeles is for strictly first-class round-trip tickets on sale daily September 3 to 14. Return limit October 31st.

\$75.00 round trip to San Francisco, Los Angeles, San Diego, Portland and Puget Sound points, daily to September 15th. Return limit October 31st.

Round-trip tickets are good for passage on the electric lighted Overland

Limited, electric lighted Los Angeles Limited and China and Japan Fast Mail, all through to the coast without change.



The Best of Everything

All agents sell tickets via this line.

W. B. KNISKERN, P. T. M.
Chicago & North-Western Ry.
CHICAGO, ILL.



THE ONLY DOUBLE TRACK
RAILWAY BETWEEN CHICAGO
AND THE MISSOURI RIVER.

Allied Sanitariums of Southern California

Institutions using the same methods for the restoration and preservation of health that have proved so successful in the older institutions at Battle Creek, Mich., St. Helena, Cal., and Boulder, Colo.

Circulars furnished on application. You can see Southern California while stopping at these Sanitariums.

When you visit the beautiful orange groves of Redlands and Riverside, stop at Loma Linda, or the "Hill Beautiful."

Loma Linda Sanitarium is sixty-two miles east of Los Angeles on the main line of the Southern Pacific Railroad, located upon a hill 125 feet high. It stands in a valley amid orange groves, fruits, and flowers, for which this section is famous. Surrounding this valley on every side are emerald hills and snow-capped mountains. Loma Linda has been justly called a veritable "Garden of Eden." Address,

LOMA LINDA SANITARIUM

LOMA LINDA, CALIFORNIA



LOMA LINDA SANITARIUM



PARADISE VALLEY SANITARIUM

Do you dread the **hot days** and **sultry nights** of July and August? Don't take the risk of another hot summer, when you can enjoy the **beautiful cool climate of San Diego** where hot days are entirely unknown.

Paradise Valley Sanitarium is new and thoroughly up-to-date, the only one of the great Battle Creek institutions by the sea.

Send for our new summer catalog.

P. V. SANITARIUM
NATIONAL CITY,
CALIFORNIA

—WHEN YOU VISIT—
LOS ANGELES AND ITS SEA-SIDE RESORTS, MAKE YOUR HOME AT GLENDALE SANITARIUM.

Glendale sanitarium is a three-story building of 75 rooms, steam heated and lighted with electricity. It is located at Glendale, one of the suburban villages of Los Angeles, eight miles from the heart of the city. The Pacific Electric Cars pass the Sanitarium every thirty minutes. The elevation is 600 feet above the sea. The climate is delightful both in summer and winter. Address,

GLENDALE SANITARIUM

GLENDALE - CALIFORNIA



GLENDALE
SANITARIUM



COLORADO

A trip through the West is of itself a delight, but if it include a visit to Colorado—that land of cloudless sky, of rare climate and scenery—it is a journey never to be forgotten. In natural beauty, this region of picturesque mountains and canyons offers even more varied pleasures than Switzerland; as a health resort it is unsurpassed.

When planning your trip west, remember that to get the best in travel you should see that your ticket is for

The Colorado Special

Of the

Chicago, Milwaukee & St. Paul Railway

Leaves Union Passenger Station, Chicago, at 6.05 P. M. daily. Arrives Denver 9.30 P. M. the next day. Another good train leaves Chicago 10.25 P. M., arriving in Denver 7.50 A. M. the second day.

Thirty dollars buys a ticket via the St. Paul Road any day this summer, after June 1st, from Chicago to Denver, Colorado Springs, or Pueblo and return.

Folders and booklets descriptive of Colorado mailed free to anyone interested.

F. A. MILLER,
General Passenger Agent,
Chicago.

R. C. JONES,
Michigan Passenger Agent,
32 Campus Martius, Detroit.

THE NEW VOICE

John G. Woolley, Editor

Established Sept. 25, 1884

The Greatest Prohibition Newspaper in the World

The national and international bureau of information on all subjects relating to the liquor traffic.

Published weekly. Contains sixteen pages every issue, sometimes more.

“It has a cheer for every honest effort against the liquor traffic.”

C. N. Howard, President Prohibition Union of Christian men says: “No other reform can show a single agency which has accomplished so much for its consummation as has this paper for Prohibition.”

PRICE \$1.00 A YEAR IN ADVANCE

Sample copy free on application

Special Price of “Good Health” and the “New Voice” to new subscribers, \$1.25

In connection with the above we can offer “Temperance Progress in the 19th Century,” by John G. Woolley, and William E. Johnson. The latest and most important history of the Temperance Reform yet published. A valuable reference book. 533 pages. Cloth, price \$2.00.

To new subscribers we can make the following unparalleled offer—

The New Voice, regular price	\$1.00	
Good Health	1.00	
“Temperance Progress in the 19th Century”	2.00	\$4.00
Special Price to new Subscribers	\$2.70	

or only 70 cents more than the price of the book alone.

Address either—

The New Voice Company

Hyde Park, Chicago, Ill.

or Good Health Pub. Co.

Battle Creek, Mich.

The Battle Creek Sanitarium and Hospital Training-School

For CHRISTIAN NURSES *A Great Opportunity*

For all Christian young men and women who are in sympathy with the principles taught at the Battle Creek Sanitarium, and who desire to prepare themselves to work for the betterment of the race in the capacity of Christian nurses.

A three-years' course is provided, and the instruction given comprises a larger number of subjects and more thorough training than is offered by any other school in the world. In addition to the subjects taught in hospital training schools special attention is given to all branches of physiologic therapeutics, including hydrotherapy, radiotherapy, phototherapy, kiniesitherapy, or manual Swedish movements, and massage.

There is also a very thorough course in surgical nursing. Ladies receive thorough theoretical and practical instruction in obstetrical and gynecological nursing.

The course also includes instruction in bacteriology and chemistry, comprising laboratory work, lectures, and recitations.

Nurses receive on an average two hours of regular class work daily, besides the regular training at the bedside and in practical work in the various treatment departments.

The course in gymnastics embraces not only ordinary calisthenics, but also the Swedish system of gymnastics, medical gymnastics, manual Swedish movements, swimming, and anthropometry.

The school of cookery affords great advantages in scientific cookery, and also instruction in dietetics for both the sick and the well, the arranging of bills of fare, the construction of dietaries, and all that pertains to a scientific knowledge of the composition and uses of foods.

The course for men covers two years of instruction and training.

Graduates receive diplomas which entitle them to registration as trained nurses. Students are not paid a salary during the course of study, but are furnished books, uniforms, board and lodging. Students are required to work eight hours a day, and are expected to conform to the principles and customs of the institution at all times. Students may work extra hours for pay. The money thus earned may be ample for all ordinary requirements during the course.

Applicants received whenever vacancies. The next class will be organized the first of October, 1906.

Students who prove themselves competent may, on graduation, enter into the employ of the institution at good wages. For particulars address the

BATTLE CREEK SANITARIUM TRAINING-SCHOOL,
Battle Creek, Michigan



St. Louis

Green, Gold and Brown "Daylight Special"—elegant fast day train. "Diamond Special"—fast night train—with its buffet-club car is unsurpassed for convenience and comfort.

Buffet-club cars, buffet-library cars, complete dining cars, parlor cars, drawing-room and buffet sleeping cars, reclining chair cars.

Through tickets, rates, etc., of I. C. R. R. agents and those of connecting lines.

A. H. HANSON, PASS'R TRAF. MGR., CHICAGO
S. G. HATCH, GEN'L PASS'R AGENT, CHICAGO



6th With spectacles on nose.

For Shakespeare's Seven Ages

A compact, delicious lunch for the traveler o'er land or sea—highly nutritious and digestible—ready any moment. A healthful and invigorating food-drink, invaluable in car or sea-sickness. More wholesome and recuperative than tea, coffee or cocoa. It is pure, rich milk from our sanitary dairies, with the extract of selected malted cereals.

In powder form, a delicious beverage may be prepared with either hot or cold water. In Lunch Tablet form, it is always ready for solution in the mouth. A palatable, nutritious confection—a convenient quick lunch for every member of the family, old or young.

Horlick's Malted Milk is used extensively at the Battle Creek Sanitarium



At all druggists. Sample vest pocket lunch case, also booklet giving valuable recipes, sent free, if mentioned.

ASK FOR HORLICK'S; others are imitations

Horlick's Malted Milk Co.,
Racine, Wis., U. S. A.
LONDON, ENGLAND. MONTREAL, CANADA

OBESITY

Belts are used to advantage by corpulent people, both ladies and gentlemen, to reduce corpulency and give shape to a pen-



dulous or relaxed abdomen. The use of these belts reduce the size and leave no room for superfluous fat to accumulate.

Elastic Stockings



for enlarged veins, weak or swollen joints, or where there is tenderness, itching, or burning, are the recognized relief and cure for these ailments.

Literature gratis. Correspondence invited.

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92 Wabash Ave., Chicago, Ill.
2 Doors North of Washington Street

MANUFACTURERS OF

High Grade Surgical Instruments, Hospital Supplies, Invalid Comforts, Trusses, Crutches, Etc.

SYLMAR OLIVE OIL

DIRECT FROM THE RANCH IN CALIFORNIA

Sylmar Olive Oil was awarded the Grand Prize (highest award) at the St. Louis World's Fair in competition with all other olive oils.

We produce Sylmar Olive Oil under the most favorable conditions from the finest ripe olives grown in California. We own our own olive ranch, the trees, and the most improved mill. We pick, press and bottle our own product. In a word, we produce the highest quality of olive oil in the world.

Sylmar Olive Oil retains all the rich, fruity flavor of ripe California olives and is most palatable. Sylmar will keep longer than any other olive oil without turning rancid. Sylmar can be purchased with the confidence that every bottle will stand the most rigid chemical analysis and be proven free from adulterants.

\$3.00

**EXPRESS
PREPAID**



Natural Oil of Olives Perfected from
"Blossom to Bottle" on the
Largest Olive Ranch in the World

The absolute purity of Sylmar Olive Oil is protected by a guarantee of \$1,000.00 in gold.

Pure Olive Oil is universally recognized as a highly nutritious form of food, easily digested and almost wholly assimilated, while its therapeutic values are agreed upon by all leading physicians.

We publish a booklet containing physicians' directions for medicinal uses of olive oil, cooking recipes government recommendations, descriptions of our process and directions for detecting adulterants in olive oil. We will send this booklet and a sample bottle of the oil to any address for 10c. postage.

Send postoffice or express money order for \$3.00 for three quart-size bottles and we will deliver them to you express prepaid. Satisfaction guaranteed or money refunded. You take no risk when you buy Sylmar Olive Oil.

Los Angeles Olive Growers Ass'n, 328 Bradbury Bldg., Los Angeles, Cal.



"Certainly no Periodical, and probably no book, on birds ever found anything like such favor with the public as **Birds and Nature**."—*Evening Post, New York.*

\$4.40 for \$2.20

A Combination Offer That Means Something

Birds and Nature (1 year)	\$1.50
Birds of Song and Story (Grinnell)	1.00
Game of Birds35
Golden Pheasant (Colored Picture)25
*Literature Game40
*Game of Industries40
Twenty-Five Pictures (From Birds and Nature)50

All for
only

\$2.20

Postage or
Express
25 cents

The total amount of value..... \$4.40

*Geography or History Game may be substituted.

BIRDS OF SONG AND STORY

A bird book for Audubon societies, 16 color plates. Any other \$1.00 book may be substituted for Grinnell.

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Illustrations of popular birds, in colors, true to nature, on 52 finely enameled cards, 2½x3½ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

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A beautiful picture for framing. Printed in natural colors on fine paper, 18x24 inches.

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500 questions and answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

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Educational—400 questions and answers on the great industries of our country. 100 cards, 2½x3 inches.

A. W. MUMFORD & CO.

Publishers

378 Wabash Ave., Chicago

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We will furnish any of the following named supplies in combination with one year's subscription to **GOOD HEALTH**. Add to the one dollar you send for **GOOD HEALTH** the price set opposite the article you desire

Combination Water Bottle and Fountain Syringe B.....	\$1 00
Combination Water Bottle and Fountain Syringe A.....	1 25
Hot Water Bag, cloth insertion, two quart.....	75
Hot Water Bag, cloth insertion, three quart.....	1 00
Spine Bag, 26-inch.....	1 00
Stomach Tube.....	1 00
Natural Flesh Brush.....	00
Wet Abdominal Girdle.....	1 00
Faradic Dry Cell Battery.....	7 00
Abdominal Supporter.....	3 00
Perfection Douche Apparatus, Complete.....	1 25
Douche Pan.....	50
Perfection Vaporizer.....	2 00
Magie Pocket Vaporizer.....	25
Magie Pocket Vaporizer, with Bulb for Ear Treatment.....	75
Rectal Irrigator.....	10
A Package Containing Sanitarium Talcum Powder, Massage Cream, Antiseptic Dentifrice.....	25

Any of the Above Combinations will be Sent to Separate Addresses if so Desired. Address

GOOD HEALTH PUB. CO., Battle Creek, Mich.

**Wonders of
Colorado**

Side trips from Denver through majestic gorges and fascinating canons, to the lofty peaks, great mining camps and famous resorts of the Rockies.

Write for rates and detailed information about the wonders of such a vacation to the

Union Pacific

Address
E. L. Lomax, G. P. A.
Omaha,
Neb.

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.
- 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. Leadworth, 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.
- TREATMENT ROOMS, 201 Granby Block, Cedar Rapids, Iowa. R. L. Mantz, 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.
- ADIRONDACK SANITARIUM. (Formerly Upper Hudson Sanitarium), Lake George, 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.
- 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.
- NORTHWESTERN SANITARIUM, Port Townsend, Washington. W. R. Simmons, 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.
- SANITARIUM 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.

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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.
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- THE LAUREL, 11 W. 18th St., New York City.
- HYGEIA CAFE, 203 3d Ave., Peoria, Ill.

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

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- 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.
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In replying to advertisements please mention GOOD HEALTH.

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 Health and Household Economics

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, \$40.00.

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, \$40.00 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 the

BATTLE CREEK SANITARIUM SCHOOL OF HEALTH AND HOUSEHOLD ECONOMICS

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FAVORITE MELODIES



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Joe Mitchell Chapple

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There are to be ten classes of songs, and forty-nine selections in each class:—four hundred and ninety separate purchases to be made, and One Thousand Dollars paid out as follows: For the best song in each of the ten classes, I will pay \$25.00; for the second, \$15.00; the third, \$10.00; the fourth, \$5.00; and for the remaining forty-five songs selected in each class I will pay \$1.00 each.

THE TEN CLASSES ARE:

First Class:—Patriotic and War Songs from 1620 to the present day. These have played no mean part in the history of our nation, and should become familiar to the present generation.

Second Class:—Sea Songs and Chanteys. Our people are descended from races that have held dominion over seas for centuries, and there are quaint songs of extraordinary interest to be found among those who are preserving old records and family lore.

Third Class:—Lullabies and Child Songs. The sweetest melodies are often those our mothers sang over our cradles and trundle beds. Singers of all ages have hallowed them with a singular mystery and sweetness.

Fourth Class:—Dancing Songs, Lits and Jigs. The world needs a revival of the jolly old songs that were sung by the circling onlookers, while the lads and lasses "tripped the light fantastic toe" by the light of the harvest moon or the glow of a blazing pitch-knot.

Fifth Class:—There are Plantation and Negro Melodies in great variety. The plaintive and the gay are seldom expressed with more natural emotion than in the songs of the negroes down South.

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by the passing of generations, and the relegation of old books to desuetude in the attic. Let us have a full quota of "camp meeting songs and fervid, soulful hymns."

Seventh Class:—This is for the universal Love Songs of all races. The Norse, German, Gaelic, Iberian, Italian and Slav all have cherished the love lyrics from the fatherland. Varied as were the lives of the different peoples, those old lyrics must possess a singular interest for us all, since love dieth not and "music be the fool of love."

Eighth Class:—Selections from Operas and Operettas. The classic and the popular are so distinct and yet sometimes so interwoven, that memory glows with them. Let us have some of the very old and beautiful masterpieces.

Ninth Class:—The popular Concert Hall and Lyceum songs and ballads. These were sung by traveling troupes or troubadours a generation or two ago, and were renowned for their humor and money's worth of fun. These ballads have not outlived their purpose, and we want them revived.

Tenth Class:—In this let us group the good old College, School and Fraternity Songs that link us so closely to "storied halls and ivied walls," and are as much a part of our educational institutions as the campus or the charter itself. Here is where every college man and "co-ed" can meet on neutral ground, and contribute songs that the great common people of America can take up in grand refrain.

It may be you can find a rare old song among the yellowed sheets or song books in the attic; perhaps one or more exist only in the misty memories of parents or aged grandparents. Search them out, and if but fragments can be found or remembered, don't be discouraged. Send in the fragments. Perhaps someone else can produce the missing parts.

Last year I advertised everywhere for "Heart Throbs," and 50,000 people sent me their cherished clippings, some "bedewed with tears and embalmed with sighs." I paid \$10,000 for those contributions.

Now don't delay to send in your Favorite Song Selection as soon as possible. As soon as the ten classes (forty-nine songs in each class) are filled, this offer will be withdrawn. Payments will be made at that time.

Understand, that this opportunity is open to all without subscribing for the National Magazine or charge of any kind.

All selections submitted will be carefully considered, and heart value counts in the awards. In the event of a tie for any award offered, the award will be equally divided between those sending in the same song.

We cannot be responsible for contributions; stamps should be enclosed for return postage.

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JOE MITCHELL CHAPPLE,
EDITOR NATIONAL MAGAZINE, BOSTON, MASS.

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A YOUNG STUDENT

GOOD HEALTH

A Journal of Hygiene

VOL. XLI

SEPTEMBER, 1906

No. 9

STATISTICIANS publish, now and then, summaries of the annual losses from fire, cyclones, shipwrecks, and various other destructive forces. The enormous totals of these property losses are often appalling, representing sums sufficient to build a great metropolis or pay a national debt; *but the greatest loss of all is seldom referred to.*

The World's Daily Loss

The loss of material is a calamity; but what can be said of the loss of human life? No proper estimate can be put upon the value of a human life. We know not what might be the value of the life work of any single human being.

The smallest infant may be the embryo of a discoverer, an inventor, of sources of wealth beyond estimate in amount.

The State places the minimum value of a man's life at \$5,000, because at \$1.00 a day a man can earn \$300 a year, which is the interest at 6% on \$5,000. But reckoning a man's time worth \$2.75 a day, and placing interest at 4%, a fairer rate, a man's value should be placed at \$20,000. To be sure, our estimate is modest, however, we will divide this amount, and fix the money value of a life at \$10,000. Let us now compute on this basis the world's daily and annual losses from destruction of human lives by war, accident and disease.

The average length of human life at the present time is conceded to be about forty years. This means that of every thousand persons living, twenty-five die annually. This is true in civilized lands, like the United States. In such half-civilized countries as Mexico, for example, the death rate is much higher. The death rate in Mexico is so great, in fact, that the average length of life is reduced to barely seventeen years, which means a mortality rate of sixty per thousand. It is probable that the same rate holds good for most savage and semi-savage countries. The greatest loss is from infant mortality. The savage infant has a hard chance for its life.

The estimate that the world's annual death rate is twenty-five per thousand is not, then, an extravagant one, but represents less than the actual truth.

What, then, is the sum total of the world's daily and, yearly loss of life? *Estimating the world's population as fifteen hundred millions (1,500,000,000), and the total annual death rate at twenty-five per thousand means not less than*

37,500,000, or nearly forty million deaths annually (doubtless actually more than this).

THIS IS AT THE RATE OF 103,000 deaths every day.

These figures are truly appalling. Think of it. A whole city, a great army, wiped out every day of the year!

THE MONEY VALUE OF THESE LIVES IS REPRESENTED BY A SUM 10,000 TIMES AS GREAT, \$1,030,000,000, AN AMOUNT EQUAL TO THE NATIONAL DEBT.

And not once only does this loss occur, as in the case of a fire or an earthquake, but every day of the year, and year after year. Every morning the sun rises upon 100,000 new-made graves, which hold a hundred thousand human forms from which the life has gone out,— a billion dollars of material worth.

How much of this loss of life and property is necessary, or inevitable?

This is a question not easy to answer, but it may be safely asserted that *half, at least, of the annual death rate is due to preventable causes, and there are good authorities who do not hesitate to claim an unnecessary rate of human life amounting to fully nine-tenths of the annual mortality.* Who can form even a moderate conception of a daily loss amounting to half a billion or even a billion dollars, or \$200,000,000,000 A YEAR.

The calamity at San Francisco was terrible and almost unprecedented in this country, but even this catastrophe, awful as it was, shrinks into insignificance beside the daily sacrifice which the world makes to ignorance and sin.

What can be done to stop this prodigious world loss, this fearful, increasing waste?

THE ONE AND ONLY REMEDY IS TO BE FOUND IN A RETURN TO NATURAL HABITS OF LIFE, IN COMING BACK TO SANE AND SIMPLE METHODS OF LIVING.

Why should we hesitate when the need of reform is so manifest and urgent? Custom, conventional usage, holds us with an iron grip. We need an earthquake in every community to awaken us to a proper sense of the world's needs, and our duty thereto.

J. N. Kellogg

What the White Race May Learn from the Indian

BY GEORGE W. HARTON JAMES

VII

HOW these "things we may learn from the Indian" grow upon us, as we study the noble red man in his own haunts. Again and again I have noticed that "*he doesn't know enough to go in when it rains.*" The white man who first coined that expression deemed it an evidence of smartness and reared his head more proudly than his fellows because he was the author of so bright an idea. Yet when you come to consider it what a foolish proposition it is. Go in when it rains? Why should you go in? Do the birds go in? I have just been watching them from my study window,—larks linnets, song sparrows, and mocking-birds. Not one of them seems to care a particle about the rain and their songs are as sweet and as cheery and as full of melody as they are on the days of brightest sunshine. How well

I recall seeing a mocking-bird on a stand on my lawn one day when the rain was pouring down fiercely. He stood with bill up and tail down so that he had a very "Gothic roof-like" appearance, his mouth wide open, and as the rain fairly poured from the end of his tail he sent out a flood of melody more rich and sweet than any song I had ever heard in my life before.

And the horses! How they enjoy the

rain! I have seen them loose in a stable having a double door, the upper of which was open, and when it rained they would thrust their noses out into the rain and let the drippings of the eaves fall upon them with evident pleasure and longing that they might get out into it all over.

Nothing alive in Nature save "civilized" man dreads the rain. The Indian fairly revels in it. I was once at the Havasupai village for a couple of weeks, the guest of my friend Wa-lu-tha-wa. His little girl, seven years old, was a perfect little witch. She was quick, nery, lively, and healthy. When it rained and her clothes got wet I tried to prevail upon her to come into shelter. But no! She wanted to be out in it and off she sprang through the door, playing with the pools as they collected and running with others of her playmates to where the



A Havasupai child brought up to enjoy being out in the rain

extemporized waterfalls dashed themselves into semi-spray as they fell upon the shelving rocks. Here they stood, in the water and rain, like dusky fairies, laughing and shouting, romping and sporting, in perfect glee.

The older women, too, care little for it, unless it is very cold or the wind is blowing. They no more mind being wet than they do that the wind should blow, or the sun shine, and as for any ill effect

that either children or grown-ups suffer from the wet, I have yet to see it. Why?—The reasons are clear. In the first place, they have no fear of the rain. It is not constantly instilled into their minds from childhood that "they mustn't get wet, or they'll take cold," and girls are not taught to expect functional disarrangement if they "get their feet wet." This has something to do with it, for the effect of the mind upon the body is far more potent than we yet know.

and make their wearers uncomfortable."

I have thought a great deal about this, and am not prepared to say that with our present costume I would advocate women's going out much in the rain. But I do say that once in a while they can put on short skirts and stout shoes and such old clothes as can not be injured by getting wet, and then resolutely and boldly sally forth into the rain, and the harder it comes down, the better, if it be warm weather. Then let them learn to enjoy the pattering of the



Havasupai school-children who are not afraid of getting wet

In the second place, they move about with natural activity in the rain as at other times. This keeps the blood circulating and prevents any lowering of the temperature of the body.

In the third place, their general out-of-door life gives them such a robustness that if there is any tax upon the system it is fully ready to meet it.

But, I am asked, "Would you advocate white people, especially girls and women getting wet? Think of their skirts, bedraggled in the rain and how these wet skirts cling to the ankles

rain upon cheeks and ears. Let them hold out their hands and feel the soft and gentle caresses of the "high-born, noble rain." Let them watch the drops as they spatter on the leaves and trickle down the stems, scattering volume and speed as they reach the bole, and fall to the ground, there to give life and nourishment to the whole plant. Everything in Nature loves to be out in the rain. How fresh and bright the trees look after a shower. How the rocks are cleansed and made bright and shining! How their color comes vividly out

in the rain! And upon human beings the effect is the same, provided they value health and vigor more than they mind a little discomfort in the bedraggling of their clothes. Years ago I learned the same lesson. I was riding from the line of the railway, over the Painted Desert with several Havasupai Indians. It was the rainy season. Showers fell half a dozen times a day. At first I wished I had an umbrella. I got wet through and so did the Indians. I thought I ought to feel wretched and miserable, but somehow the Indians were as bright and cheerful as ever, so I plucked up heart and courage and in half an hour my clothes were dry again. Four or five times that day and an equal number the next day, I got wet through and dry again. Riding

horseback kept me warm, and the quick and healthful circulation of the blood, the active deep breathing caused by the exercise, the absence of fear in the soul, all combined to make the wetting a benefit instead of an injury.

My friend W. W. Bass, of the Grand Canyon of Arizona, with whom I have made many trips in that Wonderland region, tells with great gusto a true story of my riding over the desert on one occasion clothed in one of the old-fashioned linen dusters that reached below my knees. It was warm weather and dusty on the railway, hence the duster, I suppose. But when we got fairly out on the desert it began to rain, and how it did pour! It came down so rapidly that by and by my pockets were full of water, and Bass says that when he overtook me as I was jogging along, singing at the top of my voice (just as

the mocking-bird did), the water splashing out of my pockets as I bounced up and down in the saddle. The linen duster clung to the sides and back of the horse and wrapped itself around my legs so that the picture was comical in the extreme. But I was happy and refused to feel any discomfort, and so got joy out of the experience, as well as health and vigor. For let it be remembered that when I came from England, twenty-five years ago, I came as an in-



Camping out on the way to the Salton Sea

valid, broken down in health completely; so much so that I was even forbidden to read a book for a whole year. Now, few men are so healthy as I. Years of association with the Indian, learning simplicity and naturalness of him, have aided materially in making the change. I have learned the value of putting the primary things first. I used to be so "nice" and "finicky" that the idea of having my clothes wet would give me a small panic. They would get out of shape and look badly and have to be pressed before I could wear them again. But when I came to the conclusion that I was worth more than clothes, that my health was of more importance than a crease in my trousers, I found I was taking hold of a principle which, while it might at times seem to be rough on my clothing, would have a decidedly beneficial influence on my health.



Indian and His Hut

And this leads me to the importance of learning this lesson from the Indian. (Figure 4.) He is not as "nice" sometimes as I wish he were, but we are far too nice, often, for health and comfort. Many a woman ruins her health by wrecking her nerves, drives her husband distracted, worries and annoys her children by being too nice in her house. I have found them, in New England and elsewhere, aye, even in Old England, women who valued a clean house more than they valued their own lives, the happiness of their children and the comfort of their husbands. Indeed, in one case I well remember a woman (in England) drove her husband into temporary insanity, and finally into ignominious flight away from her, by her eternal washing of floors, shaking of carpets, polishing of furniture, and dusting down. Every time the poor fellow went in from the workshop he must change his clothes. If he came in from the outside he must take off his shoes before he entered the door. If he put his warm hand down on the polished table he was rebuked, for the poor, wretched woman at once got up, fetched her chamois leather and rubbed off the offending marks. Poor, wretched woman, and equally poor,

wretched man! No wonder he went crazy and finally lost his manhood and ran away.

I know this is an extreme case. But I vouch for its strict truth. And there are thousands of women (and men too, for that matter) who are afflicted in a serious measure with the same disease. In that home where niceness is valued more than health,

and comfort, and work in life, there lurks serious danger. Go to the Indian, and while I do not suggest that you lose all niceness, by any means, seek to learn some of his philosophy and place first things first. First health, happiness, comfort, peace, contentment, love, *then* these other things.

I'm going to make a confession that I am afraid will bring me into sad disgrace with some of my readers. When my first boy was born, his mother was very proud of him. As he grew out of his baby clothes she liked to see him look nice and neat and clean. He must be



Yuma woman whose hair has been well washed in a mud bath

a pretty little cherub, dressed in white and have the manners of a little Lord Fauntleroy. I quietly remonstrated (I'm always quiet about everything I do), but to no effect. So I resolved on a coup d'etat. One morning after the youngster was dressed up in his white bib and tucker, and as uncomfortable and unhappy as any and all healthy children feel at such treatment, I took him by the hand, and led him out of doors and out of sight of the maternal eye, where there was plenty of mud and plenty of water. In half an hour his changed appearance was a marvel.

We started a little stream of water, which we then dammed. We made mud pies and I helped him mix the "dough" in his apron. We reveled in mud from top to toe. I rolled him in it, so that back was as vividly marked as front. Not a remnant of niceness was left in him. We went home happy and contented, laughing and merry, but bedaubed and beplastered everywhere. We had had such a good time. And it was such fun going out with father.

We were going again to-morrow and the next day and the next. And so we did. It needed no words, no argument. It did not take long to get two or three suits of brown canvas or blue denim and the youngster grew up healthy, happy, vigorous, strong, tough, and often dirty, rather than anæmic, miserable, dyspeptic, weak and ailing, and nice. There would be far less demand for children's tombstones, surmounted

with marble angels and inscribed with wretched doggerel, if mothers valued health rather than niceness, vigor and strength before primness and immaculate bibs and aprons. So I say, let us not be over-nice. And especially let us not train our children to value clean hands and clothes more than the rugged health that comes from contact with the soil and out-of-door enjoyments. I find one can enjoy home and Browning, Dante and Shakespeare all the better because his body is vigorous and strong, his brain clear and his mind active as the result



George Wharton James in his garden in Pasadena

of rough-and-tumble mountain climbing, desert tramping or riding, and walking on canyon trails.

Another result of this frank and fearless acceptance of out-of-door conditions is manifested in a readiness to meet difficulties that over-niceness is disinclined to touch. Let me illustrate. Two or three months ago I made a journey with two Yuma Indians and four white men down the overflow of the Colorado River

to the Salton Sea. We were warned beforehand that it would be "an awfully hard trip." We were told that it was "hell boiled down" to try to go through certain places. The river for ten or twelve miles leaves its bed and runs wild over a vast tract of land covered with a mesquite forest. The mesquite is a fairly dense growth covered with strong and piercing thorns. When we came to this place we had to cut our way through the thorny thicket and our faces, hands, and bodies all suffered with fierce scratchings and thorn pricks. Several times we stuck fast and there was nothing for it but to jump out into the water with ax in hand and cut away the obstructions and lift over the boat. My Indian, Jim, though dignified and serene, as I shall fully explain in a future article, had that promptness that over-niceness destroys. He was out over the side of the boat as quickly as I was, ready for the hard and disagreeable work. Had I been "nicely" dressed and "nice" about the feeling of water up to my middle, too "nice" to wade for hours, sinking into quicksands, in order to find the best passage for the boats, we should have been there yet. We cut down three mesquite trees, under water, in order to get our boats over the stumps. We forced our way through tall and

dense arrow weeds, one in front and the other behind the boat, lifting and forcing, pulling and pushing. It was not "nice" work, but it was invigorating, stimulating, and soul-developing.

The other day I went photographing on the Salton Sea. When the launch stopped twenty feet from the island covered with pelicans, where I wished to make photographs, I shouldered my camera, stepped out into the water, which came up to my thighs, and walked ashore. The engineer wondered: Why should he? Had I waited, the pelicans would have flown away. Speed was necessary. "Niceness" would have prevented my getting what I went for. When I stand on the lecture platform, or in the pulpit, or in the drawing room; when I meet ladies in the parlor and go with them for an automobile ride, I dress as neatly as I can afford and endeavor to look "nice," but when I go into my garden to work, I put on blue overalls and a pair of heavy shoes and I try not to be nice. I roll around in the dirt, I feel it with my hands, I revel in it, for thus, I find, do I gain healthful enjoyment for body, mind, and soul. I owe many things to the Indian, but few things I am more grateful for than that he taught me how to value important things more than "looking neat" and being "nice."

(To be continued.)

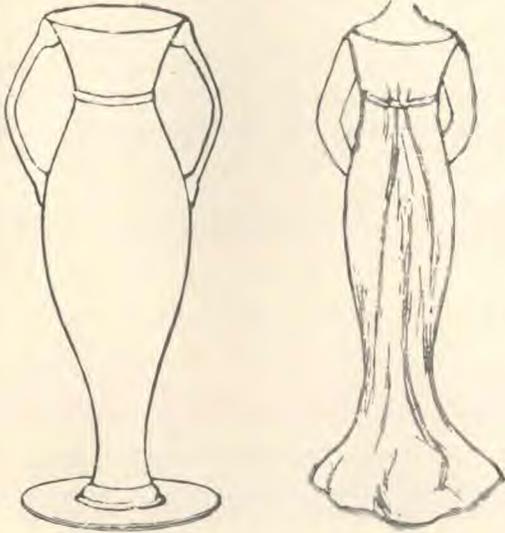


Forcing our way through the mesquite bushes on the way to the Salton Sea

The Possibilities of the Present Empire Modes

BY OLIVE M. GHOSLIN

THE latest tendencies of the styles are undoubtedly toward the Empire of the fashions of Napoleon's time. First came the coats, three-cor-



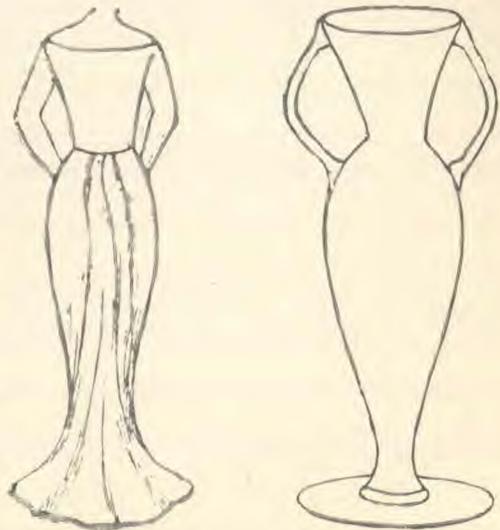
nered hats, buckles, etc.; later the princess-empire costumes, and now the direct Empire dress.

Probably the majority of women do not fully appreciate the qualifications and advantages of this dress from artistic and healthful standpoints.

The artist's first lesson in designing is to arrange any given number of straight, horizontal lines, in such relation or space to each other, as to form a combination or design pleasing to the eye. Later he combines horizontal with vertical lines, next curves, etc. Examples of pleasing arrangements of lines may be seen in Scotch plaids, window mouldings, and in fact all furniture has a touch of beauty or adornment added in the making, through curves and pleasing arrangements of lines and angles. Notice this in even your simplest piece of furniture.

We are created with this instinct for the beautiful; but just why certain arrangements of lines and curves, or colors, appear more attractive to the eye than others, is inexplicable. The fact remains nevertheless. These decorative designs need not be true to nature in order to appear beautiful to us. For instance a design of flowers on tapestry, wall-paper, rugs, etc., may be utterly false or unnatural in form and color, and yet being suitable in form, size, and color, to material applied to, appeal to our sense of harmony and beauty. In fact the majority of designs used for our decorative purposes are the *conventional* designs, the definition of which has just been given. The other division, or *unconventional* designs, are those which are true to nature.

However, the utility or application of the design is another matter. The first principle to be observed in this phase is "adaptability or suitability of design to form." Thus in designing a chair the first thought is a correct framework.



In other words, it must be of suitable form and strength to support a seated person. Secondly, it must be curved and ornamented in such manner as to be pleasing to the eye.

On the aforesaid principle, "adaptability or suitability of design to form," rests the evidence in favor of Empire fashions in dress. From the artistic standpoint, the Empire has just as many possibilities if not more, than the conventional or wasp-waisted figure. The form of a perfect woman is curved and proportioned in such manner as to be beautiful from an artistic standpoint. The natural form, thus qualified as pleasing in its form and contour, and also being the crowning masterpiece of the Creator, the clothing should closely follow the lines of the figure, reflecting the beauty and grace within, as the setting does its jewel, allowing at the same time perfect freedom of movement and breathing, with their sequences of health and grace.

It may be noticed that all artists in portraying superb womanhood, or one denoting strength, power, and grace, invariably depict her in free, flowing costumes, and if waist line is indicated

at all, it is placed just below the bust. This is as it should be.

There is no natural waist line in the female figure. The nearest approach to one would be just underneath the fullness of the bust. This divides the figure in pleasing proportions—the greater length of skirt line giving an appearance of added height and grace. The slight curving in at the arms, outward at the hips, then sweeping in at the ankles, with the flare at the base, proves a beautiful and harmonious design, similiar to the curves and proportions of one of the urns illustrated, herewith, which have for centuries been ideal type forms of design. Is not the short necked urn as popular or even more commonly seen than the other?

The lifting of the waist line from the soft, unprotected abdomen, to the firm protection of bony chest relieves the use of the corset, removes the weight of heavy skirts, with their attendant evils of crowding and displacement of the vital organs, hampering of movement and circulation. In the adoption of the Empire costumes rest possibilities of greater health, beauty, and grace or poetry of motion.

THE PUBLIC DRINKING CUP

A Prolific Source of Contagion that Is Occupying the Attention of Many Boards of Health

Public drinking cups and glasses have long been recognized by bacteriologists as a prolific source of contagion, and those who have any regard for hygiene are careful to supply themselves with private drinking cups for use when traveling. This subject came up for discussion at a recent conference of state and provincial boards of health at Washington, and it was stated that the abolition

of public drinking cups at railway stations and on trains was soon to take place, and that the federal government had decided to make an effort to abolish them.

Tuberculosis, the germs of which are always present in the system of those afflicted with this disease, is specially liable to be spread in this way. Children are likely to become infected by means of the public drinking cups used in the schools. Parents should see that their children are provided with private drinking cups for use during school hours and teachers should give the children to understand that they will not be permitted to drink unless so supplied.

Tobacco Poisoning

THE poison of tobacco is so potent and violent in its action that even the external application of the moist leaves to the skin is sufficient to produce most serious symptoms. If a cigar be unrolled and the leaves composing it be applied over the stomach, great nausea will be produced in a very short time. This method has been used to induce vomiting. Cowardly soldiers have been known to place tobacco leaves under their arms just before going to battle, for the purpose of producing sickness.

Some years ago a man was detected in an attempt to smuggle a quantity of tobacco by placing the leaves next to his skin. The nearly fatal symptoms which followed, led to the discovery of the smuggler.

If tobacco is poisonous when applied to the skin, it is doubly so when inhaled. The smoke of tobacco contains, in addition to nicotine, several other poisons, the chief of which are pyridine, picoline, sulphuretted hydrogen, carbon dioxide, carbonous oxide, and prussic acid, all of which are fatal poisons when received into the system in any other than the most minute quantities. Thus it is not to nicotine alone that the evil effects of smoking are due, but to all of these poisons combined.

Birds, frogs, and other small animals die when exposed to tobacco fumes in a confined space. Cheese-mites, bees, and other insects may be quickly killed by directing upon them a stream of tobacco smoke from an ordinary pipe.

Inhalation is the most speedy way of getting any volatile poison into the system. The reason of this is obvious when the fact is made known that the lungs present a mucous surface fourteen hundred square feet in extent, every inch of which is in the highest degree capable

of absorbing gaseous substances brought in contact with it. This membrane is of the most marvelously delicate character, being of such exceeding thinness that it forms scarcely any obstacle to the passage of gases which enter the lungs by respiration. Just underneath this delicate membrane passes all the blood in the body, or an amount equivalent to the whole quantity of blood, once every three minutes. The vapory poison inhaled by the tobacco smoker is not simply taken into the mouth and then expelled, but it penetrates to the remotest air-cells, and spreads itself out over the whole of the immense extent of membrane stated. Thus it is plain that the blood of the smoker is literally bathed in the narcotic fumes drawn from his pipe or cigar.

So readily does the system receive the poison of tobacco in this way that it has repeatedly been observed as a fact that persons who are engaged in the manufacture of cigars often suffer much from the characteristic effects of nicotine poisoning.

When tobacco is applied to the mucous membrane as in chewing and snuff-taking, its poisonous elements are absorbed in essentially the same manner as when it is applied to the skin, but much more rapidly. In chewing, considerable quantities are also absorbed through the stomach, being swallowed with the saliva.

Very few users of the weed need to have a description of the effects of a moderate degree of poisoning from tobacco. The giddiness, nausea, and deathly sickness which follow the first attempt to use the drug, are indubitable evidence of the poisonous character of tobacco, which evidence is confirmed by the difficulty, in many cases very great, experienced in becoming addicted to its use.

In severe cases of poisoning, violent vomiting and purging, vertigo, deathly pallor, dilatation of the pupil, a staggering gait, disturbed action of the heart, interference with respiration, and in extreme cases insensibility and syncope, are commonly observed. Only a very small quantity is necessary to produce these symptoms in a person not accustomed to its use; but in persons who have habituated their systems to the poisons, a much larger quantity is required.

Persons not accustomed to the use of tobacco often show symptoms of poisoning from taking a very small quantity of the drug, as by inhaling its fumes in a smoking-car or a bar-room. Infants are often sickened by inhaling the air of a sitting-room which is poisoned by a smoking father. There is good reason for believing that not a few infants' deaths have occurred from this cause, as it is well known that young children are ex-

ceedingly susceptible to the influence of poisons of all kinds.

It is often objected that while chemistry and scientific experiments seem to prove that tobacco is a powerful poison, the experience of thousands of persons disproves the theory of its poisonous character, since if it were so intense a poison as described, cases of death from tobacco poisoning would be much more frequent.

To this objection we answer: One reason why so few persons are reputed to die of nicotine or tobacco poisoning is the wonderful faculty the system possesses of accommodating itself to circumstances. Through this means the worst poisons may by degrees be tolerated, until enormous doses can be taken without immediately fatal effects. Corrosive sublimate, strychnia, belladonna, and many other poisons may be thus tolerated.

One Day At a Time

God broke our years to hours and days,
That hour by hour, and day by day,
Just going on a little way,
We might be able all along to keep quite
strong.

Should all the weight of life
Be laid across our shoulders, and the future
rife
With woe and struggle, meet us face to face,
At just one place,
We could not go;
Our feet would stop; and so—

God lays a little on us every day
And never, I believe, on all the way
Will burdens bear so deep,
Or pathways lie so threatening and so steep,
But we can go, if by God's power
We only bear the burden of the hour.

—George Klinge.

The Curious Chemist

BY EDMUND VANCE COOKE

Illustrated by Robert J. Wildhack

I know a man who seems a sort
Of laboratory, or retort.
He fills his still with fusel oil,
Et cet., and lets the compound boil,
Until 'tis volatile enough,
And then it issues, puff by puff,

To keep this fuse from going out,
He sucks in smoke and spits it out!

He gravely guards this sacred light
From early morn till late at night.
True to his trust, no time nor place



From out a fissure in his face
And seems to permeate all space.

And then he boldly fires a chunk,
Or stick of—well, it looks like punk.
He slips this in the aforesaid vent,
As if it were his full intent
To self-explode—to light the gas
And let destruction come to pass.

Is foreign to his fuming face,
Yet alway, just before the fire
Burns to its limit, his desire
To self-explode is tinged with doubt
And straight he casts the fuse out!

A very curious man; 'tis true;
Of course he's not at all like you?

—*Success Magazine.*

“This Our Craft Is In Danger”

BY E. J. WAGGONER, M. D.

THERE was a stir among the pork packers of Gadara, for some hog drovers, breathless and excited, had just come into town with the news that a poorly dressed stranger, seemingly a tramp from the other side of the lake, had just that morning landed and had almost immediately begun to make trouble. In some mysterious way he had succeeded in stampeding their swine, so that the entire drove, two thousand in number, had rushed over the precipice into the lake, and had been drowned. This news had set the whole city in commotion, for nearly all the leading inhabitants were more or less interested in the pork industry, and to a man they rushed out to learn the particulars.

Alas, it was only too true! The hogs had gone down without a doubt, and no one could tell what might happen next. The owners found the stranger, surrounded by a dozen other men, even more disreputable looking than himself, as unconcerned as though he had not caused the destruction of some thirty or forty thousand dollars' worth of hogs.

It appeared that the man was a traveling physician, who, although he was unlicensed, performed cures never before heard of in the profession. Everywhere he went, he healed all the sick in the neighborhood and what was still more remarkable, he never took any pay for his services.

He had just landed that morning when he was set upon by two maniacs who had long been the terror of the country. These men seemed to be possessed with the malignity and strength of ten thousand demons, for no chains could hold them, and it was as much as any one's life was worth to come near them.

Yet at a word from this mysterious stranger they had become as peaceable as lambs, and now they were sitting quietly, clothed in their right mind. Surely the community could do no less than make the mysterious stranger welcome, giving him the freedom of the town, that he might bring health to all their afflicted.

But no; he had already exacted too great a price. The disease from which he had relieved the two citizens of Gadara had in some way been communicated to the swine, with the results already stated. Prompt measures must be taken or their business would be utterly ruined. It was all well enough to have sickness banished from the district; but if it entailed the loss of all their hogs, as seemed likely, it was not to be thought of for a moment. What was the health of the multitude compared with the property of the few? They insisted that the stranger should at once go away, before more hogs were killed and more men healed; and so he reluctantly returned by the same boat that brought him.

* * *

A few years later a little Jew, who, on account of his diminutive stature, had been nicknamed Paul, by which name he was generally known, instead of by his proper name, Saul, was preaching in Ephesus, and a great awakening had resulted. "So mightily grew the Word of God and prevailed" that many thousands of people who had been kept in the bondage of ignorance and superstition by the heathen hierarchy, had abandoned the black arts by which they had been deceived and had deceived others, and, burning their books of magic, had

adopted the simple life of righteousness and temperance which Paul proclaimed. At one bonfire of books devoted to priestly juggling, thousands of dollars' worth of books had gone up in smoke.

"And the same time there arose no small stir about that way," for a certain Greek, named Demetrius, a silversmith, who had amassed great wealth by the manufacture and sale of silver shrines to the goddess Diana, and who was president of the idol-makers trust, became alarmed at the rate at which the people were being enlightened, and calling a meeting of the manufacturers of images, said to them:—

"Sirs, ye do know that by this craft we have our wealth. Moreover ye see and hear that not alone at Ephesus, but almost throughout all Asia, this Paul hath persuaded and turned away much people, saying that they be no gods, which are made with hands; so that not only this our craft is in danger to be set at naught but also that the temple of the great Goddess, Diana, should be despised and her magnificence should be destroyed."

What mattered it to Demetrius and his fellow-craftsman, that tens of thousands of benighted souls who had been kept in bondage had learned that when God said, "Let there be light!" he meant that it should shine into men's hearts, and make them free as the light? Those mammon-worshipers were possessed by the idea that the world existed solely that they might pile up vast fortunes and anything that interfered with that must be suppressed, no matter at what cost to the souls and bodies of the mass of their fellow-men. So Paul, whose mission it was to turn men from darkness to light, had to leave Ephesus in the clutches of the silversmiths and darkness.

* * *

About half a century later, the light that had been started in Ephesus had spread over all the country. The younger Pliny was proconsul in Asia Minor, and to him the priests and cattle raisers came with a bitter complaint against the Christians. Not that the Christians were disorderly people; far from it. On the contrary, the more Christianity spread, the less work was there for the criminal courts; but there was the trouble: the Christians' teaching that "they be no gods, which are made with hands," had taken such hold of the people that even those who had not become Christians had become indifferent to the worship of the gods of the country, and the result was that few cattle were now bought for sacrifice. Sales had fallen off to an alarming extent, and something must be done at once to stop the spread of the new doctrine, and to build up the beef trade. Accordingly a persecution was set on foot, the leading Christians were put to death, and soon the priests and cattle dealers had their monopoly restored for a season.

* * *

And now the history comes down to our own time. Now and then reports have been circulated that the meat-packing business was not conducted in so clean a manner as the brightly labeled tins would lead one to suppose. It had even been intimated that occasionally a cow found its way into the corned-beef tins, which was in the condition of the side of beef of which Mother Goose sung, "If it hadn't been killed, it must have died;" and sometimes death had even anticipated the butcher's knife.

All of these things, and many more that were calculated to give thinking people an antipathy to dressed beef, were put into a book by Upton Sinclair, a book which made so great a stir that President Roosevelt was moved to make

an investigation on his own account, especially since the value of the services of some of the government officials had been called into question.

The President's special commissioners finished their task, and while it was claimed that fact and fiction are so inextricably mingled in Sinclair's "Jungle" that the book could not be taken as a basis for action, the condition of things in the packing-houses was found to be so bad that the President hesitated to make the report public. The natural conclusion was that the special report presents a picture even worse than that sketched by Sinclair (which was proved to be the case) and the President agreed to withhold it if the packers would institute immediate reform and keep it up. This they were not willing to do, as it would involve great expense; yet they did not want the report by Messrs. Neill and Reynolds made public, for says the *Tribune's* Washington correspondent:—

"The live-stock men who were here the other day insisted that the publication of such a report would not only have a disastrous effect abroad, but would upset the local market to such an extent as to lower the price of livestock to an extraordinary degree, because the consumption of meat would immediately be reduced on account of the revelations made as to the system adopted in its production."

That is to say, the conditions are so

bad inside the packing-houses that if the people knew all, they would not eat the stuff that is sent forth (which is also being demonstrated). The live stock men, it seems, failed to realize that this admission is more damaging than any report could be. At least it ought to be.

Some years ago the writer's attention was attracted one morning by the loud cries of a huckster offering strawberries at a remarkably low price. Stepping to the door, he beckoned to the lad who was assisting, and was about to examine the large box that was brought when the huckster called out to the boy in loud and angry tones, "Don't let him look at them berries." It is scarcely necessary to say that the berries were promptly sent back to the huckster's wagon; for berries that are not fit for inspection are certainly not fit to be eaten; and the same thing holds true of meat.

Will not the people at large come to the same conclusion? If they insist on eating meat, will they not also insist that they will not eat any that is not as clean and healthful as any dead thing can be, even though it should require so many inspectors that some packers would have to go out of business? Shall man be considered of more value than money? We shall see. If not, the desolation of Gadara and the few stones that mark the site of Ephesus and old Jericho accurately portray the future destiny of this country.



Sewerless Sanitation

WHERE there are no sewers the disposal of dead matter is always a serious and important question. By what means may it be accomplished?

First and most important is disinfection. A disinfectant is a substance which, when brought in contact with decomposing and decomposable matter, destroys its dangerous properties and thereby renders it innocuous. This is accomplished by the destruction of the bacteria associated with it if in a state of decomposition, and by a chemical action upon the decaying substances. All excreta should be disinfected with as little loss of time as possible.

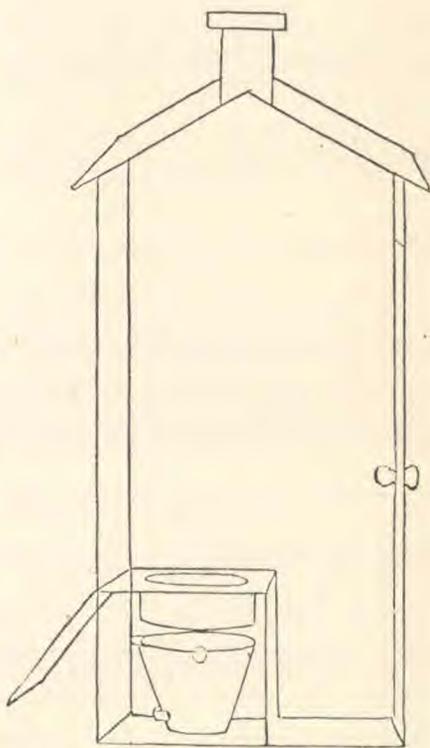
The best disinfectants for the purpose are dry earth, coal ashes, charcoal, and the saturated solutions of the mineral salts, as copperas, blue vitriol, chloride of zinc, permanganate of potash. Each of these has its excellencies, but copperas, the cheapest of all, is also one of the best. Chloride of lime, if properly used, is very cheap and serviceable; but as commonly employed it is of no service except to quiet the conscience of the user by producing what might be termed a "sanitary smell."

How should these disinfectants be used? Here are a few hints on this subject given as concisely as possible.

Dry earth and coal ashes are best used in the earth closet with a shovel convenient for use. There are also numerous chemical devices for applying earth or ashes.

The following points must receive special attention: The earth must be dry and fine, and must be used in abundant quantities, sufficient to absorb all the moisture, as it is by this means chiefly that dry earth is useful for this purpose. Coarse sand is of little value. Clay, dried and pulverized, is the best of all

materials for this purpose. Charcoal, finely pulverized, is useful when applied in abundant quantities, both as an absorbent and by means of its oxidizing properties. It may be used in the same way as dry earth, and the quantity should be sufficient to absorb all moisture. Cop-



Pail for Earth Closet, in Position for Use

peras and the other salts mentioned must also be used freely, if any benefit is expected from them. A solution of copperas, containing at least two pounds to the gallon, should be kept on hand for use. At least one pound of copperas in solution should be used each day for a family of ordinary size, or about an equal quantity of blue or white vitriol. When purchased by the quantity, copperas costs but a few cents a pound and

hence may be used freely at small expense.

The dry-earth system is safe, practical, and economical.

The great requisite is co-operation. A man may keep his own premises in a scrupulously sanitary condition, and yet be as much endangered through the carelessness of his neighbor as though he were himself equally careless of the laws of sanitation. "Thou art thy brother's keeper," applies with all its significance in a sanitary sense.

A plan that has proven most efficient in some localities is the use of a pail twelve by fifteen inches at the top, nine inches at the bottom, and ten inches in depth. They were made of heavy galvanized iron, were very strong, and cost fifty cents each with the collar, which was attached to the seat to prevent the scattering of excreta upon the ground. The width of the collar was varied

somewhat according to the distance from the seat to the pail, this provision being made to accommodate the plan as nearly as possible to the form of construction found in most buildings. The pail rested upon a plain board, upon which were fastened guides to direct it to the proper position.

Dry earth and ashes were employed to delay decomposition and a scavenger was hired to empty the receptacles once a week during the months of April, May, June, July, September and October. They were regularly emptied twice a week during July and August, and during the most extreme heat of those months, every other day.

The expense of this system is very small. The original cost is a mere trifle, and when a hundred pails or more were in use, the expense for a scavenger was a mere trifle. This system is thoroughly practical and very easily operated.

The Hydriatic Treatment of Yellow Fever

BY J. H. KELLOGG, M. D.

HYDRIATIC measures have been found extremely valuable in the treatment of yellow fever. More than 100 years ago, Dr. Benjamin Rush treated Yellow Fever in Philadelphia with the wet sheet pack and with great success. About 115 years ago, Dr. Jackson, a Scotchman, was spending some time in the West Indies, and noticed that the natives took yellow fever patients down to the sea-shore and laid them in the water, keeping them there until the fever disappeared. On the way home to England, Dr. Jackson had the misfortune to contract the disease himself. Being given up to die by the ship physician, he had himself carried upon deck, and instructed the sailors to pour

buckets of water over him. He could not very well be let down into the sea, but kept himself drenched with water, lying upon the deck of the ship, until the fever was subdued. When he reached home he told the story of how he cured the fever and an English physician, Dr. Currie, of Liverpool, was so much interested that he began making experiments. His own children were taken sick with scarlet fever, and he had them held up while he poured water over them, giving them what he called an "affusion." His treatment was so successful that he employed it with other children, and soon the remedy was used extensively in the treatment of typhoid fever. Currie's little book on



Fig. 77. The Wet-Sheet Pack. (Applying the Wet Sheet)



Fig. 78. The Wet-Sheet Pack. (Sheet Applied)



Fig. 79. The Wet-Sheet Pack. (Applying the Blanket)

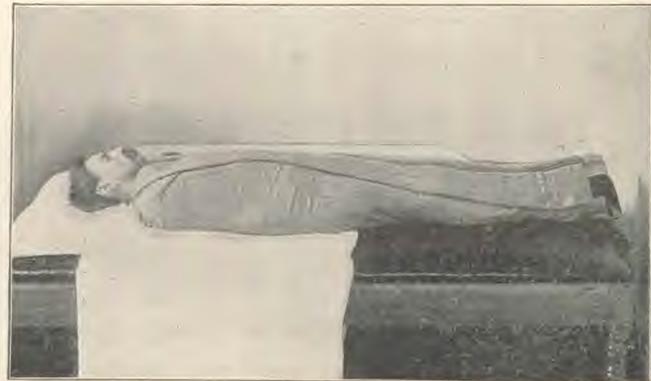


Fig. 80. The Wet-Sheet Pack. (Blanket Applied)

the use of water in fever is now a classical work.

After a few years, water became quite the thing in the treatment of fever in England, but it was soon forgotten. It was taken up in this country by Dr. Benjamin Rush and others, but here also it was soon forgotten. For nearly seventy-five years the medical profession neglected the use of water in fever, and other maladies, but its great value is now becoming more and more recognized, and the prospect is that in the next few years the entire medical profession of the United States and the civilized world will abandon almost every other remedy in favor of the use of water. The use of

water in typhoid fever has reduced the mortality from twenty-five or thirty per cent down to three per cent. In twelve thousand cases so treated, the mortality was only three per cent. Statistics have been collected in Germany which show that in 800 cases of typhoid fever successfully treated by the use of water, there was not a single death.

A case of yellow fever requires the constant care of a good physician and a good nurse. Cases differ somewhat, and the treatment has to be regulated accordingly; but a few general hints may be given:—

For controlling the fever and relieving the cerebral congestion, there is nothing better than the wet sheet pack. The sheet should be wrung out of water at sixty degrees, or water just as it comes from the pipe. It should be wrapped around the patient with woolen

blanket outside. The sheet will be warm in about five minutes, and at the end of six or seven minutes it must be renewed. This time it will take about ten minutes to warm up. It must then be renewed again, and changed after longer interval. The renewal must be continued until the fever is subdued.

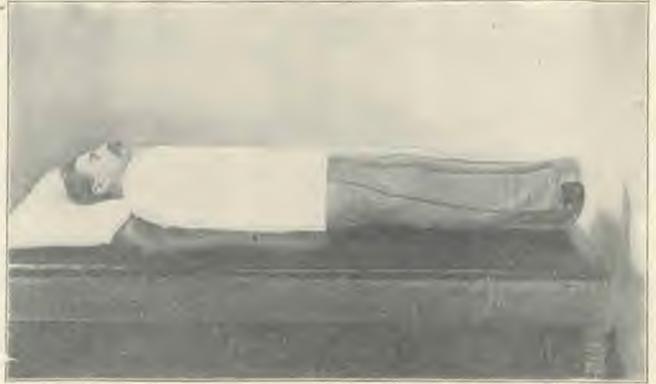


Fig. 81. The wet-sheet pack. (Completed)

For the vomiting, an ice bag over the stomach and a hot pack to the legs is a good thing. The stomach lavage should be given when there is evidence of something in the stomach. The withholding of all kinds of food for a day or even for a week, is an excellent measure. Applications of heat over the liver, followed by the heating compress are useful in the treatment of this disease.

When the disease has reached the period of quiescence, the patient should be treated very thoroughly several times a day with a cold towel rub or cold mitten friction, to increase his power to resist the disease.

A large enema should be used to cleanse the bowels. The body should be kept well supplied with water and the waste of water by vomiting made up by introducing water through the bowels.

The Pace that Kills is the Slow Pace



Passing the Medicine Ball in the Outdoor Gymnasium of the Battle Creek Sanitarium

LAZINESS undoubtedly kills ten persons where work kills one.

The business man is worn out at forty when he ought to be in his prime, not because he has done so much work, but because he has so much neglected muscular work. Good muscles are as necessary for good brain work as they are for digging canals or building railroads. Nerve tone depends on purity of blood, which is only to be secured by a proper amount of daily exercise.

Many a man has lost his health by striking an oil-well or a gas-well or some other source of sudden wealth. When he was a laboring man, and earned his bread by the sweat of his brow, he had a good appetite, good sleep, good digestion, and good spirits. Nightmares, neuralgias, and "blue devils" never trouble such a man. When he gets rich, and sits down in an office in an easy chair, rides to his place of business in a

cushioned carriage and imagines that he is enjoying life, he begins to prepare himself for a day of retribution which will surely come.

Men often worry themselves into a state of disease, but mental work, as well as physical labor is in the highest degree healthful when a proper amount of muscular work is combined with it. The trouble is that the majority of mental workers seem to entertain about the same idea concerning exercise as did the Irishman in the story. While a fellow-passenger walked the deck of a ship for exercise, during a long voyage across the Atlantic, an Irishman, also a pas-

senger, lay flat on his back, looking straight at the mast-head. When admonished that he should take some exercise, he replied, "But where's the need of exercise? Doesn't the captain say the ship is carrying us two hundred miles a day? Sure, that's exercise enough for any one."



One of the Amusing Water Games

BLESSINGS IN DISGUISE

How Sickness Often Forces the Invalid to Find the Way to a Truer Health

The chronic invalid who outlives all his apparently healthy contemporaries is by no means uncommon. The advice of Dr. Oliver Wendell Holmes to one who enquired how to live long, was: "*Get a fatal disease and then take care of yourself.*" Cornaro, prince of centenarians, was driven to the manner of life which resulted in perfect health into an extreme old age, by the advice of his physicians to make his will and set his affairs in order. Mr. Horace Fletcher did not begin the investigation which inaugurated the chewing reform, of inestimable benefit first to himself and then to the world, until he was refused a policy by an insurance company as being too great a risk. President Roosevelt adopted "the strenuous life" to counteract the physical weakness of his youth. The very insignificance of their physique has been the goad which has driven some of the most noted athletes to their heroic efforts. More than one noted singer began vocal culture only as a means of



Another gymnasium game that provokes fun

strengthening supposedly weak lungs. It is not in spiritual matters only of their dead selves to higher things."

When one has a reminder that his store of vitality is not unlimited, he begins to draw more carefully on his bank account with life, and may thus escape bankruptcy much longer than he otherwise would. On this point a writer says:—

"We begin to feel that we are going downhill, and sometimes perhaps that the end of active service, if not of life, is near. It is, however, by no means sure that this is the case. We may have been overdriving the machine of the body, which, after all, is only a machine, and will give out like any other if overtaxed. If this is the case, what is needed is to change the gear to a slower speed. Many who think they have nearly reached the end of their work

will find that there is plenty of energy left to go on under a little less pressure. Herbert Spencer never was able to work more than four hours a day, but the sum total of his life work is enough to daunt an ordinary well man.

"If you feel that you are not as strong as you used to be, take good care of yourself; you will be surprised to find how much of life there is left in you."



A lively tilt with the foils in the open air

A Brutalizing Influence

In the recent packing-house exposure, the main stress has been laid upon the fact that people were unconsciously eating diseased food products, or at least meat that had been put up with little or no regard for cleanliness. This condition may to some extent be remedied, and sufficient effort has already been put forth to satisfy the indignation and all alarm has about subsided, so doubtless most of those who became vegetarians *through fear* will soon be



"None but the brave deserve the fare."

—Davenport, in *The New York Evening Mail*

consuming the flesh of dead animals as before.

But there is one feature that can not possibly be eliminated, and that is the brutalizing effect which the work of the slaughter-house has upon those engaged in it. It was this, chiefly, that animated Upton Sinclair in writing "The Jungle." The people at large considered only their own danger from the unhealthy condi-

tions, while Sinclair desired to impress upon them a sense of the degradation into which hundreds of their fellow-men were being forced in order to gratify their depraved appetites, which rendered possible and condoned such horrors as are ascribed. The following statement from some who were first in the field of investigation is taken from the *New York Times*.

"What impressed us most is the terrible spirit which animates the workers. Their surroundings have envenomed them against the world. They are prisoners in a life that is one long torture, and are utterly callous to the ills which may result from the distribution of diseased meat, rather than glorying in its further defiling. They are all of them overworked and underpaid, and each class of workers have their own special ailments."

"The surroundings necessarily brutalize the men and degrade the women. *There is immorality everywhere.*"

"Small wonder that they have no care to lessen the filth about them, which is to find its way to the consumers eventually, but rather *seek to add to it*. Tuberculous workers expectorate on meat in preference to the floor. It is a partial vent for the dull resentment which is ever burning in their breasts."

There is a generally accepted maxim, *Qui facit per alia, facit per se*,—"Whoever does a thing through others does it himself." This being so it does not speak well for the degree of civilization of a people that their dietetic habits are such as to compel others to become brutalized. Even if we do not push the maxim to its limit, it is plain that a man of fine feeling should not compel another to do that which is repugnant to his own sensibility.

Dietetic Fads

BY THE EDITOR

WE hear a great deal nowadays about dietetic fads and delusions. The people who talk about dietetic fads seem to be very much concerned for the welfare of a few folks who take a notion to live on a raw diet, or a few other people who have an idea that it might be good to return to Nature for a while, and for the people who have objections to the shedding of blood and the eating of flesh food. They seem to be very much disturbed about the very few people who are doing something a little different from what other people are doing, and who are trying to find out what is the natural thing to do. But they do not seem in the least troubled about the people who are indulging in hurtful fads.

No one has yet been able to demonstrate that any injury results from adopting a natural diet—a diet from which meat is entirely excluded. It is absolutely innocuous, so far as health is concerned, to say the very least. Dr. Woods Hutchinson, in a recent tirade against vegetarians, admits that “the contention that human life can be maintained in fair health and vigor upon a chiefly vegetable diet is absolutely unchallenged by us. Indeed, nearly one-half of the human race has been compelled from sheer necessity to prove that thesis in its actual experience.” If half the human race have proved that a non-flesh dietary is absolutely sufficient, why should it be called a fad? It is not a fad, but a fact. When you have as evidence half the human race living well on a dietary from which flesh is excluded, satisfied with it and able to exercise all their faculties with vigor and efficiency, certainly it can no longer be called simply a fad, a fancy, a whim.

All that Dr. Hutchinson can say against the vegetarian diet is that it has “no superiority.” But a natural diet is superior in the fact that it is free from uric acid and all tissue poisons, and also from such parasites as trichina and tape-worm.

Here is also another advantage in a non-flesh dietary,—it does not necessitate the killing of animals. Dr. Hutchinson does not recognize that as any advantage at all. To him it is no argument. But it is a strong argument to many others, and it would, in fact, be an argument to most persons if *they* had to do the killing. If one had to kill a sheep in order to get mutton chops, how many would be willing to do it? How many would wring the chicken's neck in order to get chicken broth, or kill hogs for the sake of ham and bacon? How many would kill cattle in order to get beef-steak?

You say, “O no, I would not like to do that. It is not my business.” Why would you not like to do it? “It is degrading business.” Certainly, it is a degrading business, but somebody must do it. If the whole community eats beef-steaks, there must be the whole butchering business. Why should we condemn somebody else for doing a thing that we ourselves make necessary? If all adopt a non-flesh diet there would be at least this advantage, that the butchers would be relieved of their unpleasant occupation and given an opportunity to engage in work more elevating and desirable.

In England it has been recognized for centuries that a butcher should not be permitted to sit on a jury in a trial for murder. In this country when a man is on trial for murder, his attorney may

object to a butcher being made a member of the jury, and his objection is sustained. A butcher is recognized as having lost his sense of the value of life, so that he has not the respect for human life that a man should have.

Isn't it a serious matter, then, that in every large city, such as Chicago, Cincinnati, St. Louis, Kansas City, there are thousands of men who wade in blood, whose bodies are stained with blood and their hands reeking with blood from morning till night? It is not a pleasant thing to contemplate, but the meat appetite—the meat fad we may call it, because meat is not essential as an article of food, as recognized by Dr Hutchinson—keeps this multitude of people submerged in this horrible business which brings with it moral and physical degeneration.

Gautier, an authority on the subject of diet, proves conclusively that a non-flesh diet is not only sufficient, but that it is superior in that it secures greater clearness of intellect, calmness of spirit, a more amiable disposition, less irritability, and greater endurance.

There are other fads than the raw-food fad and the no-flesh fad. For instance, there is the tea and coffee fad. The drinking of tea and coffee is simply a fad. Is there any natural demand for it in the body? Absolutely nothing can be shown from a physiologic standpoint to sustain the theory that the use of tea and coffee is any more essential or that it contributes any energy to the body. Thein and caffenin are poisons. This was first pointed out by Lehmann the father of physiologic chemistry. He called attention to the fact that thein and caffenin are essentially the same as the waste substances found in the body and in all flesh food. He proved that caffenin was a poison by administering seven and one-half grains to his laboratory assist-

ant, the effect of which was to make him sick for two days.

Dr. Edwin Smith took four ounces of coffee and made it into a decoction of three pints. He and his laboratory assistants drank it together, and they fell to the floor and remained there insensible for half an hour.

Consider for a moment. Here is a person who, instead of taking a pint and a half at once, takes it in three doses. He would not fall to the ground, insensible, but his senses would have been to some degree modified and disturbed. That is, he would have less sense, even though he did not lose all his senses. That is true of every person who habitually takes tea or coffee. His senses are in some degree blunted.

King James of England issued a decree to suppress the coffee houses because they bred treason. People went to these coffee houses and drank coffee and they lost their patriotism and gossiped and laid plots. The coffee houses became a source of treason and so they were suppressed. Did you ever notice when a lot of ladies get together at the tea table after they have taken a cup or two how freely gossip flies around? It is very interesting to notice the effect of the tea in setting loose the tongue and in stimulating the imagination. It also lessens the inhibitory power and weakens the judgment.

Tea and coffee have a certain blunting effect upon the sensibilities. A woman who is so worried and disturbed in mind by domestic troubles that she does not know what to do calls upon the teapot and feels better. How does that happen? Are the worries gone? Is the situation in any way changed? The things that troubled her are all there just the same as before but her sensibilities are blunted so that she does not appreciate them. The situation is, in lesser degree, that

of a man who goes into a saloon with fifty cents in his pocket and after he has taken three or four drinks he imagines that he is a Rockefeller, and offers to treat the whole crowd. A man who is cold takes a glass of whisky and feels warm. He is actually colder than he was before, but he thinks he is warmer. The woman who is worried and nervous drinks tea or coffee to get rid of her nervousness and worry, but she really gains nothing except that her sensibility is in some degree diminished. In other words, she is narcotized.

Tea and coffee are altogether harmful in their effects. One who uses either can drop the habit at once, getting no harm, but only good, from the change. The use of these beverages is purely a whim, a fancy, and can be discarded absolutely without injury.

There is also a dietetic fad in reference to the use of meat. Dr. Salisbury, twenty-five years ago, conceived the idea that consumption and Bright's disease, and nearly all chronic disorders were due to yeast which came from bread. The yeast got into the blood and grew and propagated itself in the blood and produced a lot of maladies. There was no sense in this theory, yet it was adopted even by the medical profession—the theory of feeding people almost entirely on meat, even excluding bread, because it contains no yeast. In all chronic maladies the patient is better off without meat, which places an additional tax upon his system to dispose of the waste substances which it contains.

The eating of oysters is another fad. People have the idea that oysters are very nutritious and easily digested. As a matter of fact, the oyster contains so small an amount of nutriment that the natives of Terra del Fuego who live largely on oysters, are compelled to eat from twelve to twenty-five pounds a day

in order to get sufficient nutriment. Figure it out and you will see that it takes that amount to give a man the proper rations. An ounce of oysters contains but eleven calories. A quart of oysters has less food value than four ounces of bread or zwieback. The idea that the oyster will aid digestion is another harmful fancy that has been alive in the world for a long time. When we kill the oyster it has no power to digest even itself. If you imagine that the oyster is going to be accommodating, after you have swallowed him alive like a boaconstrictor swallowing a baby, as to take hold and help you digest your dinner, you make a great mistake. The oyster is no aid to digestion and is not itself very easy of digestion, especially when fried.

Then the idea, or fancy, or fad, of taking things half rotten—what a disgusting practice it is. Why should one want things to have a taste of putrescence? There is no accounting for this strange, perverted taste. This peculiar, cultivated taste is unnatural and unwholesome and injurious. The flavor of game is due to putrefaction. Let it go a little bit too far and the taste will be enough to make you sick. Some of the things served on dinner-tables—such as Limburger cheese and meat with a high flavor—ought to be served to turkey buzzards, because it takes a turkey buzzard to digest such carrion. You sometimes see game all colors—green, yellow, purple—hanging up in the market. There is something more than color there. The color is the result of putrefactive process taking place in the intestines. Game is sent to the market without being dressed, and the swarming millions of microbes in the intestines soon migrate into the tissues, so that putrefaction progresses very far and very fast.

The eating of old cheese, too—that is another fad. There was recently an account in the newspapers of a trial in Chicago of a man who was charged with being responsible for the death of a boy, because he sold Limburger cheese some of which the boy ate, and from the effects of which he died. One of the witnesses for the defendant testified that Limburger cheese is at its best when it smells the worst. The attorney asked the judge to charge the jury that Limburger cheese is not fit to eat until it is advanced in putrefaction and has a most offensive odor. The defendant claimed that after he sold the cheese which poisoned the child, he ate half a pound of it in the presence of a policeman. The only reason it didn't kill that stalwart German was because he was tough enough to stand it. The little boy had not gastric juice enough to destroy the microbes, so it killed him. The jury returned a sympathetic verdict

of one hundred dollars for the plaintiff. One hundred dollars is a small price to pay for killing a boy. If a man may kill a boy with Limburger cheese for one hundred dollars, why may not another man kill a boy with a bullet for the same price? The boy is killed and it makes no difference whether he is hit in the head with a bullet or hit in the stomach with Limburger cheese.

FAINT hearts to	Slender	Seek the first
hopes	must cling,	gleam, so
In hope is	In hope is	speed this
present	present	spring,
strength.	strength.	Not only wait,
To catch the first	To catch the first	but watch!
faint gleam	faint gleam	Pray at the door
of spring	of spring	of hope,
Makes winter	Makes winter	and sing,
half its	half its	Faith's finger
length.	length.	on the
		latch.
		—Chas. A. Fox.



Typhoid Fever and Drinking Water

We have 50,000 deaths annually from typhoid fever, and we know how to prevent these deaths. Why do we not do it?

It is estimated that the life of the average adult is worth to the state \$1,000. If a young man of from twenty to twenty-five years of age loses his life, it will cost \$1,000 to raise another up to the same age; and I am sure that any father who is engaged in the pleasurable occupation of raising a family of boys will deny that it can be done so cheaply. But on this estimate, this government is losing 50,000 times \$1,000, or \$50,000,000 annually in death from typhoid fever. This is not all typhoid fever is costing us. For every death from this disease at least ten other people are sick from it. Five hundred thousand people who do not die are sick each year with typhoid fever.

We will suppose that the average duration of the sickness is twenty-eight days, and all physicians will agree that this estimate is too low. The person who has typhoid fever is often unable to resume his vocation within a shorter time than three months. However, we will make our estimate on the supposition that the average time lost from work by a man sick with this disease amounts to twenty-eight days. Thus it is evident that the total loss of time for the five hundred thousand sick people would be 500,000 times twenty-eight days, or 14,000,000 days, which is equivalent to more than 38,356 years. Supposing that the time of the individual is worth fifty cents per day when he is well; this represents an actual loss of \$7,000,000 annually, and this should be doubled because for every person sick, the time of another person who acts as nurse is demanded. The \$14,000,000 added to

the \$50,000,000, which are lost by death makes a total sum of \$64,000,000 or about \$1 for every inhabitant as the annual tribute levied upon this nation by the one disease, typhoid fever. This represents approximately the amount which we pay every year for the ignorance and carelessness which we exercise in allowing this preventable disease to prevail among us.

I have said that typhoid fever is a preventable disease, and that the large number of deaths from this disease is unnecessary. This is true, not only theoretically, but practical demonstrations are not wanting. Prior to 1859, the city of Munich, in Bavaria, was a veritable hotbed of typhoid fever. There were no sewers and no public water supply. Most of the houses were furnished with large brick or wooden flues which were built from the cellar up through the different floors. Into these the excretions from the body were dropped and accumulated in the cellars. Other waste material was deposited in cesspools, and garbage was thrown into back yards. The air in the houses was foul and offensive to the sense of smell. The drinking water was taken from shallow wells in the yards, and these often received the ooze from the cesspools and vaults. In 1859 the citizens were compelled to seal tightly the bottoms and sides of these receptacles of filth, and later a system of sewerage was introduced, and still later a supply of wholesome drinking water was obtained. Notwithstanding the fact that portions of the city still remain unsewered at the time of the last report, the results have been most gratifying. From 1852 to 1859 the typhoid fever per 1,000 in Munich averaged 24.2. This has been gradually lessened, until, in 1884, it was 1.4 per 1,000.

This shows what has been done in an old and crowded city, and Vienna has practically repeated the demonstrations made by Munich. The majority of cases of typhoid fever arise from contaminated water. That drinking water infected with the discharges of a person sick with typhoid fever may cause an epidemic of the disease there can be no longer any doubt. The records of sanitary science abound in histories of such cases. Every physician of large experience with this disease can detail one or more instances in which the disease has been clearly traced to infected water, and I will consider that this method of dissemination of the disease is recognized by all. It is probably safe to say that bad drinking water causes not less than 40,000 deaths each year in this country.—*V. C. Vaughn, M. D., Pres. Mich. State Board of Health.*

OPTIMISM AND DIGESTION

How One Invariably Affects the Other in the Most Ordinary of Every-Day Affairs

That depression of spirits has its origin in the digestive organs was apparently recognized by the ancients who designated it *melancholia*, meaning "black bile." How much our outlook upon life and consequently our happiness and fortune, are affected by the condition of our health, which again depends largely upon the state of the digestive organs, is but little understood. The optimism that carries one man through difficulties and trials that crush and overwhelm others, often is not so much a matter of temperament or habit as of sound health based upon perfect digestion.

In his unique treatise on "The Art of Living Long," Cornaro tells in his quaint

style the following incident: "Then my brothers and others of my kindred saw some great, powerful men pick quarrels against me. Fearing lest I should be overthrown, they were possessed by a deep melancholy (a thing usual to disorderly lives); which increased so much in them that it brought them to a sudden end; but I, whom that latter ought to have effected most, received no inconvenience thereby. Nay, I began to persuade myself that this suit and contention was raised by the Divine Providence, that I might know what great power a sober and temperate life hath over our bodies and minds, and that at length I should be conqueror, as also it came to pass; for in the end I got the victory, to my great honor and no less profit; whereupon also I joyed exceedingly, which excess of joy neither could do me any hurt; by which it is manifest that neither melancholy nor any other passion can hurt a temperate life."

The same practical truth was recognized and humorously illustrated by Sydney Smith:—

"My friend, he says, sups late, he eats some strong soup, then a lobster, then some tart, and he dilutes these excellent varieties with wine. The next day I call upon him. He is going to sell his house in London and retire into the country. He is alarmed for his eldest daughter's health. His expenses are heavily increasing, and nothing but a timely retreat can save him from ruin. All this is lobster, and when over-excited nature has had time to manage this tastaceous incumbrance, the daughter recovers, the finances are in good order, and every rural idea excluded from his mind. In the same manner old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide."

The Evolution of Dress



Oriental Costumes

In a lecture delivered at Chautauqua by Professor Frederick Starr, he endeavored to explain the origin of dress. The following ideas with regard to its evolution are interesting as showing the hold that custom has on the human race, and its prevalence over utility or fitness:

"It is an easy matter to tell how the clothing of the various nations arose. The Esquimaux got his present garb from many loose pieces of skin that he threw over his body, and tied with thongs. In the Oriental garments, the garment of the Chinese woman, for example, we find the loose style. There is a great deal of color in the garment, and much attention is paid to beauty. We have here the loose trousers and the large loose sleeves.

"There is the North American Indian, who wears nothing but a single piece of cloth. He wraps this around his body, brings it under his arms in front, and then he has his blanket all ready for use. But this method of clothing does not give him much use for his arms. So he makes a slit in the cloth, and allows the garment to hang from the shoulders. He thus has made the beginnings of a blanket. But to give his arms still

more room, he catches the cloth under his arms with a thorn, thus forming the first sleeve, the original loose and flowing sleeves.

"There are many such examples of evolution in dress. In the garment of the Mexican, the evolution has been carried one step farther. The cloth has been trimmed so as to shorten the sleeves, and the garment has been sewed at the sides so that it may better stay in place. The Indian woman throws the cloth over her head and catches it at the back with a thorn, thus forming the hooded cape. Suppose the Indian wishes to leave the upper part of his body absolutely free. He takes his blanket and wraps it around his waist and tucks it in, allowing the free cloth to hang. He thereby has formed a skirt. Suppose now he wishes to give his lower limbs still more freedom. He catches the cloth between his limbs with a thorn, thereby forming a pair of trousers.

If we examine our own dress we will find that it abounds in all sorts of survivals. Why is it that every gentleman's hat has a hat-band? You will say that it is for ornament. But when you have a black ribbon on a black hat, I very

much doubt the ornamental value of the band. Why is it that every gentleman's hat has a bow on the hat-band, and that bow always on the left-hand side. There is no present reason for these things. The cause lies in the past. The reason is that once there was a time when a piece of cloth thrown over the head and tied with a band of cloth served for a hat. The hat-band was there to hold on the hat. But why was that band always tied on the left side? The reason is that those were the days of sword-fighters also. If the bow or rosette had been on the right side, it would have been in the way. Naturally, therefore, it was placed on the left-hand side to be out of the way. And then of course when people have once become accustomed to do a thing in a certain way, they will continue to do that same thing in the same way, even after the purpose for so doing it is long since past.

There are other interesting survivals. What is the reason for the buttons on boys' short trousers, just above the knee? There was a time when it was the fashion for grown men to wear short trousers also. They were very proud of shapely legs, and wore these trousers very tight so as to show off the shape of their limbs to good advantage. Now if they had attempted to pull these tight trousers on, without some way of relieving the strain, there would have been danger of splitting. Accordingly buttons were placed along the sides, and when the trousers had once been pulled on safely the trousers were buttoned up.

Again, what was the origin of the buttons on the sleeves of men's coats? There was a time when it was the fashion for men to wear lace-cuffs on their undergarments. If these had been directly exposed to the weather, they would have quickly become dirty. So

they wore jacket-sleeves over them to protect them. Then whenever they wished to show their lace-cuffs off to their friends they had merely to unbutton the sleeves and show the beautiful cuffs beneath.

What is the reason for the difference between the clothing of men and of women? It is true, to be sure, that the clothing of men is more utilitarian and better adapted to the purpose of an active life but the difference arose in the conflict between the northern and the southern types at the time when the barbarians of the north conquered Rome. The Romans up to that time, like the Greeks and the other Mediterranean races had worn the loose garment of the southern type. The barbarians on the other hand wore the more utilitarian garments of the northern type. Now the men of Rome were quick to see the advantages of the new dress and were quick to adopt it. The women, on the other hand, like the women of the present day, were too conservative to take up these new-fangled notions, especially as they came from the hated, rude conquerors of Rome. There have been minor changes since that day, but the women's dress of the present time, especially the dress of the South, ornamental, bright, and attractive, is nevertheless barbaric.

The Romish priests have clung to the Southern dress. Conservatism has retained the old garbs. The college gown, also, is a survival of the Southern type. Contrary to the ordinary opinion there is no place so conservative as the university, and it is in the medieval universities that this ancient garb has been preserved. In many particulars we find that dress customs and habits are closely connected with interesting facts of history.

Meat Poison Suggestions

Thousands of cases of poisoning from meat and sausage have occurred without the real cause of the poisoning being suspected.

Many persons have died from trichina poisoning whose deaths were attributed to rheumatism or typhoid fever rather than to the parasite.

1. Meat poisoning and sausage poisoning (botulismus) have by recent investigation been shown to be two distinct disorders. In meat poisoning the source of the germs is septic and other disease processes from which cattle were suffering when killed. Germs closely allied to typhoid bacillus are said to play an important part in this class of cases. The flesh of cows is sometimes infected from puerperal fever. The flesh of such animals is poisonous immediately after the animal is killed, and the danger from the use of such meat is not prevented by thorough cooking (Fischer). Such meat not only does not become less dangerous by heating, but its virulence seems to increase, so that when a portion of diseased meat is mixed with healthy meat the infection extends to the whole.

2. There are three distinct forms of meat poisoning:—

1. A fever with vomiting, diarrhea, headache, backache, and great weakness lasting from two to three days to several weeks.

2. An attack resembling cholera occurring soon after eating, characterized by cramps in the legs, vomiting and rice water discharges, and subnormal temperature.

3. Symptoms resembling those of typhoid fever beginning four to nine days after eating the diseased meat.

3. Many cases of meat poisoning resemble very closely what is known as paratyphoid fever, and it has been sug-

gested that many of these cases are due to the paratyphoid bacillus, the difference in symptoms depending much upon the amount of the parasites which have been received into the alimentary canal. The best authorities now consider it quite probable that many epidemics of what was thought to be typhoid fever have been really epidemics of meat poisoning. Such outbreaks generally occur after picnics, weddings, or some other gathering in which a large number of persons were exposed to infection from a common source.

4. While sausage poisoning occurs most frequently from the use of sausage, this is not always the case. The poisoning is due to the development in ordinary so-called healthy meat of poisonous substances resulting from the growth of the bacillus botulismus. The symptoms of sausage poisoning begin to develop in twelve to thirty hours after the sausage is eaten. There is at first vomiting and diarrhea, then paralysis of the muscles of the eyeballs and of the muscles of the throat. Death results in fifteen to forty-five per cent of cases from disturbance of the heart and lungs. The sausage poisoning is destroyed by a sufficiently long continued boiling, but sausage is seldom boiled; hence it is an extremely dangerous article of food.

In the face of facts like these, which are constantly being brought to the attention of the profession and the public it seems indeed singular that flesh meats should still be regarded as the chief source of strength and energy by a large proportion of the public. It seems certain from the facts now generally known that more disease may be traced to the use of meat in its various forms than to any other article of food.

Bacterial Poisons in Foods

BY A. W. NELSON, M. D.

All food materials which have undergone decomposition to such a degree as to give to them vile tastes, odors, etc., developed in the later stages of putrefaction are not generally relished.

The question then presents itself to us, How far may this process be carried on and still result in no harm? May we eat with impunity food in which decomposition has begun, and if so, to what degree is it wholesome?

The effect of bacterial growth upon food is manifested in various ways. Bacteria do not actually consume the food as do higher animals. They only consume a part of it. Parts of the food are used by the bacteria for their growth, leaving the rest together with the products of bacterial growth which are known as decomposition products, illustrated by the souring of milk or decay of meat. These decomposition products are of a nature different from the original food substance. Besides the decomposition products other substances known as secretions are given off by the bacteria, they being in this respect like the higher forms of life. Some may be quite harmless, others are of a very poisonous nature. Thus we see that by bacterial action, food may contain many virulent poisons. Some of these products, being gaseous, give the food a bad odor; others present special flavors, which are due to decomposition or decay. As bacteria begin their action upon food, they produce and give off new products which at first give only a mild flavor, but as the process continues the flavor becomes so pungent as to be unbearable. Accompanying this process there is also softening, and if continued for sufficient time a decay and destruction of the food.

This process is illustrated by the so-called "gamey" flavor in meat which is due to a process of decay which has reached a certain stage. This flavor, not suggesting decomposition so strongly as in later stages, is relished by some whose tastes are like those of the Burmese, who bury fish for months in the ground and then consume it with great relish.

The bacterial action produced, gives not only certain flavors but also other products. Take for example cheese. Cheese consists principally of the fat curd removed from milk. This is com-

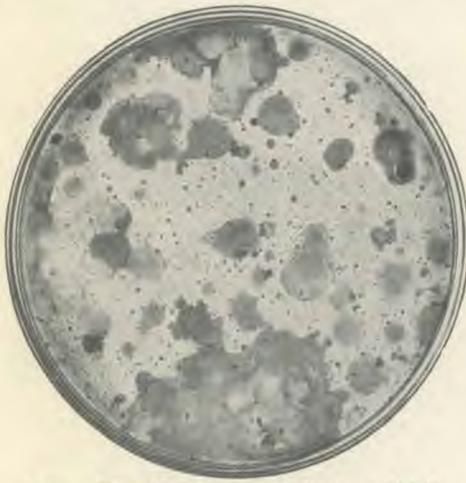


Many Molds and Germ Colonies from Ordinary Cheese.

pressed and allowed to undergo bacterial changes during what is known as the ripening or curing process. These changes are due to micro-organisms and require anywhere from a few weeks to several months of putrefaction process in order to obtain the desired flavor. This flavor depends upon the kind of germs used and the time given them to act, so that although proteolytic changes take place that are not fully understood, we also have a great

variety of decomposition products. To such poisonous decomposition products the poisoning from cheese-eating is due. Poisoning in this case is known as ptomain poisoning.

Ptomains are chemical bodies of great complexity and are formed by the action of micro-organisms upon food materials. If these poisons are present in sufficient quantities they cause death; in lesser amounts perhaps only sickness or discomfort; and if only present in such small quantities as to be almost entirely unnoticed, their continued use eventually causes injury and disease. The illustra-



Culture Plate, Showing Germ Colonies and Molds Taken from Roquefort Cheese

tions show cultures of germs and molds made from cheese. Note the large number and variety present. They are equal in numbers to those in very bad milk. Any one who has known the flavor, taste, and odor of Limburger cheese is easily persuaded by the many evidences that very advanced putrefaction is present.

Many cases of poisoning result each year from the use of decayed food, as cheese, meat, milk, etc. Food poisoning in such cases should not be confused with disease caused by bacteria taken into the body and thus producing disease. In cases of poisoning from eating food, the bacteria have developed directly in

the food before eating. This food thus affected is also very liable to contain disease germs as well. Thus it would have a double action.

Since micro-organisms grow best at the higher temperatures, cases of poisoning are more common in summer. Ice-cream poisoning is often due to the action of bacteria upon milk before the freezing process. A general poisoning following a great dinner or banquet is not at all uncommon, not to say anything of the many lesser intestinal troubles which so often follow. These disturbances of the body functions are very often due to the presence of ptomains in some of the food eaten, especially so should they be in the least putrescible when served, even though this process may only be carried to such a degree as to give it a gamey flavor. Ptomains very readily develop in foods kept in cold storage and then removed to a warm place. Cold storage foods should be consumed quickly if at all. Recent investigations have shown us that flesh kept in cold storage without the removal of the entrails is exceedingly dangerous.

It is well known that a great part of the summer diarrhoea in children and adults results from the consumption of foods containing poisonous products. The infant mortality of the great cities is due largely to the use of milk in which may be found multitudes of germs. Milk is a very good germ food. Cooking the food does not always render it less harmful, for the poisonous products still remain. This is also true in the case of parasites which infest meats. The drying process does not destroy them but only inhibits their growth, and under favorable conditions they will again grow in great rapidity. A mass of pork infested with trichina will stand boiling for hours without destroying the parasite. An eminent bacteriologist said recently that if people only knew

of the great number of parasites of various kinds found in codfish the industry would be ruined. Animal foods and their products are much more

formed we do not know. But we do know that strictly fresh food never contains germ poisons for the reason that there are few bacteria present and the few present have not had sufficient time for action.

As bacteria develop slowly if at all at low temperatures and ptomaines are more readily produced in the absence of oxygen, it is very important to preserve food in refrigerators which give a uniform low temperature and have a constant supply of fresh air.

But best of all we should use fresh and natural foods, nuts, grains, legumes, which are protected by nature from bacterial action by their dryness, bacteria requiring from 20 to 80 degrees of moisture. This is the reason bacteria do not develop in dried fruits.

Food having an odor or taste of decomposition should always be regarded with suspicion and discarded. As bacteria develop best in the warm weather of summer, special care should be taken not to use food which is liable to putrefy or has in the least undergone this change.



Culture Plate Showing Many Germs and Molds Present in Milk only 24 Hours Old

liable to cause ptomain poisoning than other forms of food.

All bacteria do not produce poisons having the same actions and properties, and, just how these various poisons are

Fomenting the Ear

When it is necessary to apply a fomentation or a poultice to the ear for relief of earache, care should generally be taken to fill the external canal with warm water before applying the fomentation or the poultice so that the heat may be readily conveyed to the inner parts. This renders the application much more effective, since the column of water conducts the heat from the poultice or the fomentation to the middle ear. When the water is not placed in the ear as suggested, the ear is filled with a watery vapor which is by no means so good a conductor as liquid water.

The effect of heat in such a case is double: First, it relieves pain by the

anodyne effects of heat; and second it relieves congestion by diverting the blood from the inner parts to the surface.

Deaf Persons Immune from Seasickness

A foreign journal announces the discovery that deaf persons do not suffer from seasickness. A sea captain made this observation in taking across the Atlantic a large class of deaf mutes. Seasickness is without doubt in some way related to the organ of equilibration which is associated with the ear. Deaf-mutism may in some way modify the internal ear in such a way as to make it less susceptible to the motions of the ship than when in health.

How a Sedentary Man May Keep Well

The average business man grows old prematurely, becomes a subject of auto-intoxication and arteriosclerosis and all the secondary consequences which are the result of these pathological conditions, which are caused by lack of exercise.

Man is naturally an active outdoor animal. It is as impossible for man to live a long and healthy life shut up in a counting-room or an office as for a horse to preserve its vigor shut up in a narrow stall or stable. Under such conditions a horse rapidly deteriorates. So also does a man.

Wild creatures shut up in cages instinctively seek to counteract the ill effects of their confinement by almost ceaseless activity. Watch the lion pacing restlessly up and down his cage hour after hour. Observe the monkey going through his heavy gymnastics. A cage full of monkeys is a veritable turnverein. Note the caged bird, the parrot for example, putting himself through the most various and strenuous activities possible within its narrow confines. The horses in the pasture organize races and other athletic events to stimulate muscular activity. Man alone sits down in an easy chair and allows himself to fall into decay for lack of activity.

No doubt vicious dietetic habits, by benumbing the normal sensibilities, and producing a sense of enervation and torpor are largely responsible for the indisposition to exercise to be noted among professional and business men. The nervous exhaustion resulting from long hours of work and deficient sleep, supplemented, perhaps, by the further drain resulting from social dissipations and the depressing influence of tea, coffee, alcohol and

tobacco, and especially meat eating and overeating induces a state of inaptitude for energetic muscular activity.

The natural consequences of a sedentary life are:—

1. Weak heart, shown by the breathlessness which results from a brisk walk, short run, or climbing two or three flights of stairs,—a symptom which is ominous, and which should lead to an immediate change of habits and the development of heart vigor by a system of carefully graduated exercises in the open air.

2. General lowering of the vital resistance from imperfect circulation of the blood and accumulation of tissue wastes, the destruction and elimination of which require active muscular exercise in a creature constituted like man. Such animals as the dog and the turkey buzzard are possessed of livers capable of destroying enormous quantities of poison,—at least four times greater than the human liver. It is not possible for a man or a woman to remain in health for any considerable length of time without exercise which quickens the breathing and thereby accelerates the movement of blood through the liver, thus aiding it in its poison-destroying functions. This is also true of many other poison-destroying organs of the body, such as the lymphatic glands, the muscles, the kidneys, and the spleen.

3. Under the influence of sedentary life the blood becomes rapidly deteriorated. The blood is the life, and when depreciated in quality all the life processes necessarily deteriorate. The blood vessels themselves, by continuous contact with blood which is surcharged with poisonous substances which should have been destroyed by the liver, or eliminated by the kidneys as rapidly as formed, become the seat of a chronic process

which results in thickening of their walls, narrowing of their channels, and finally obliteration of great numbers of the smaller vessels, and a removal of the firm fibrous structure which gives to the vessels their strength, and a deposit in its place of lime salts, rendering the vessels brittle and thus predisposing to apoplexy, Bright's disease, hardening of the liver, dropsy, angina pectoris, sudden heart failure, and other irremediable conditions which lead either instantly or rapidly to certain and premature death.

4. Every sedentary man suffers more or less as the result of his neglect of muscular activity. The loss of appetite, biliousness, headache, mental obtuseness or confusion, nervous irritability of temper, despondency, lack of initiative, exhaustion, insomnia, and a multitude of other symptoms from which men of sedentary habits very generally complain, are all indications of the chronic autointoxication from which such persons necessarily suffer.

The remedy is easily found. A brisk walk of a couple of miles two or three times a day, or a horseback or bicycle ride of six to ten miles at a lively rate will cause a speedy disappearance of some or all of the symptoms named, if they have not existed for so long a time that organic or structural changes have occurred.

The weakness of the abdominal muscles which is universally to be found in men of sedentary habits—the natural result of continually sitting in a relaxed position, is responsible for many of the symptoms named. Relaxation of the abdominal muscles removes the intra-abdominal tension necessary to support the great masses of blood vessels found in the cavity of the trunk. In consequence they become over-distended with blood, while at the same time the vessels which supply the brain, spinal cord, and other parts of the body, are robbed of

a part of their normal supply. The large blood vessels of the trunk are capable of holding all the blood in the body, hence when over-distended the brain and spinal cord may be receiving not more than half the amount of blood they require for normal and energetic activity. Here is the cause of much of the mental confusion, exhaustion, and weariness from which business men, professional men and many women suffer most acutely, and is perhaps the chief cause of the mental and nervous depression with which many thousands of semi-invalid men and women struggle in vain while still seeking to do their part in the activities of life.

It is worth while for such persons to know that almost instant partial and even entire relief may be obtained by simply assuming a recumbent position. When such a person lies down, gravity aids in restoring the blood which has accumulated in the abdomen to the general circulation. The emptying of the abdominal viscera may be greatly accelerated by pressure of the hands, and especially by combined deep respiration with firm pressure by the clasped hands placed across the lower abdomen. By this simple method the abdominal viscera which are engorged with blood, thus robbing the brain and also setting up a multitude of disturbing reflexes, may be emptied of their stagnant contents, just as one empties a wet sponge of water by compressing it with the hand. Each time a deep respiration is taken, when the abdomen is compressed, the diaphragm distends and presses the congested liver, stomach, bowels, and spleen against the fixed abdominal wall, thus emptying the viscera of their contents and accelerating the vital current in the vessels of the general circulation.

Great benefit may also be derived from

deep breathing with abdominal compression in a sitting posture. If pains are taken to raise the chest well and hold it high while the breath is forced in and out, one can experience an almost instant change in the condition of the brain and the ease with which mental work may be accomplished.

Many sedentary people whose abdominal muscles have been greatly weakened by neglect of exercise find great relief from the use of the abdominal supporter. It affords to the over-distended vessels of the abdomen a support which should be given by tense abdominal muscles but which has been lost through the degeneration of these structures. The abdominal supporter is, of course, only palliative, and when it is worn its use should be supplemented by systematic exercises whereby the abdominal muscles may be strengthened. Walking is one of the best of these exercises, provided the chest is held high and the chin well drawn in. This tenses the abdominal muscles, and so forces the blood into the general circulation, thus providing for an adequate supply of blood to the working muscles of the brain. Walking on tiptoe is one of the most effective means of exercising the abdominal muscles.

The greatest benefit is to be derived from breathing exercises, and exercise in general. It is not the development of the lungs, but the strengthening and hardening of the muscles and the relief of visceral congestion, the squeezing of stagnant blood out of the liver, stomach, spleen, and other abdominal organs. The beneficial effect of exercise upon the circulation of the stomach and other abdominal organs is the explanation of the influence of the morning walk in creating an appetite for breakfast.

If one can not possibly get an opportunity to take a morning walk, he can get almost exactly the same benefit by

taking deep breaths, a hundred or more, while standing before an open window, or lying down upon a sofa with the windows of the room open, breathing deeply, with the hands clasped at the back of the neck and raising both legs to the perpendicular, keeping the legs extended and the muscles tense. This exercise repeated twenty to forty times in succession, three times a day, will accomplish more in maintaining healthful conditions of vital organs than a sauntering walk of several miles.

It is possible to counteract very largely, if not wholly, the effects of sedentary life by taking care to keep the air of the room fresh and at as low a temperature as is consistent with comfort, then sitting up straight with the chest raised, and take a dozen or more deep respirations every half hour or so. By taking a little pains one can soon form the habit of forced deep respiration while running up columns of figures, reading letters, dictating to a stenographer, running a tabulator or a calculimeter, or engaging in almost any other sort of office work.

Every man whose business is necessarily sedentary should devote at least a couple of hours every day to vigorous out-of-door employment. If in addition to this he will practice deep breathing by the method suggested while engaged in his office work, taking care to keep the chest well raised and the back well hollowed, he may postpone the evil day when he must suffer the consequences of sedentary life for many years, if not indefinitely.

REPORTER: "Uncle, to what do you attribute your long life?" OLDEST INHABITANT: "I don't know yit, young feller. They's several of these patent-medicine companies that's dickerin' with me.—*Chicago Tribune.*"

... The Walking Club ...

Fruits of Two Fine Trees

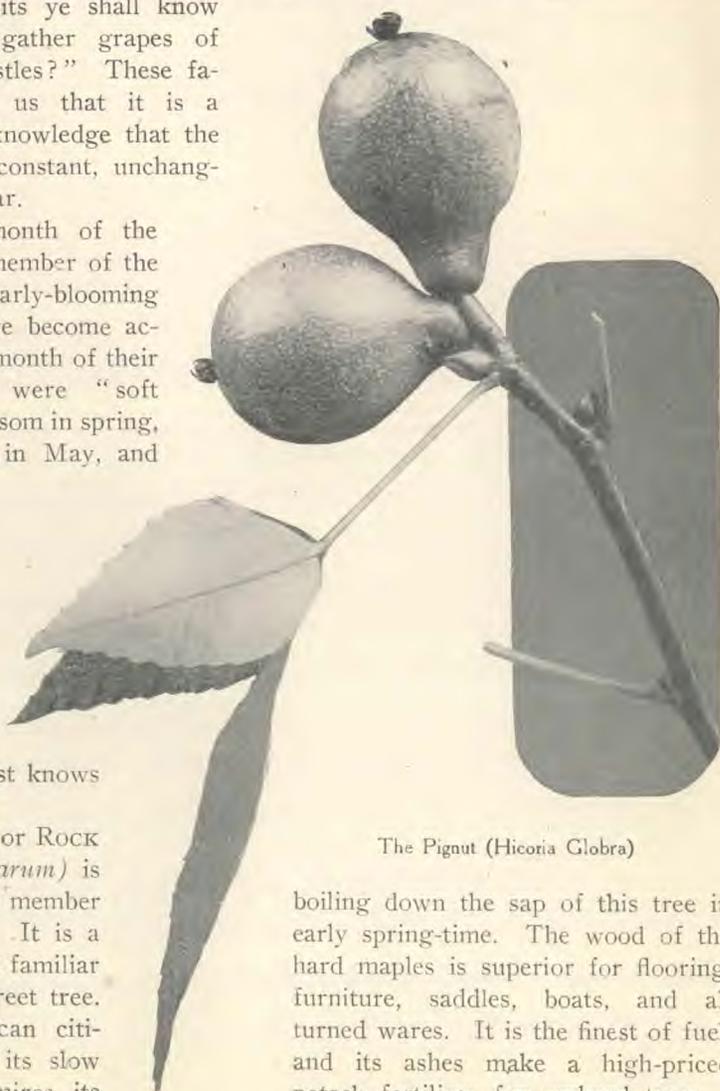
BY JULIA ELLEN ROGERS

NEXT to the leaf, the fruit is the best trait upon which to base our judgment of the identity of an individual tree. "By their fruits ye shall know them." "Do men gather grapes of thorns or figs of thistles?" These familiar texts remind us that it is a matter of universal knowledge that the fruits of plants are constant, unchanging, from year to year.

In this opening month of the autumn we study a member of the Maple Family, the early-blooming members of which we become acquainted with in the month of their blossoming. They were "soft maples," quick to blossom in spring, ripening their seeds in May, and able to show a little forest of seedlings before autumn. The wood of these maples is soft, and the trees grow very rapidly. Everybody knows the silver maple; everybody in the East knows also the red maple.

The SUGAR, HARD or ROCK MAPLE (*Acer Saccharum*) is a more conservative member of the same family. It is a fine shade tree, and is familiar as a roadside and street tree. The average American citizen is impatient at its slow growth, but he admires its

form and its handsome foliage, which turns to yellows and reds in autumn. The maple sugar (when pure) comes from



The Pignut (*Hicoria Globra*)

boiling down the sap of this tree in early spring-time. The wood of the hard maples is superior for flooring, furniture, saddles, boats, and all turned wares. It is the finest of fuel, and its ashes make a high-priced potash fertilizer for orchard trees.



The sugar maple unfolds its buds late in spring, and the flowers appear, greenish and inconspicuous, though hung out in long stems, among the opening leaves. In September the leaves, still fresh and green, tend to conceal the fruits. They are strikingly like the winged keys borne by the early maples in May but it takes a whole summer for this very deliberate tree to mature its fruits.

The winged keys, and the pale-lined, strongly veined leaves of this admirable species of the great Maple Family need no further description, since both are shown in the illustration.

The NORWAY MAPLE (*Acer platanoides*) is the sugar maple's rival in popularity. It is widely planted in towns and cities as a street and shade tree. It has a round head, while the sugar maple tends to form an oval head. The foliage mass is very thick, and darker than that of the sugar maple, for the leaves are not pale beneath. The leaf-stems of Norway maples contain milky sap. Break one and squeeze the end. Norway maple leaves are very large; they turn in late autumn to a clear yellow. The seeds are larger

than those of the sugar maple; they are flat, and spread almost in a straight line, forming an angle as great as is seen between the paired seeds of the sugar maple.

I hope no member of the Walking Club will be satisfied until he knows at sight all sugar and Norway maples in his neighborhood.

The PIGNUT (*Hicoria glabra*) is a very desirable member of tree society, though its name is a decided handicap. If pigs are turned into the woods in the autumn they eat with avidity the nuts of this hickory tree, which boys let alone, the nuts being insipid and sometimes bitter. The tree is a beautiful, bright-leaved member of the hickory family, with wood which is admirable for fuel, but rarely burned because it is so valuable in the manufacture of vehicles and farm implements, wheels, sled-runners, and a multitude of other useful articles. As a shade tree this hickory is unexcelled. Its gray bark is close-textured without a sign of "shagging" like that of its near relative, the shag-bark. Its limbs are clean and hard, forming a narrow head of pendulous, contorted branches. To the tips, the twigs are smooth and trim, with winter buds rather small for a hickory, globular



at the ends of twigs, pointed along the sides of twigs.

The leaves of the pignut are normally of five leaflets, the three nearest the tip of the leaf-stalk larger than the basal pair. The three leaflets in the illustration show how the fruit-development has taken the energy of the twig to the disadvantage of the leaf nearest by.

The fruit of the pignut is bright green yet in September, the husk pear-shaped as a rule, and pitted or dotted. The husk will later part into four valves opening to let the thin-shelled round nut fall out. It usually happens that the husk does not split-entirely to the base, so the nuts are not freed by this tree as they are by the shagbark. This is an additional reason why boys do not like to bother with the nuts of this tree; and any boy knows that this sign is one of several to warn him from wasting

time in "brown October's woods" gathering the fruits of a nut tree whose "shucks stick." Rather, he hies him to a tree whose shaggy bark declares its name. There is no further question. He leaves the pignuts to the green city boys who come out for nuts on a holiday, and has little sympathy for the disappointment in store for them when they come to eat the nuts.

Hickories are Americans. There is no native hickory elsewhere on the globe; and the trees do not grow well in any other region. It is a noble genus, with about a dozen distinct species, members of the Walnut Family. Let us call the pignut the "Smooth Hickory" and plant its nuts where we wish to have handsome, clean, well-behaved trees. Encourage your neighbors to do the same, and thus inaugurate a worthy reform.

The Passing of the Birds

BY BELLE M. PERRY

WE are wont to think of May and June as the special bird months, and with reason. But there is so much of interest the summer through, and even in winter, that I am coming to regard all the months as bird months. Indeed, I would match July, with its sweet bird-baby interests, with the best May and June have to give.

To watch a young bird with its father or mother and then see it by itself is to be convinced that there is a touch of bird-baby nature that makes them kin to their little human fellows. A young Baltimore oriole almost deceived me one day into thinking I had found a new bird, it was apparently so industriously seeking food beneath the leaves of a branch to which it clung. The father

soon came with a worm and, behold, it was a changed creature. The wings fluttered helplessly at its side and it uttered the most fretful and teasing cries until its wants were satisfied and the father had flown when it was again an independent little bird. This was repeated several times and I thought of the children I have seen perform in a similar way. A child, well-behaved by itself or in the presence of others, will often become a little nuisance the moment its mother arrives.

I have seen a number of the dearest bird-baby pictures this year and a continual regret has been with me that I have not joined camera work with bird study. How much pleasure and value snap shots of the fine pictures that any

one has opportunity to see would add to a note book.

The special interest that attaches to this month and the next is the gathering and passing of the birds to their winter homes. From the middle of September until the middle of November there are frequent air caravans to the Southland. From time immemorial the birds have made these annual fall and spring pilgrimages and they will no doubt continue to do so as long as there are birds and winters, though a number of our songsters might be won to become all-the-year residents if people would go to the needed care to insure them food and protection from cold and storm. An acre set out to pine and spruce would in a few years become a fine winter shelter. Intelligently multiply this a few hundred times in any of our northern States and the question of protection from cold and storm would be solved. Supplement these bird shelters with as liberal a setting out of those trees, shrubs, and vines that furnish winter bird food and there would be a great falling off in bird migration. Enough and much more than enough ground is wasted and unused on most farms for shelters and feeding grounds of this sort. Some of the migrating birds even now prefer to take their chances with us rather than embark on the perilous and toilsome migration journey. Among these are robins and bluebirds. Some convenient forest no doubt serves as their winter home, as the temperature of dense woods is always much warmer in winter than that on the outside. On January twenty-first of this year, a remarkably spring-like day and one of several in succession, we saw robins in our apple trees, pecking away at some of the fruit of the previous season which still clung to the branches. From this time on they were with us every warm

day. No doubt some of the birds seen during a warm spell in the later winter months are advance agents of the spring migrations, sent on to inspect the situation and return if the conditions are unfavorable.

It will be interesting from this time on till the travel season is over, to listen and watch for the gatherings of the flocks of these wonderful and mysterious trips. That the nestlings of the present year are able to withstand the ordeal of such far and long-continued travel seems almost incredible. No doubt many of the weaker ones fall by the wayside. It is a question in part of the survival of the fittest.

Even more remarkable is bird intelligence regarding location and direction. Some credit this to instinct and others to a combination of this with their marvelous gift of vision which enables them to sight rivers and mountain ranges at a great distance and to use these as guides to direction. The eyes of birds, and especially of some kinds of birds of prey, are fitted with the most rapid and delicate possibilities of adjustment to distance. They are field glass or hand glass at the moment of need. These telescopic powers are due to an osseous and muscular tube attachment to the socket. In some birds this osseous tube is composed of as many as twenty pieces. Some birds will discern their prey on land or in water when they are flying so high that they seem a mere speck in the sky. This is shown by their lightning-like descent from these heights directly upon the object sighted.

Whether to the guiding impulse of Nature alone or to this, combined with their splendid gift of sight, is due the power of birds to make with certainty the point they seek, however far away, this much is evident, the call to go takes imperative hold upon the summer-resi-

dent bird-world at this season and flocks may now be seen in low meadows, on river banks, and in various places, where for several days they go through flying drills in preparation for the journey so close at hand. Among the first to go are the orioles, kingbirds, swallows, and martins. Let me digress for a moment to say a word regarding these last-named birds, which I was so eager to win for neighbors this year, but which never came, although an inviting home was prepared for them. I have failed to learn that any have been seen in this locality. Twice have I found them in most unexpected places in other towns. While waiting for a car on the streets of Lansing one day in June my attention was attracted to martins on the telephone wires in front of a business block. I soon discovered them going in and out of some little opening near the roof of the building. It was evidently their nesting place. A little later I had a similar experience on the streets of Jackson (Mich.) and I am wondering if the cornices of city business blocks, with the convenient telephone wires on which to light, offer them inducements beyond those of the bird house built and placed with especial care for their liking to nest in colonies and to have clear sailing to nests unobstructed by tree or building. Certainly the English sparrow must be as great an annoyance to them on the business street and in the nooks and crannies of business blocks, where they literally swarm, as anywhere else in the world.

As I have said, the migrant birds are now gathering and our note-books may record new and strange proceedings on the part of some of our most familiar feathered friends. Not all, however, even of the same kind in the same locality, necessarily go in the same caravan. They probably know full well that there

will be other opportunities and one emergency or another has hindered some of them. Perhaps an accident to nest of nestlings has resulted in a late brood not yet sufficiently strong to hazard the journey.

Not only may we gather interesting notes from the doings of our own summer residents, but also from the many warblers and other migrants that nest farther north and which will be likely to stop over with us for varying lengths of time, from a day to a week or more, to rest and recuperate before going on with their journey.

The birds that are surest and swiftest of wing, as the swallows, do not hesitate to travel by day. Those less strong of wing and of conspicuous plumage dare not risk the daylight. But the night migrations have their special dangers, too. The gas and electric lights of cities and towns, with the network of wires in their vicinity, to say nothing of church spires and lighthouses, are the cause of many bird disasters during migration time. These same lights prove a friend to many of our night-foraging birds during the insect season, when a good meal is always easily secured in their vicinity. Many screech owls have been seen around these lights in our town the present summer. Their whereabouts during the day was always easily traced by the excitement of the birds in that locality. One morning we were awakened by a clamor among our birds, the special cause of trouble seeming to center in two large maple trees. This continued all day and, do the best we could, nothing could be discovered to warrant such a tumult. The mystery was explained when dusk came on and a number of screech owls began making investigations in our bird houses. This immediately aroused our resentment and they were dispersed with the aid of a shotgun which is kept for

English sparrows. Not until next morning did we discover that one had been injured in a claw. We kept it long enough to observe some interesting things, chief of which was the double set of lids with which nature has provided these particular birds. The under lids look as if they might have been made from mica and are edged with a little dark line. These serve to subdue the strong light of day which is so trying to owl eyesight. The outer lids close only in sleep. These birds are interesting little creatures and I suppose are considered pretty good citizens, owing to the number of insects, mice, and other pests, including English sparrows, which they are said to destroy. But their bird diet is not confined to English sparrows, and we made it so uncomfortable for them that they have not been seen since in our neighborhood.

Among the latest birds to migrate are the phebes, chipping sparrows, robins, and bluebirds. By the last of November the bird caravans have all departed, none of them to return before early May, and we may know that whatever birds we see after that time are either residents or winter visitors.

The Meadow Song

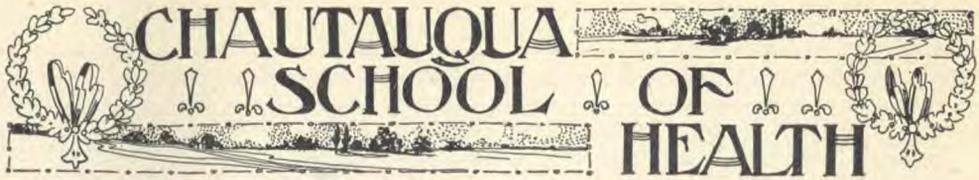
F. M. M.

REDTOP, timothy, June-grass, and clover,
Sing the merry meadow-song over and over!
Bobolinks a-trilling through it,
Little breezes thrilling through it,
Just to-day,
Care away,
And I'll be a rover.

Redtop, timothy, herd's-grass and daisy,
Hear the merry meadow song, laughing and
lazy!
Grasshoppers a-chirring through it,
Jolly quakers whirring through it,
Garden small
Over all,
Dancing till they're crazy.

Redtop, timothy, buttercup, and rye-grass,
How the merry meadow song ripples through
the high grass!
Golden cups a-dancing in it,
Golden sunlight glancing in it,
Garden plot,
Clean forgot,
I'm content with my grass!
—*Laura E. Richards, in the Youth's Companion.*





Temperature of Baths

BY J. H. KELLOGG, M. D.

THE thermometer is the only accurate measure of temperature; hence the importance of its use in the administration of baths.

Yet the thermometer may be abused. A given temperature may seem warm to one individual and tepid or cool to another. The same difference of sensation will occur in the same individual on different occasions. What seems cool to-day will be thought warm to-morrow. The susceptibility of the body to sensations of heat and cold largely depends upon its condition and the temperature of surrounding objects. In consequence of this physiological fact, it is improper to attempt, as some have done, to fix certain temperatures at which baths must be given to all persons under all conditions.

For convenience and perspicuity, the temperature of baths has been divided into six grades as given in the following table by Forbes: all who attempt to use the bath according to the directions should carefully learn and preserve the distinctions here made:—

- | | |
|-------------------|-----------------------|
| 1. Cold bath..... | 33 deg. to 60 deg. F. |
| 2. Cool bath..... | 60 " " 75 " " |
| 3. Temperate bath | 75 " " 85 " " |
| 4. Tepid bath.... | 85 " " 92 " " |
| 5. Warm bath.... | 92 " " 98 " " |
| 6. Hot bath..... | 98 " " 112 " " |

The vapor bath ranges from 98 degrees to 120 degrees; the hot air or Turkish bath from 100 degrees to 160

degrees, or even higher, though not usefully so.

A bath of any temperature above the natural heat of the body, 98 degrees, is a hot bath. At 32 degrees, water becomes ice; a bath is very rarely given at this temperature, and then the application should be made to only a small surface. Water at 32 degrees, and even ice and snow, may be usefully employed as topical remedies in local diseases. It will rarely be necessary to employ a full bath at a lower temperature than 65 degrees, which will usually seem very cold to the patient. A temperature from 85 degrees to 95 degrees, is the most generally useful for baths which involve a considerable portion of the body, though of course higher temperatures are employed in local applications.

It is often necessary to administer a bath when a thermometer can not be obtained. In such cases it is customary to test the temperature by placing the hand in the water. This is an unreliable method, however; for the hand becomes, by usage, so obtuse to heat that water which would seem only warm to it would be painfully hot to the body of the patient. To avoid this source of error, it is only necessary to plunge the arm to the elbow into the water, by which means its real temperature will be determined. Water which causes redness of the skin is hot; when it feels

simply comfortable, with no special sensation of either heat or cold, it is warm. Slightly cooler than this, it is tepid. When it causes the appearance of goose-flesh, it may for practical purposes be called cool, a still lower degree being cold.

The method about to be described is somewhat more accurate than the preceding and may be found convenient for facilitating the preparation of a bath of proper quantity as well as temperature, a matter which though simple enough is often quite annoying to inexperienced persons. It is a fact of common knowledge that water boils at 212 degrees F. Boiling water, at sea level, has this temperature. Well and spring water, and water of cisterns in winter, does not vary greatly from 53 degrees. The temperature of well and spring water changes very slightly with the seasons. By combining the proper quantities water of these known temperature, any required temperature may be produced. Not having seen this method suggested before, the following table may perhaps be used to advantage in the absence of a thermometer; the use of a thermometer is advisable however, when possible:—

Tem 53 degrees	Tem 212 degrees		106 degrees
2 qts. added to	1 qt. equals 3	qts. at	98
2½ qts. added to	1 qt. equals 3½	qts. at	93
3 qts. added to	1 qt. equals 4	qts. at	85
4 qts. added to	1 qt. equals 5	qts. at	80
5 qts. added to	1 qt. equals 6	qts. at	76
6 qts. added to	1 qt. equals 7	qts. at	

When larger quantities are needed it is only necessary to multiply each of the combining quantities by the same number. For instance if a gallon and a half of water is needed for a foot bath at 106 degrees, pour into a pail or bath tub four quarts of fresh well water and then add two quarts of boiling water. If four gallons of water are wanted for a sitz bath at 93 degrees (a very common temperature) pour into the bath tub three gallons of fresh well or spring

water, and add one gallon of boiling water. Thus any required quantity can be obtained at the temperatures given. The cold water should be placed in the vessel first and there should be no delay in adding the hot water, as it would rapidly lose its heat, and thus make a larger quantity necessary. Determine measurement is not essential. The cold and hot water may be added alternately in proper proportions, being measured by the same vessel until the requisite quantity is prepared.

THE VALUE OF ATHLETICS

Interesting Facts Revealed by Study of the After-history of Col- lege Oarsmen

Dr. Meylan, Director of the Columbia University Gymnasium, has been making a study of the after-history of the Harvard oarsmen, and finds them to be an unusually healthy lot of men. Ninety-seven per cent reported themselves in excellent health. More than one-third of them have not once consulted a physician in more than ten years, and more than half have not been sick in bed for a single week since leaving college. Only one of a large number reported himself as being in poor health. It thus appears that vigorous training, such as rowing, is in no way detrimental to health, but on the contrary, it helps to build up a hardy constitution.

"THIS is the gospel of Labor,—
Ring it, ye bells of the kirk!
The Lord of Love came down from above
To live with men who work.
This is the rose He planted
Here in the thorn-cursed soil;
Heaven is blessed with perfect rest,
But the blessing of earth is toil."

—Henry van Dyke.

A Day's Menus

BY LENNA F. COOPER

BREAKFAST

	Proteids	Fats	Carbohydrates	Total
Grapes	36	103	437	576
Peach Toast	74	233	4646	771
Macaroni Cutlets	141	169	326	5 51
Corn Omelet	118	225	60	403
	4)369	730	1287	2386
	92	182	322	596

DINNER

	Proteids	Fats	Carbohydrates	Total
Browned Onion Soup	81	555	217	853
Protose Fillet	109	71	106	284
Baked Egg Plant	83	114	200	398
Mashed Potatoes 20 oz.	60	160	416	636
Cabbage Salad	28	228	87	343
Jellied Peaches	32	149	633	814
Whole Wheat Bread (4 slices)	45	5	232	282
Butter	1	113		114
	4)439	1395	1891	3724
	109	349	473	931

LUNCHEON

	Proteids	Fats	Carbohydrates	Total
Cantaloupe 2 lbs.	24		352	376
Vegetable Sandwich	137	305	542	984
Mint Julep			724	724
	4)161	305	1618	2084
	40	76	405	521

THE DAILY RATION

	Proteids	Fats	Carbohydrates	Total
Breakfast	92	182	322	596
Dinner	109	349	473	931
Luncheon	40	76	405	521
	241	607	1200	2048

CALORIES IN COMMON MEASUREMENTS

	Quart.	Wt.	Proteids	Fats	Carbohydrates	Total
Grapes		1 lb.	24	68	292	384
Nut Meal	1 cup	4 oz.	261	363	51	675
Peaches (med. sized)	1	3 oz.	3	1	34	37
Granola or dried Bread Crumbs	1 cup	4 oz.	62	4	340	406
Onions (med. sized)	1	2 oz.	3	2	23	28
Carrots (diced)	1 cup	4 oz.	6	4	44	54
Protose broth	1 cup	8 oz.	10	2	2	14
Egg plant (med. sized)	1	1½ lb.	33	19	144	197
Cabbage (chopped)	1 cup	4 oz.	7	3	26	36
Almonds (blanched)	1 doz.	1 oz.	24	146	20	190
Tomatoes (med. sized)	1	6 oz.	6	6	28	40
Mayonnaise dressing	1 cup	10 oz.	130	210	60	400
Strawberry juice	1 cup	8			196	196
Red Raspberry "					190	190
Cantaloupe (med. sized)	1	1 lb.	12		176	188

MACARONI CUTLETS

	Proteids	Fats	Carbohydrates	Total
½ cup macaroni	35	3	222	260
¼ cup milk	18	52	27	97
1 level tablespoon flour	2	1	22	25
½ egg	13	21		34
¼ cup nut meal or chopped nuts	65	91	13	169
⅕ cup dried bread crumbs or Granola	8	1	42	51
Salt				
	141	169	326	636

Take one-half cup of macaroni broken in three-fourths inch lengths and cook in boiling salted water until tender. Drain, then pour over it a dash of cold water. Drain again; add one-fourth cup of nut meal slightly browned in the oven, one-eighth cup of dry bread crumbs or granola and an egg sauce made by thickening one-fourth cup of milk with one level tablespoonful of flour to which add one-fourth beaten egg; also salt to season. With the hand form into cutlets and roll in dry bread crumbs. Place in a baking pan and pour over all one-fourth cup of milk to which has been added one-fourth beaten egg. Bake in an oven until nicely browned.

CORN OMELET

	Proteids	Fats	Carbohydrates	Total
4 eggs	105	168		273
¼ cup corn pulp or fresh corn	9	7	58	64
1 tablespoon cream	3	49	5	57
1 tablespoon bread crumbs	1	1	7	9
1 Teaspoon Salt				
	118	225	60	403

Separate the yolks of the eggs from the whites; beat the yolks until light; add the corn pulp, cream, salt, and bread crumbs. Beat the whites until stiff; fold into the egg mixture. Turn all into a hot, oiled omelet pan. Then remove to cooler part of the range and allow to cook slowly until well set and a nice golden brown on the bottom. Place in the oven for one moment; then fold and turn onto plat-

ter. Garnish with parsley and serve hot.

PEACH TOAST

	Proteids	Fats	Carbohydrates	Total
6 peaches	18	16	6	208
4 slices bread	4	45	5	282
$\frac{1}{2}$ cup cream	$4\frac{1}{2}$	13	222	24
	75	233	464	771

Make a toast of the bread by placing in a slow oven until thoroughly dry, then increasing the heat slowly until the whole is of a golden brown throughout.



Corn Omelet

(This may be prepared in quantities and kept indefinitely in a dry place.) Moisten with hot cream; cover the toast with sliced peaches. A little sugar may be added if desired.

CREAM OF BROWNED ONION SOUP

	Proteids	Fats	Carbohydrates	Total
4 medium sized onions	17	6	93	116
1 cup milk	36	104	55	195
1 cup cream	26	444	47	517
1 cup water				
1 tsp. salt				
1 level tablespoon flour	2	1	22	25
	81	555	217	853

Bake the onions in a closed vessel in a slow oven until very tender and quite brown. Rub through a colander. This will keep for some little time and gives an excellent flavor to soups and foods in which a "fried onion" flavor is desired. The onion is much more wholesome when cooked this length of time than eaten raw or cooked for only a few moments. The objectionable feature, the volatile oil, is driven off by prolonged cooking. To the pulp add the milk, cream, water, and salt. When boiling, add the flour which has been previously braided with a little water and let cook five to eight minutes. Serve hot.

PROTOSE FILLET

	Proteids	Fats	Carbohydrates	Total
$\frac{1}{2}$ cup diced carrots	3	2	22	27
$\frac{1}{2}$ cup chopped celery	3	1	8	12
1 onion finely chopped	2	1	12	15
$\frac{1}{4}$ lb. Protose	91	64	40	195
$\frac{1}{2}$ cup Protose broth	8	1	1	10
1 level tablespoon browned flour	2	1	22	25
	109	71	106	284

In the bottom of a baking dish place the diced carrots, chopped celery, and finely chopped onions. Spread evenly over the bottom of the pan and place over these the protose cut in one-half inch slices; cover with a brown sauce made by thickening protose broth with browned flour. Bake about one hour, or until the vegetables are tender. To make the protose broth, simmer a one and one-half inch slice of protose, cut finely, in one and one-half cups of water for one hour or more.

BAKED EGG PLANT

	Proteids	Fats	Carbohydrates	Total
1 medium sized egg plant				
$1\frac{1}{2}$ lbs.	33	19	144	197
1 cup boiling water				
1 cup bread crumbs	$\frac{1}{2}$	6	1	29
$\frac{1}{2}$ cup milk	18	52	27	97
1 egg	26	42		68
$\frac{1}{2}$ level tsp. salt				
1 level tsp. celery salt				
	83	114	200	398

Slice the egg plant and cook in a small amount of boiling water. While cooking put together the following ingredi-



Jellied Peaches

ents: bread crumbs, milk, egg, and seasonings, salt, celery salt, and onion. When the egg plant is tender remove from the fire and turn into the above

mixture. Put in a baking dish and allow to bake slowly until set. Serve at once.

CABBAGE SALAD

	Proteids	Fats	Carbohydrates	Total
2 cups chopped cabbage				
$\frac{1}{2}$ cup sour cream	13	222	24	259
2 tablespoon lemon juice			11	11
1 level tsp. sugar				
$\frac{1}{4}$ tsp. salt				
	28	228	87	343

Chop the cabbage finely and add a sour cream dressing made as follows: Beat the sour cream with an egg beater until light and thick; add gradually, the lemon juice, sugar, and salt, beating all the while. The salad should be served soon after mixing.

JELLIED PEACHES

	Proteids	Fats	Carbohydrates	Total
3 peaches				
1 cup water				
$\frac{1}{2}$ cup sugar			495	495
$\frac{1}{8}$ cup lemon juice			14	14
$\frac{1}{2}$ box Vegetable Gelatine				
1 doz. blanched almonds	24	146	20	190
	32	149	633	814

Pare and cut in halves three nice peaches. Heat one cup of water and one-half cup of sugar to boiling. Add the peaches and cook until tender; remove and place each half peach in a sherbet glass or mold. Prepare a jelly, using the peach juice of which there should be three-fourths cup (if deficient add water to make the required amount) and one-eighth cup of lemon juice and one-half cup of water in which has been cooked one-eighth box of gelatine having been previously soaked, washed, and drained. After the jelly has cooled until it just begins to thicken, pour slowly into the glasses or molds. When set, add two blanched almonds split in halves.

WHOLE-WHEAT BREAD

	Proteids	Fats	Carbohydrates	Total
1 cup potato water				
$\frac{1}{4}$ - $\frac{1}{2}$ cake compressed yeast				
$\frac{1}{2}$ teaspoonful salt				
$\frac{1}{2}$ teaspoonful sugar				
2 cups whole wheat flour	161	51	838	1050
2 cups white flour	92	37	911	1020
	253	88	1749	2070

For the liquid use potato water, drained off from boiled potatoes. Milk or half water and half milk may be used. Dissolve the yeast in one-eighth cup of warm water. Warm the flour and liquid. Mix the potato water, salt, and sugar, and dissolved yeast. Stir in the flour with a spoon until as thick as possible. Knead in the rest of the flour leaving a small amount for flouring the board. Put all to rise in a warm place about one and one-half or two hours, moist heat being preferable, or until the dough has become twice its size in bulk. Knead down, adding more flour if the dough is too soft. Let rise again about three-fourths of an hour, or until the dough is again twice its size. Shape into a loaf and let rise again about three-fourths hour. Bake one hour. This quantity is sufficient for one loaf.

VEGETABLE SANDWICH

	Proteids	Fats	Carbohydrates	Total
8 slices bread	90	11	464	565
1 oz. Butter	1	227		228
2 medium tomatoes	12	13	55	80
$\frac{1}{2}$ cup chopped celery	2	1	8	11
$\frac{1}{4}$ cup mayonnaise dressing	32	53	15	100
	137	305	542	984

Butter eight slices of bread. Peel and slice and salt the tomatoes. Chop the celery very fine. Prepare a mayonnaise dressing as follows: Beat one egg, add lemon juice, salt, and olive oil. Place in double boiler and stir continuously until it begins to thicken. Then remove from outer boiler and set in dish of cold water stirring until cold. Use one-half of this amount. Butter the bread and on one slice place a layer of sliced tomatoes; cover with mayonnaise dressing; sprinkle with chopped celery and place upper slice; press together. Cut diagonally across or into fancy shapes.

MINT JULEP

	Proteids	Fats	Carbohydrates	Total
½ cup strawberry juice	4		98	98
½ cup red raspberry juice			95	95
½ cup lemon juice			36	36
½ cup sugar			495	495
6 mint sprigs				
1 cup boiling water				
1 pint cold water				
			724	724

Pick and wash the mint leaves; bruise with a potato masher and pour over them one cup of boiling water. Cover and let stand fifteen or twenty minutes; strain and add the sugar, strawberry juice, lemon juice, raspberry juice, and the remainder of the water. Surround with ice until very cold before serving.

A FRUIT EATING HERMIT

Japanese Recluse Housed in Hollow Tree
Maintains Health and Strength
on Fruit Diet

A Japanese correspondent, Mr. N. Kurasaki, teacher in Ibaraki, Osaka District, Japan, observing that GOOD HEALTH recommends a fruit diet, sends us a curious account of one who, on a diet consisting exclusively of fruit, has maintained his natural strength to the age of ninety years. The following details may interest our readers:—

"He is called Chirin, and lives in a house in the recess of a mountain called Kakusozan, which is in Iishi District, Izumo Province. He is above ninety, but very strong. When young he was a servant of a millionaire, but quitting his service he climbed the mountain and took his abode in the hollow trunk of a huge tree. There he sat and meditated for many years, living only on fruit. Gradually his fame began to spread, and his old master built him a house, in which he lives at present. He is regarded as a prophet by rustic people about his place, who make him presents

of fruit continually. He sleeps very little, for he sits every night from 11 P. M. till 2 A. M. and prays to heaven in silence. He is credited with the power of prophesying, and believes himself to have supernatural power of insight into the future. Lately he has begun to eat rice sometimes and it is said this causes him to make some mistakes in his prophecies (How great is the good of fruit).

"This is a true story. My father saw him while in his hollow tree, and my wife's sister saw him in his present house, where she was allowed to stay one night, for the hermit welcomes visitors, boiling water and cooking rice himself in spite of his old age. But he will by no means let them interrupt him during his prayer season. My father-in-law possesses his autograph, and one of my distant relatives, who was a friend of his, is in possession of a large tray (hirobon) which was made of the wood of the hollow tree in which he sat and meditated."

DR. MORRIS ON SANATORIUM TREATMENT

According to Dr. Morris, the eminent American physician, there is but one mode of treatment which has stood the test of time and experience as a cure for pulmonary tuberculosis, and that is the so-called "sanatorium method," which employs chiefly fresh air, sunshine, regulation of diet, and improvement of nutrition. The observation which Dr. Morris makes with reference to pulmonary tuberculosis is practically equally true with reference to the treatment of other chronic maladies. Disease is curable not by drugs nor magic, but only by the vital forces which reside in the body. It is essential to health that the body be kept in constant use. Indolence will soon clog the wheels of action.



RIGHT AND WRONG WAYS OF DOING THINGS

Children's Department

In Apple Harvest

O ANNA! the Maiden's-blush apples are ripe, let us go and gather some," said Eddie Hart, as he came bounding into the room where his sisters, Anna and Laura, were busy at work one beautiful morning in early autumn time.

"Me do too," prattled wee little Mabel from the corner where she sat building a block house.

"Yes," replied Anna; "we will all go, and fill a basket with the nice mellow fruit to surprise Aunt Nellie, when she returns from her drive."

It did not take the children long to reach the tree; and while Anna, who was the tallest, picked the luscious fruit, Laura filled the basket, and Mabel gathered all her little hands could hold. Eddie, with his pockets and arms full, began to eat the tempting fruit.

"O Eddie!" said Laura, "you ought not to eat the apples now, you know mamma does not like to have us eat between meals."

"It does not matter if we eat apples, does it, Anna? Everbody eats apples when they want them."

"I do not believe mamma would want us to eat them except at meal-time; but Aunt Nellie has returned, and we will go and ask her about it," replied Anna.

Aunt Nellie, who was keeping house with the children while their papa and mamma were away on a visit, loved her nephew and nieces very much, and was ever ready for a talk with them; so

when Eddie asked her to tell them if it was wrong to eat apples between meals, she said: "Yesterday I heard a little boy say that he did wish people would not be all the time asking him to run on errands; for from morning till night there were so many things wanted he could scarcely get a moment's time to rest or play. Now, I suspect your poor stomach would offer the same plea, if it could talk. God did not intend it to work all the time. He made it to do a certain amount of work, which it is necessary it should do in order to keep your body well and strong; but when that work is done, it needs to have a chance to rest, just as much as you do after you have taken a long walk.

"After you have eaten your breakfast, it takes your stomach and its helpers four or five hours to take care of the food you have put into it. It has to sort it over, churn it up, and do a great deal of hard work before it gets it disposed of. You know your food is used to make blood, and has to be taken to pieces, and fixed over a good deal before it is ready for use. Now, as I said before, it takes four or five hours for the stomach and its helpers to fix over your breakfast, and sometimes even longer, according to the things you eat; for it is a good deal harder work to digest some foods than it is others.

"If we eat anything an hour after breakfast, the stomach and its helpers will have to work on that, and fix that

over just the same as they did the food we ate for breakfast; and then the curious thing about it is that it will have to begin at the beginning of the process, and do with that just the same as it did with the breakfast. Thus the poor stomach is obliged to work a great deal more and a great deal longer than it ought to; and if we keep on eating thus between meals, the stomach will have to keep right on working; and by and by it will get so tired out that it will not do its work well, and the little boy or girl who owns it, will become sick.

"It does not make any difference at all what it is that you eat between meals, whether it is apples, or candy, or cake, or something else. Anything you eat, even just a little taste, will have to go through this whole process of digestion, as it is called, just the same, though for some things it will take a much longer time than for others."

"Well," said Eddie, "I never knew before that it was treating my stomach so badly to eat an apple between meals, but after this I shall take care not to do so any more."—*E. E. K.*

TO-DAY

We shall do much in the years to come,
But what have we done to-day?
We shall give out gold in a princely sum,
But what did we give to-day?
We shall lift the heart and dry the tear,
We shall plant a hope in the place of fear,
We shall speak with words of love and cheer,
But what have we done to-day?

We shall be so kind in the after while,
But what have we been to-day?
We shall bring to each lonely life a smile,
But what have we brought to-day?
We shall give to truth a grander birth,
And to steadfast faith a deeper worth,
We shall feed the hungering souls of earth,
But what have we fed to-day?

—*Nixon Waterman.*

LISTERINE

The original antiseptic compound

¶ Listerine is peculiarly free from irritating properties, even when applied to the most delicate of the tissues, whilst its volatile constituents give it more healing and penetrating power than is possessed by a purely mineral antiseptic solution; hence it is quite generally accepted as the standard antiseptic preparation for general use in domestic medicine, and for those purposes where a poisonous or corrosive disinfectant can not be used with safety. ¶ It is the best antiseptic for daily employment in the care and preservation of the teeth.

Literature more fully descriptive of Listerine may be had upon request, but the best advertisement of Listerine is—LISTERINE

Lambert Pharmacal Company, St. Louis, U. S. A.



By the Editor

An International Department of Health

At the recent meeting of the American Association for the Advancement of Science held at Ithaca, N. Y., Prof. J. Pease Norton, assistant professor of Economics at Yale University, read one of the most important papers which has appeared in recent times. The facts presented by Prof. Norton are of extraordinary interest and worthy of serious attention by thinking men and women.

Professor Norton has undertaken to estimate the annual cost to the country of preventable disease and death. Here are some of his figures, which, being presented by a man of national repute as a statistician, must be regarded as at least approximately accurate:—

One million, five hundred thousand persons will die in the United States during the next twelve months. Four million, two hundred thousand will be constantly sick during the next twelve months. Five million homes, or twenty-five million persons will be made wretched by sickness and death in the next twelve months.

Of the persons now living in the United States, eight millions will die of pneumonia, eight millions will die of tuberculosis, six millions will die of diseases of the heart.

Six million infants under two years of age will die in the next ten years.

The present average length of life in this country is about forty years. An increase of ten years would result in the saving of more than \$2,000,000,000.00 annually, according to Newholmes. The

time lost from sickness amounts to nine days per year for each inhabitant on an average, or two million years of life each year. If one-third of this could be saved the money value of the saving would be not less than \$500,000,000.00 annually.

Six hundred million dollars is expended on criminality each year, a large amount of which is the outgrowth of disease. By the proper application of known scientific measures for the suppression of disease and death the annual saving would amount to between three billion and four billion dollars per annum.

The United States Government spends seven hundred and fifty million dollars annually for various purposes, of which only seven million dollars is spent for health.

Professor Norton advocates the organization of a new department of the national government to be devoted to health. He proposes that such a department should consist of the following bureaus:—

- National Bureau of Infant Hygiene.
- National Bureau of Education and Schools.
- National Bureau of Sanitation.
- National Bureau of Pure Food.
- National Bureau of Registration of Physicians and Surgeons.
- National Bureau of Registration of Drugs, Druggists, and Drug Manufacturers.
- National Bureau of Registration of Institutions of Public and Private Relief, Correction, Detention, and Residence.
- National Bureau of Organic Diseases.

National Bureau of Quarantine.
 National Bureau of Health Information.
 National Bureau of Immigration.
 National Bureau of Labor Conditions.
 National Bureau of Research requiring Statistics.
 National Bureau of Research requiring Laboratories and Equipment.

Such a department, honestly and efficiently administered, would unquestionably result in an enormous saving of human life. The expenditure of the few million dollars necessary to support the several bureaus named would be the most advantageous investment which could be made by the national government. The money annually expended in the improvement of harbors, in the promotion of commerce in its various branches, in the development of agriculture, and in other lines,—all good and wise uses of money,—are comparatively unimportant when the infinitely greater value of human life is considered, and the enormous saving of life and suffering which might be effected by the means suggested by Professor Norton's paper. This entire paper will soon appear in a leading journal, and it is to be hoped that it will be given wide publicity.

We earnestly urge each of our readers to use his utmost influence to secure the legislation necessary to establish this new and most important department of public service. One of the most effective means of doing this is to write to your state senators and congressmen asking them to see that the proper bill is prepared for placing this matter before congress, and to see that the bill is passed when it is presented. Here is one of the greatest opportunities you will ever have to put your influence on the side of a great and noble humanitarian movement.

The establishment of such a department as Professor Norton has outlined will be the most important step taken in modern times in the interests of human life and health.

At the late meeting of the American Association for the Advancement of Science, a committee was appointed to promote the establishment of this new depart-

ment by agitation in all legitimate ways for the purpose of creating a public sentiment in its favor. Prof. Irving Fisher, the head of the Political Science Department of Yale, who is at the head of this committee, is a man of great organizing ability and unbounded enthusiasm in all questions relating to human progress. No better person could have been selected for this important work, and those who know Professor Fisher will feel safe in saying that from now on the American people and the United States government will be allowed no peace until the national department of health has been organized and set in operation.

UNDOING OF THE COOKS

Growth of Vegetarian Idea in Paris Creates Consternation Among Chefs

According to a recent dispatch from Paris, a movement in behalf of natural food in that great center of modern degeneracy has attained such proportions that the chefs and cooks, like the silversmiths of Ephesus, are alarmed lest they lose their occupation.

One of the earliest treatises on diet written in modern times was by Gliczes, a French writer, who published his work nearly a century ago. Dr. Bonejoy wrote an excellent little work in the interests of food reform about fifteen years ago. The preface to this excellent little work was written by the eminent Dr. Dujardin-Beaumetz, for many years one of the leading medical writers of the French capitol. For the last ten years of his life Dr. Dujardin-Beaumetz adhered closely to a non-flesh dietary, which he recommended to all sufferers from disorders of the kidneys, being himself subject to Bright's disease, to which he a few years later succumbed, after having kept himself alive and in active work for many years by a careful dietary.

Thus a movement toward simplicity and naturalness in diet has been incubating for a long time in Paris, and we are glad to know that at last the most intelligent class of Parisians are awake to the importance of giving attention to what they eat.

Those who have the good fortune to escape the monstrous dyspepsia-producing compounds of the French cooks can well afford to endure with patience the opprobrious epithets spitefully circulated about them by their disappointed one-time tormentors,—those professional poisoners and undertakers' assistants, commonly known as French chefs. "Aristocratic health maniacs" these diet reformers are called by the unregenerate. But then, this is not surprising, for a lunatic always regards everybody else but himself as insane. To be sane, means, in its proper sense, to be healthy, to be well. To be insane is to be unwell, unhealthy. The so-called "intellectuals" of Paris, who have turned their backs upon the mad riot of sense-serving sufficiently to return to sane habits of eating, are certainly less to be regarded as mentally invalids than those who meekly swallow viands which closely resemble gleanings from a dissecting room, prepared by a class of artisans whom Plutarch designates as "those layers out of corpses,—the butchers and cooks."

From the following paragraphs which we quote, it would appear that the movement in behalf of a natural dietary is lately getting quite a start in Paris, than which there certainly is no city more greatly in need of such a reformation:—

"Vegetarianism is playing havoc with some of the high-priced cooks of Paris. It has become so much of a craze in some of the circles of the Faubourg St. Germain that the cooks are in despair. Their hereditary triumphs in fish, flesh, and fowl are scorned by the aristocratic health maniacs.

"This vegetarian movement is due in great part to the intellectual set, as a certain class likes to have itself regarded. Prince Paul Troubetskoi, the famous sculptor, is really the head and front of this

revolution, and scores of his friends have enlisted with him in the cause."

WOOD-ALCOHOL POISONING

Death and Blindness often the Result—Danger to Public Health

Drs. Buller and Wood have recently made a study of this subject and found that "if ten persons drink, say, four ounces of Columbian spirits within three hours, all will have marked abdominal distress and four will die, two of them becoming blind before death. Six will eventually recover, of whom two will be permanently blind. With still larger doses, the proportion of death and blindness will be greater" (*Journal American Medical Association*).

Here is a danger to the public health concerning which every one should be informed. Wood naphtha, known under the various names of wood alcohol, methyl alcohol, and Columbian spirits, is coming to be so generally used for various domestic purposes that its highly poisonous properties should be understood. Like all the alcohols, this product is not only capable of producing intoxication, but is a poison in every sense of the word, and even more deadly poison than ordinary ethylic alcohol or wine spirits.

THE MONKEYS REJOICED

Were Delighted to Return to their Normal Fare after Whisky Experiments

Some years ago Professor Abbott, of the Laboratory of Hygiene, University of Pennsylvania, made a series of experiments on monkeys for the purpose of determining the influence of alcohol upon animals. The experiment, which extended over two years, was finally left incomplete, and the monkeys were permitted to return to their normal sober life, greatly to their delight; for the Professor states in his report, which was

made to the famous Committee of Fifty, that it was with very great difficulty that the monkeys could be made to take alcohol in any form. He says, "In order to get them to take it at all it was necessary to devise a more or less attractive mixture. After several trials a mixture of milk, whisky, and sugar was found to be most acceptable to them, but even this was not always totally consumed; some of it was at times refused, again some was spilled by the animals in their attempts to drink, while again there were days when they refused the mixture entirely. . . . At times they exhibited such disinclination to the whisky that it was often necessary to diminish the dose very much, and then gradually increase it again. There were also a number of instances where it seemed advisable to discontinue the whisky entirely for a time."

From the above it appears that the only way by which it was possible to get the monkeys to take whisky was to starve them to it; and that they never became addicted to it is evident from the fact that they sometimes refused to eat at all rather than to take alcohol with their food. In this respect the monkeys seem to show better judgment than some of their relatives who have enjoyed higher opportunities.

THE "OYSTER-CURE"

Remarkable Absurdity of French Origin Finds Its Way into Print.

ACCORDING to *What to Eat* some Frenchman has made the astounding discovery that the best remedy for nervousness is "eating all the oysters a person can consume to the exclusion of other food." A correspondent desires to have our views of this method of treating nervous disorders. We are of the opinion that nothing could be more absurd. The oyster is either a food or a medicine. It can not be both. If it is a medicine, and good for nervous disease, then it can not be a wholesome food, for medicines and foods

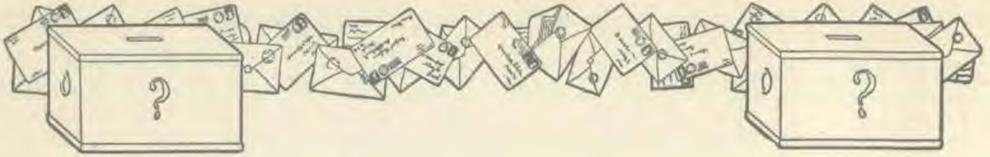
are antagonistic. The oyster contains very little nourishment—only 11 calories to the ounce. Milk contains nearly twice this amount, and grape juice more than twice the amount, while many dry foods contain as much as 100 calories to the ounce, and some furnish over 200 calories to the ounce. The oyster is a scavenger. It gets its living by licking slime off the stones and seaweed which cover the ocean bottom. That is its proper business. It was never intended to enter the human stomach. It is often a source of typhoid fever, and has more than once given rise to appendicitis, and has caused death by inflammation and obstruction of the bowels. There is not the slightest evidence that the use of the oyster is a cure for any disease.

Beans or Beefsteak

The newspapers are just now publishing statements to the effect that beans, peas, lentils, and peanuts contain twice as much uric-acid poison as does meat, and that the natives of India suffer greatly because of the amount of uric acid contained in the *dahl* which they eat. This is an error. According to Professor Hall, beans contain four grains of uric acid to the pound, whereas beefsteak contains fourteen grains, liver nineteen grains, and sweetbreads seventy grains to the pound. And meat contains nearly three times as much water as beans or other legumes, so it will be readily seen that for a given quantity of food, meat contains nearly fifty times as much uric acid as an equal quantity of beans, peas, or lentils.

The Death Rate in Norway

ACCORDING to Marcou the death rate of Norway is fourteen to the thousand. This is an exceedingly small death rate; only about two-thirds that of the United States. The low death rate is attributed to the careful education of the children in hygiene and manual training. Norway is said to have the best schools in Europe.



Question Box

10,348. Hemorrhoids Cured without the Knife.—G. E. S., Massachusetts: "What is your treatment for hemorrhoids without operation? 2. Can this treatment be carried out at home? 3. What would be the probable cost?"

Ans.—1. See answer to 10,341 (1).

2. Nearly every city has surgeons competent to operate upon a case of hemorrhoids.

3. The price of surgical operations is generally made to suit the person's circumstances.

10,349. Abscesses — Sanitary Pillow.—G. B. P., California: "1. What causes abscesses? 2. What treatment should be given for them? 3. How is a sanitary pillow made?"

Ans.—1. An infection with certain germs.

2. When pus is present, the abscess should be opened at once, washed out, and packed with iodoform gauze, or at least the wound should be drained.

3. The pillow should be thin, stuffed with hair, corn husks, cotton wool, sea moss, or pine needles. Newspapers torn into very small bits make a good filling for a sanitary pillow.

10,350. Castor Oil — Fruit.—"Ohio" asks: "1. Are there not certain cases of indigestion for which castor oil is to be prescribed? 2. Are there not some conditions of the stomach and bowels in which fruit is not tolerated?"

Ans.—1. Castor oil is not necessary for the treatment of indigestion. Dr. Kuttner, a great German specialist of gastric disorders in Berlin, was asked the question, "What medicine do you use for stomach and intestinal disorders?" He replied, "None at all. Regulation of the diet is sufficient to accomplish all that can be done."

2. Yes, in cases of extreme irritability of the gastric mucous membrane, the acids of fruits are sometimes not tolerated by the stomach.

10,351. Excessive Appetite — Gum Chewing.—J. A. G., Pennsylvania: "1. How can an excessive appetite be controlled? 2. Is there not as much danger in taking too little food as in taking too much? 3. Would a rather strenuous life create an abnormal appetite? 4. Should the desire for food be denied, or satisfied with a kind that will not injure? 5. What is the physiologic effect of gum chewing?"

Ans.—1. By taking great pains to thoroughly masticate every morsel of food and by the rather free use of fat foods.

2. and 3. Yes.

4. The amount of fat taken should be suited to the needs of the body, regardless of what the demand of the appetite may be. If you will state your height, weight and occupation, an estimate of the amount of food you require and a sample bill of fare will be made for you.

5. The salivary glands are exhausted and the secretion is depreciated.

10,352. Stomach Trouble — Peanut Butter.—"Smith," twenty-four years of age, writes: "I have a very nervous appetite and spit up without nausea a great part of what I eat. Have nervous heart trouble (not organic), and can not exercise without great palpitation (heart beating as high as 200 times per minute). 1. Is indigestion the cause of all this? 2. Will these troubles disappear if the indigestion is cured? 3. Have excessive acid in the stomach (as much as 66). Mornings I expectorate a yellow bloody mucus. Would the use of a stomach-tube be practical? 4. When and how often should it be used? 5. What other measures can you suggest for my case? 6. What fruits could I eat? 7. What is the method of preparing butter from peanuts?"

Ans.—1. Probably yes.

2. Without doubt.

3. You might be benefited by the use of the stomach tube. It is quite possible that you have erosion of the stomach. The diet should be very carefully managed, and care-

ful treatment should be applied. You ought to visit a sanitarium.

4. Two or three times a week just before retiring.

5. Hot applications over the stomach, followed by a moist abdominal bandage. A general tonic treatment should be employed together with an outdoor life.

6. It may be necessary to avoid fruits and all acid-containing food substances for a short time. The juice of very sweet oranges, stewed raisins, prunes and stewed pears would probably be the best fruits for you. Avoid acids.

7. The peanuts are deprived of their skins, steam cooked, then ground.

10,353. Tea, Coffee, Beer. Which is the most injurious?—H. W. H., Illinois: "1. Which is the most injurious—tea, coffee, or beer? 2. Give comparative food analysis."

Ans.—1. The three substances named are about equally harmful.

2. Tea, coffee and beer have practically no food value whatever.

10,354. Numb Feeling in Finger Ends.—R. H. T., Texas, forty-eight years of age: "1. What causes numbness and tingling in

the finger ends? 2. What will cure it? 3. Would an electric battery be of service?"

Ans.—1. The symptom is quite probably a paresthesia due to neurasthenia. The symptom may be due to Reynaud's disease.

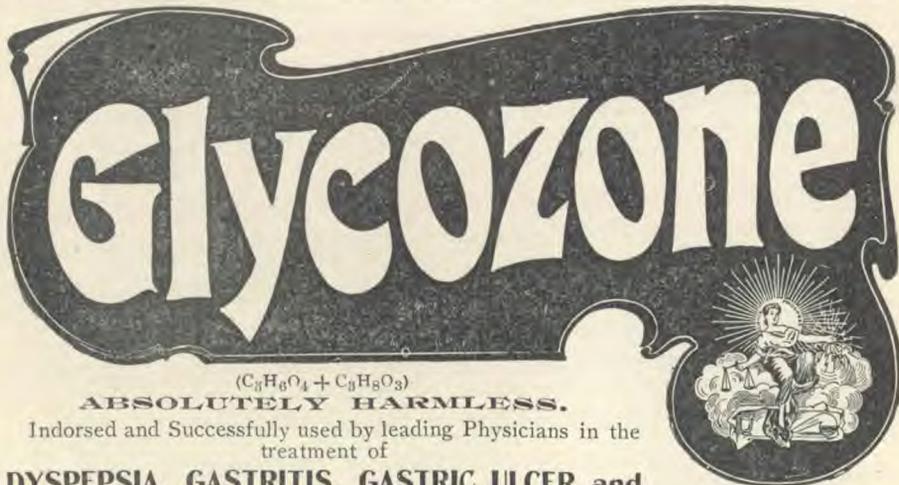
2. Bathing the parts alternately in very hot and cold water may give relief, but attention should also be given to the general health. Meat must be discarded, an outdoor life adopted, and every measure employed to build up the general health as rapidly as possible.

3. Possibly.

10,355. Stuttering.—B. J. asks for advice concerning this difficulty.

Ans.—This difficulty may be greatly benefited by the practice of speaking in a measured, rhythmic monotone.

10,356. Catarrh of the Stomach.—A correspondent: "1. What is the best treatment for slow digestion, acidity and catarrh of the stomach? 2. Eight or nine hours after eating beans, my stomach distresses me, my heart beats faster, and there is a general aching of the body. Some other foods cause the same distress. Why is this? 3. Do feces in short sections and dark-colored indicate constipation? 4. Would you advise a daily internal bath for a month?"



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Ans.—1. Careful regulation of the dietary; fomentation over the stomach, followed by a moist abdominal bandage to be worn during the night and cold bath every morning on removal of the bandage; and out-door life and plenty of active exercise.

2. Avoid swallowing the skins of peas. Beans should be cooked and served as a puree unless the Sanitas hullless beans are eaten. The cause of the distress is the long retention of the foodstuffs in the stomach because of the large amount of woody fibre contained in the hulls.

3. Not necessarily so. After the bowels move ascertain whether there is residual fecal matter by taking an enema and observing result.

4. In certain cases this is very beneficial, but employ this measure only when needed. The temperature should be eighty degrees or less.

10,357. Cod-liver Oil — Flaked Foods.—A New Hampshire subscriber sends the following questions: "1. What is the nutritive value of fresh, pure, unadulterated cod-liver oil? 2. What special value has it for medicinal purposes? 3. What is the process by which flake cereals are made—such as Force, Boston Brown Flakes, and Egg-O-See? 4. How are the so-called soda biscuit (common square crackers) made? 5. Can you give a recipe for making whole-wheat flour into some form of wafer or cracker?"

Ans.—1. Both animal and vegetable oils of all sorts when fully assimilated are utilized by the body. The caloric value is about 260 calories to the ounce.

2. None.

3. The grain is thoroughly cooked, partially dried, then pressed through heavy rollers and finally baked.

4. By combining cheap flour, starch, lard or cheap butter, and half baking in the oven.

5. See "Healthful Cookery" or "Science in the Kitchen."

10,358. What Exercises will Reduce Flesh?—F. W. N., New York: "What exercises will tend to reduce a double chin and large hips?"

Ans.—All sorts of exercises are beneficial to the extent of producing fatigue. Walking is good; swimming is better. The amount of walking should be to the extent of eight or ten miles daily. Swimming or exercising in the water for half an hour twice a day is a method of the highest value. It is impor-

tant to reduce the amount of food to the least practical limit. In general, we may say that flesh may be reduced by exercises and by restricted diet.

10,359. Bathing — Weak Throat.—R. E. L.: "1. Is the daily morning cold bath sufficient? 2. Do you recommend the nasal douche or the vaseline spray for catarrh? 3. Or do you consider the vaporizer advertised in GOOD HEALTH as the best for catarrh? 4. Will it by persistent use effect a cure? 5. Why should one who has not had a cold all winter and who takes a cold bath every morning, and sleeps with the windows open, have a sudden attack of the grip and severe tonsillitis? 6. How can the throat be strengthened so as to avoid sore throat and tonsillitis?"

Ans.—1. A warm bath employing soap should be taken once or twice a week.

2. The vaseline spray is superior.

3. The vaporizer is excellent.

4. In acute cases, yes.

5. Because the resistance is low. The measures taken have not been sufficient to build the resistance up to the normal point.

6. Build up the general health by a natural out of door life and a cold bath every morning. Gargle the throat with hot water three times a day.

10,360. The Sand Cure for Indigestion and Constipation.—F. A. B., Ohio: "What do you think of the sand cure as advocated by Professor Windsor, of Boston, Mass.?"

Ans.—We consider it irrational and in the highest degree absurd. It is of no value except as a means of lining the promoter's pocket.

10,361. Olive Oil — Kumyss — Catarrh.—A. H. K., Illinois: "1. Is olive oil healthful? 2. Is kumyss healthful? 3. How is it made? 4. What would you prescribe in general for catarrh of long standing?"

Ans.—1. Yes.

2. Yes.

3. By the addition of yeast with a little sugar to milk and fermentation. For a full description of the process, see "Science in the Kitchen," published by Modern Medicine Publishing Co., Battle Creek, Mich.

4. Build up the general health. Keep the nose in a healthy state by antiseptic sprays or the use of a vaporizer, and if you are not cured in a reasonable time consult a good specialist.

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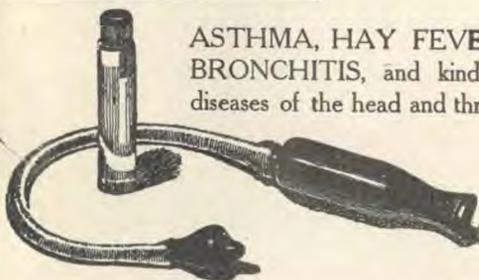
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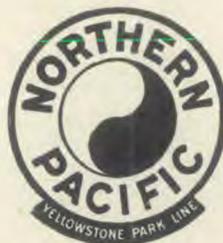
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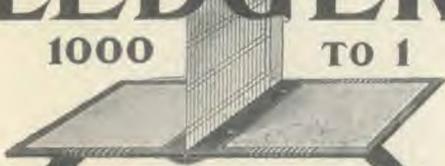
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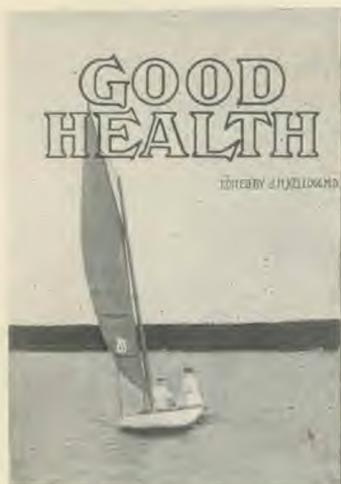
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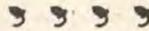
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