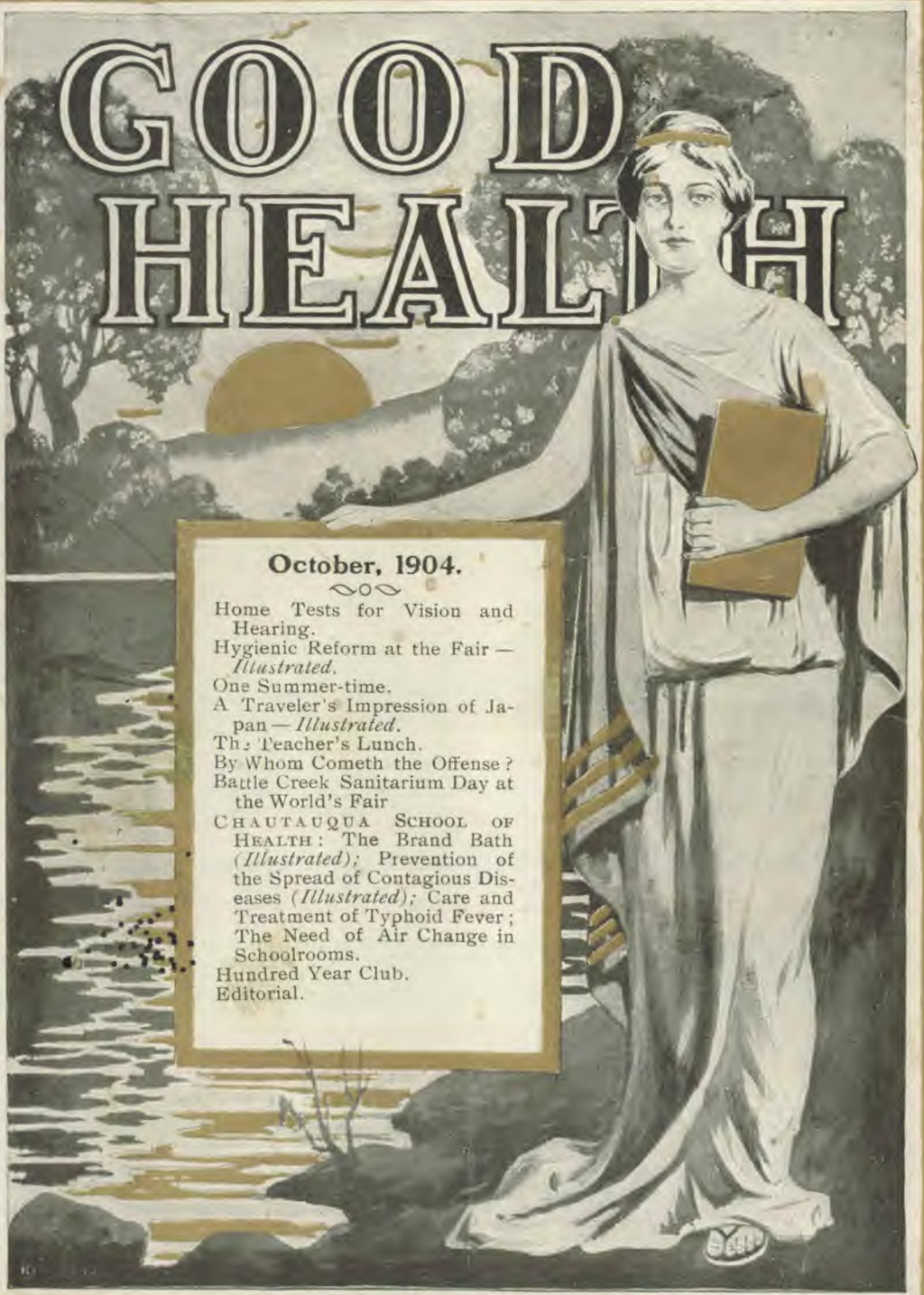
VOL. XXXIX. *Edited by J. H. KELLOGG, M. D.* NO. 10

GOOD HEALTH



October, 1904.

10 CENTS A COPY. $1.00 A YEAR.

PUBLISHED MONTHLY

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

GOOD HEALTH

Is the oldest health journal in the world. It is owned and published by a philanthropic association organized for the purpose of promoting hygienic reform in general and especially dietetic reform. There is no private interest, and the journal is not the organ of any institution or association other than its own.

EDITORIAL STAFF

J. H. KELLOGG, M. D., Editor.
MRS. E. E. KELLOGG, A. M., Editor Domestic Departments.

COLLABORATORS

A. B. OLSEN, M. S., M. D., M. R. C. S., L. R. C. P. (England), Caterham, Surrey, England.
DAVID PAULSON, M. D., Hinsdale, Ill.
KATE LINDSAY, M. D., Boulder, Colorado.
W. H. RILEY, M. S., M. D., Battle Creek, Mich.
J. C. OTTOSEN, A. M., M. D. (Copenhagen), Skodsborg, Denmark.
CHAS. E. STEWART, M. D., Battle Creek, Mich.
GEORGE THOMASON, M. D., L. R. C. S., L. R. C. P. (Ireland), Cape Town, South Africa.
C. C. NICOLA, M. D., Melrose, Mass.
J. F. MORSE, M. D., Battle Creek, Mich.
W. A. GEORGE, M. D., College View, Nebr.
HOWARD F. RAND, M. D., Boulder, Colo.
W. R. SIMMONS, M. D., Portland, Ore.
ABBIE WINEGAR-SIMPSON, M. D., Los Angeles, Cal.
MARY WILD PAULSON, M. D., Hinsdale, Ill.
C. P. FARNSWORTH, M. D., Madison, Wisconsin.
S. P. S. EDWARDS, M. D., Moline, Ill.
A. Q. SHRYOCK, M. D., Seattle, Washington.
MARY B. NICOLA, M. D., Melrose, Mass.
S. YARNELL, M. D., Spokane, Washington.
O. M. HAYWARD, M. D., Nashville, Tenn.
FRANK J. OTIS, M. D., Chicago, Ill.
J. F. BYINGTON, M. D., Battle Creek, Mich.
J. E. HEALD, M. D., Peoria, Ill.
CAROLYN E. GEISEL, M. D., Battle Creek, Mich.
A. J. READ, M. D., Philadelphia, Pa.
MABEL HOWE-OTIS, M. D., Chicago, Ill.
L. J. BELKNAP, M. D., San Jose, Cal.
D. H. KRESS, M. D., Sidney, Australia.
S. A. LOCKWOOD, M. D., Nichome, Kobe, Japan.
P. A. DEFOREST, M. D., Basle, Switzerland.
A. J. HOENES, M. D., Friedensau, Bez. Magdeburg, Germany.
LORETTA KRESS, M. D., Sidney, Australia.
R. S. INGERSOLL, M. D., Calcutta, India.
JOHN M. KEICHLINE, M. D., Cairo, Egypt.

Our Health Waist

LONG WAIST

Perfect in Design

Excellent in Quality

SHORT WAIST

REPLACES the *CORSET*, fulfilling all requirements without its harmful effects. For *Gracefulness*, *Ease* or *Comfort* this garment surpasses anything ever before manufactured. For *Economy* this waist is cheap at any cost when compared with the old style corset, because it does not deform the body, nor destroy health, but benefits and restores instead. It is *washable* and *adjustable*. You can make it larger or smaller by adjusting the shoulder straps and oval elastic in either side. By making the former longer or shorter, the length of the skirt may be regulated.

We sell two qualities, a light weight jean twilled material and a heavier weight sateen. Drab and white jean, bust measure 30 to 38, price $1.25, ; 40, $1.50; 42, $1.75. White and drab sateen, bust measure 30 to 38, price $1.75; 40, $2.00; 42, $2.25. Black sateen 25c additional. No odd numbered sizes in either quality.

When sending in orders for waists take the bust, hip, and waist measures snugly over the undergarments. We have long and short waists. The latter ends at the waistline and the former five inches below as per cut. When ordering state which is desired.

ADDRESS DRESS DEPARTMENT

Good Health Publishing Company

115 Washington Avenue North, ... Battle Creek, Michigan

Send for the latest Regal Style-Book

THE advance Spring number is just out. Send your address on a postal and let us mail you a copy. Then we will place your name on our list and future numbers will be mailed you as fast as they are issued.

Don't think this Regal Style-Book is just an ordinary booklet full of shoe-cuts. It is a reliable and correct 32-page **index** of Spring fashions—the most complete shoe style-book ever printed; full of accurate photographs and careful descriptions. It is not only an interesting but a **valuable** book to have. It is **a Regal store on paper.**

The Regal tannery-to-consumer system of **one** profit instead of **five** brings you **six-dollar shoes at the wholesale price;** and the "window of the sole" and the Buzz-saw **prove** it.

The Regal Mail-Order Department's perfect organization brings a New York shoe-store to your door—no matter where you live.

But never mind whether you need shoes now or not. We will talk buying and selling whenever you **are** ready. You **do** need the Style-Book. Send for it at once.

RALEIGH

Maybe you think you are hard to fit? —We are now supplying over 300,000 mail-order customers who thought **they** were, too. In ordering just send size and width. If not sure, copy the row of numbers inside the lining, near the top. We'll know the size and width by those numbers, **no matter who made the shoes.** Your order will be filled personally by an expert mail order salesman. Your shoes will be shipped the same day your order is received. You take no risk. Shoes exchanged or money refunded on request.

RALEIGH.—A handsome, striking model on pronounced lines, but entirely within the limits of style and good taste. The characteristic shape of the toe of the Raleigh is a certain success. Extension soles and high walking heel.

Style D2321 **as Illustrated:** Oxford Blucher style, Imported Enamel Leather.

Style E2321 Oxford, plain lace style (not Blucher), Soft Russet Leather.

Are you planning to visit any of the large cities this season? We shall be very glad to mail you, free, a convenient folding street map of any large city you may name if you will take the trouble to send for it.

Regal Shoes are delivered carriage prepaid anywhere in the United States or Canada, Mexico, Porto Rico, Hawaiian and Philippine Islands, also Germany and all points covered by the Parcels Post System, on receipt of $3.75 per pair. (The extra 25 cents is for delivery.) We are prepared to furnish special low shipping rates to any part of the world. Samples of leather and any information gladly furnished.

22 Regal stores in New York City, 6 Regal stores in Boston. 4 Regal stores in Philadelphia, 72 Regal stores in United States and England.

Women's Regal Shoes are made in all the latest styles. Sold only through our Mail-Order Department and in our exclusive women's stores.

REGAL SHOE COMPANY, Incorporated,
Mail Order Department, - - - - - - - 613 Summer Street, Boston, Mass.

REGAL

THE SHOE THAT PROVES

London Mail-Order Address 97 Cheapside, London, England.

OUR NEW MAGAZINE

CLUBBING OFFERS

For the Season of 1903-'04

Our offers for the season of 1903-'04 are the best, in many respects, which we have ever been able to make. There is associated with us this year a most brilliant galaxy of magazines, all of which are offered *without restriction as to new or renewed subscriptions.*

Read This List

	Regular Price
Good Health	$1 00
Success	1 00
CLASS A	
Frank Leslie's Popular Monthly	1 00
The Cosmopolitan	1 00
Woman's Home Companion	1 00
Good Housekeeping	1 00
Pearson's Magazine	1 00

CLASS B	Regular Price
The Review of Reviews	$2 50
The World's Work	3 00
Outing	3 00
Country Life in America	3 00
Lippincott's Magazine	2 50
The Independent	2 00
Current Literature	3 00

Our Prices

	Regular Price	Price to the Public
Good Health with Success	$2 00	$1 50
Any 1 Magazine in Class A with Good Health and Success	3 00	2 10
" 2 Magazines " A " " " " "	4 00	2 60
" 3 " " A " " " " "	5 00	3 10
" 1 Magazine " B " " " " "	5 00	3 10
" 2 Magazines " B " " " " "	8 00	4 60
" 3 " " B " " " " "	11 00	6 10
" 1 Magazine " A and 1 of Class B with Good Health and Success	6 00	3 60
" 2 Magazines " A " 1 " B " " " "	7 00	4 10
" 3 " " A " 1 " B " " " "	8 00	4 60
" 1 Magazine " A " 2 " B " " " "	9 00	5 10
" 2 Magazines " A " 2 " B " " " "	10 00	5 60
" 3 " " A " 2 " B " " " "	11 00	6 10
" 1 Magazine " A " 3 " B " " " "	12 00	6 60
" 2 Magazines " A " 3 " B " " " "	13 00	7 10
" 3 " " A " 3 " B " " " "	14 00	7 60

Magazines ordered by subscribers may be sent to different addresses. Subscriptions will commence with issues requested whenever possible to furnish copies; otherwise, with issues of the month following the date on which the subscription is received.

Order at Once

GOOD HEALTH PUB. CO.,

115 Washington Ave., N. - Battle Creek, Michigan

CHILDREN AT THE KINDERGARTEN IN KYOTO

GOOD HEALTH

A Journal of Hygiene

VOL. XXXIX OCTOBER, 1904 No. 10

HOME TESTS FOR VISION AND HEARING

BY J. F. BYINGTON, A. B., M. D.

THE importance of testing the eyes and ears of children early in life can not be overestimated. A child at school may be backward in his studies, and may therefore receive credit for being stupid or indolent, when in reality he is not deserving of the censure. He may have a naturally bright intellect, but some defect of vision or hearing may prevent him from receiving knowledge as readily as his associates. He may have the mind to receive, understand, and retain knowledge, but the avenues to his intellect may be defective. Many capable and promising youth have no doubt thus become discouraged and dropped their studies. Had the defects in the vision or hearing been discovered at an early age, they could, in many cases, have been corrected, and the child would not only have been able to get an education, but he would have retained the use of his senses for the years to come. Many defects of hearing, if they are discovered early and properly treated, may be entirely relieved, but if they are allowed to become chronic, little can be done to restore the lost function. It is the duty of the teacher to discover, so far as he is able, defects in the vision or hearing of his pupils, and, when found, to notify the parents, so that their children may receive the proper attention from a physician. It is not the purpose of this article to describe the conditions which render vision and hearing defective, nor is it intended to enable one to determine the nature of the defects found. The organs of sight and of hearing are of sufficient value to employ the best possible skill and experience in their treatment whenever they are found to be defective.

The following tests may be carried out by any teacher or mother, and if the directions are observed carefully, defects requiring the attention of a specialist may be readily discovered. It would be better for these tests to be made by the teacher, who would be unbiased in his findings, than by an inexperienced spectacle vender, who might offer his services "free of charge." The writer is not in sympathy with the too common practice of putting glasses on small children for miniature defects of vision. Nature is not always mathematically the same in her forms. It is difficult to find two leaves, even on the same tree, which are exactly of the same form, and the eye may vary, within certain limits, from the normal form and still have useful vision without the aid of glasses.

Tests for Vision

Clearness of vision is not always an indication of perfect eyes. A child may have perfect sight and still be unfitted for much close work with his eyes. There may be a simple deformity in the

shape of the eyeball, which makes the eye work to disadvantage at a near point, such as the ordinary reading distance. Vision may be clear at this distance, but there may be a strain upon the focusing muscles of the eyes, which, acting reflexly upon the nervous system, may cause headaches, inflammation, or other reflex disturbances. A test, therefore, should be made not only of the clearness of vision, but also of the range of vision. Acuteness of vision is measured for both distant objects and for objects placed at the usual reading distance, and the nearest point of distinct vision is determined. We also ascertain if the muscles which rotate the eyes in their sockets are well balanced.

Test Objects.— The most suitable objects for measuring the acuteness of vision are properly constructed letters. These would be impracticable in testing one who did not know the letters, but we seldom need to test a child's eyes who has not learned his letters. Cards having on them figures of more familiar objects have been used for testing illiterates.

The letters used for testing distant vision are known as Snellen's test types. They are so constructed that the width of each line making up the letter is one-fifth the width of the whole letter. In order for the letter to be distinguished, it is necessary for each line in the letter to be distinguished. After testing the vision of a large number of persons with apparently normal vision, Snellen found that the smallest letter which the average person could read must be large enough to subtend an angle at the eye of 5′. In order to be distinguished, it is evident that the size of the test letters must vary in proportion to the distance at which they are to be read. A card of letters was constructed having on it a number of lines of letters varying in size and capable of being read at different distances from the eye. On the above basis, the smallest letter the average person can read at two hundred feet is three and one-half inches in width. At one hundred feet a letter one-half as large, or one and three-fourths inches, is the smallest that can be seen. It is evident that a letter one and three-fourths inches in width, placed at one hundred feet from the eyes, would impress the same amount of area on the retina of the eye as a letter three and one-half inches, placed at two hundred feet, and therefore the one would be distinguished as easily as the other. On the folder between pages 530 and 531 will be found test letters constructed according to the above principles. Over each line of letters is a numeral which indicates the number of feet at which the letters in the line should be distinguished.

The letters used in testing vision at the reading distance are known as Jaeger's test types. They are the ordinary printer's types, ranging from diamond type, which is numbered 1, up to 36-point type, which is numbered 8. A page of these types is given at the close of this article.

Test for Distant Vision.— This test should be made if possible in a room large enough to place the test letters at twenty feet from the one to be examined, and in a good light. A great flood of light, such as one would get out of doors, is not nearly so satisfactory as a good side light from one direction. Artificial light may be used if the room is darkened and the light is made to shine on the letters, and not on the patient's eyes. If it is impossible to find a convenient room for placing the letters at twenty feet, a distance of fifteen feet will give nearly as good results, although at this dis-

tance a small amount of near-sightedness might not be detected. The letters used in making this test are the Snellen test types described before, and which are on the folder accompanying this article. In making the test, the left eye should be covered while the right is being tested, and the right covered while the left is being tested. If all the letters can be read in the line marked "20" when the card is at twenty feet, vision is normal, and is recorded as $\frac{20}{20}$. If the letters marked "40" are the smallest which can be read, vision is recorded as $\frac{20}{40}$, which means that the test was made at twenty feet, but the smallest letters which could be read should be read at forty feet. Vision in this case is numerically only one-half normal, but it is recorded as $\frac{20}{40}$, since that indicates the distance at which the test was made. If the line marked "15" can be read, vision is $\frac{20}{15}$, or better than normal. The numerator of the fraction expressing vision is always the distance at which the test is made; the denominator, the distance at which the letters should be read which are read.

The vision of each eye should be recorded separately, and it is also well to measure and record the vision of both eyes together. The reason for the latter test is that in testing one eye while the other is covered, the eye does not focus so readily, in a certain number of cases, so that the vision of both eyes together may be found considerably better than either eye separately.

Persons will often be found who can read as well as $\frac{20}{15}$. If vision is $\frac{20}{30}$, or less, in either eye, it indicates some defect of vision. The two most usual causes of poor *distant* vision are *astigmatism* and *myopia*, or near-sightedness. *Hypermetropia*, or far-sightedness, if very large in amount, may also blur distant vision. The above conditions may be relieved by wearing properly fitted glasses. Poor distant vision may also be caused by congenital defects in the development of the eye, or by disease affecting some portion of the eye or its connections with the brain.

Test for Vision at the Reading Distance.— This test should be made in a good light, which preferably falls over the left shoulder of the one to be examined. The letters used in making this test are Jaeger's test types, which are given at the close of this article. The proper reading distance is fourteen or fifteen inches from the eyes. At this distance Number 1 Jaeger type should be distinctly seen by the normal person under forty-five years of age. If distant vision has been found to be normal in each eye separately, the test for vision at the reading distance may be made with both eyes uncovered, but if the two eyes were different in the distant test, it will be well to test them separately as well as together in the near test. If Number 1 Jaeger can not be read at fourteen inches, the smallest type which can be read at this distance is recorded as the vision at the reading distance. Inability to read Number 1 usually indicates some defect of vision requiring treatment. The most common causes of defective vision at the reading distance, in a young person, are astigmatism and far-sightedness. Near-sightedness of large amount may prevent a person's reading distinctly as far as fourteen inches. The average person forty-five years of age, or over, is unable to read distinctly and comfortably at fourteen inches on account of beginning *presbyopia*, or old sight. It is a mistake for such a person to put off the use of correcting glasses, think-

ing that thereby he will postpone or retard the development of old sight. His sight will be better conserved by the use of properly fitted lenses than without them.

Determination of the Near Point.— By the "near point" is meant the nearest point of distinct vision. When a person with normal eyes looks at a distant object, at twenty feet or more, the muscles which regulate the focus of the eyes are practically at rest. They are brought into action only when a near object is viewed, and they are not brought markedly into action unless the object viewed is nearer than two or three feet. This faculty which the eye has of adjusting itself for objects at different distances is called its power of *accommodation*. In the defect known as *hypermetropia*, or far-sightedness, the eyeball is too short in its antero-posterior diameter, and in consequence of this shape, the muscles of accommodation must be brought into action in viewing a distant object as well as a near object, and in the latter case they must contract more than in the normal eye. As a consequence the near point of vision is more remote from the eye in hypermetropia than in the normal eye. If the hypermetropia is of sufficient magnitude, strain will be brought upon the muscles of accommodation. This is one of the most common defects in the eyes, causing headaches and other reflex nervous disturbances, and therefore the determination of the near point is an important test to be made by the teacher. It should be carefully conducted, for in many cases this test will furnish the only indication of a defect in the eye requiring careful attention and treatment.

The near point is usually determined by finding the point nearest to the eyes at which Number 1 Jaeger type can be read. If this type can not be read at any distance, it is difficult to locate accurately the near point. But in that case it will not be essential for the teacher or the mother to determine the point accurately, for the child requires the attention of a specialist. If Number 1 Jaeger can not be read at any distance, Number 2 or 3 may be used for making the test, but the findings will not be accurate in that case. The test should be made for each eye separately and for the two together, and care should be taken to find the *nearest* point of distinct vision in each case. The distance of the point from the eyes may be recorded in inches.

In the normal person the near point varies according to the age. The average person probably has the maximum power of accommodation at about the age of ten years. At this age the crystalline lens of the eye is very elastic, and capable of being changed very markedly in convexity by the muscles of accommodation. But it soon commences to harden gradually, beginning in its center, and extending to its periphery. This hardening progresses very slowly in the earlier years of life, but at the age of sixty or seventy the lens has become completely hardened in nearly every person, making it impossible to adjust the eye for different distances without the aid of glasses. The following table gives the near point of the average person at different ages from ten to sixty years:—

AGE	NEAR POINT	AGE	NEAR POINT	AGE	NEAR POINT
10	3 inches	30	6 inches	50	20 inches
15	3½ "	40	9 "	60	40 "
20	4 "	45	13 "	70	No accom.

It will be seen from the table that the normal person at about forty-five years of age can not see distinctly much

nearer than the ordinary reading distance, and at that age he must begin to wear glasses for close work. If a person is naturally *myopic*, or near-sighted, he may be able to read at a near point without glasses at a much greater age than forty-five. In this condition the eyeball is too long in its antero-posterior diameter, and it is impossible to see distant objects distinctly without the use of glasses. This is not a condition of increased eye vigor, as is commonly believed. If the near point is found to be much farther from either eye than it should be according to the table, it may indicate either a lack in the power of accommodation, or, as is more often the case in young persons, hypermetropia or astigmatism. If the near point is much farther than normal, an examination by a specialist will be desirable, especially if there is headache or any inflammatory condition in or about the eyes. The near point of each eye separately should be noted, as well as the near point of both eyes together. The latter will sometimes be found to be less than the former, on account of the eyes accommodating more readily together than separately, in a certain number of cases. A marked difference in the near points of the two eyes should be carefully noted. This might indicate a difference in the form of the two eyes, which is often a more distressing condition than an equal defect in the two eyes.

Test of the Muscular Balance of the Eyes. — By the muscular balance we mean the relation to one another of the muscles which rotate the eyes in their sockets. In marked disturbances of the muscle balance, the eyes may cross, they may turn outward from each other, or one eye may turn higher than the other. In less marked disturbances of the muscle balance, the eyes have only a *tendency* to turn in, out, or the one higher than the other. In the former cases the defect is apparent at once, but in the latter cases the lack of balance is not apparent, for the eyes do not actually turn in or out unless one eye is covered so as to disassociate its vision from that of the other eye.

A simple way of testing the muscle balance is to cover the right eye with a card and ask the child to look steadily with his left eye at some small, bright, distant object. As he is looking at the object, quickly shift the card so as to cover the left eye and uncover the right one. As you do this, notice carefully if the right eye makes a slight movement. If it does, it indicates that while it was covered by the card it was turning in a different direction from the other eye. By quickly shifting the card from one eye to the other while the child looks steadily at the distant object, and noting carefully if there is a movement of either eye as it is uncovered, we shall readily detect any tendency of the eyes to turn in, out, or the one higher than the other. These smaller disturbances of muscular balance, which are not apparent except by the above test, are sometimes more efficient causes of headaches and other reflex symptoms than more apparent defects.

By the foregoing tests, most visual defects of any consequence will be discovered. In addition to these tests, any inflammatory conditions in the eyes or lids, or headaches, especially in the temples or the back of the head, should be noted. By these tests but a small per cent of children will be found to have defective vision, but by systematically carrying out these tests each year in a school, many a child will be saved to a much better field of usefulness, and the time consumed in making

the tests will be well spent. Moreover, the tests themselves will be a source of profit and education to both teacher and pupil. It may not be advisable to notify parents of small defects in their children's eyes, and thus put them to the expense of a needless examination; but where a defect is discovered which interferes with the progress of the child, a parent will be only too grateful to be notified of it. We should be governed largely by the symptoms of the child and the progress he is making. If he is hindered in his work by being unable to see the blackboard or his book distinctly, or if close work gives him headache or his eyes become inflamed, and the tests indicate a defect in vision, it is the teacher's duty to notify the parents of the same.

A word might be said as to the *lighting of the schoolroom*. A great flood of light in the room is not desirable. Were it possible, it would not be advisable to have light from the four sides of the room. It would be preferable for the light to come mainly from one direction, as from the side of the room. Objects which are seen are made up of high lights, middle tones, and shadows. A picture lacking shadows is said to be "flat." Similar to this is an object with a flood of light upon it from all directions. It lacks shadows and hence can not be readily distinguished. Light from one side of the room, and preferably the left side, is the best. The child's shoulder does not obstruct light from the left while writing, as it does from the right.

Tests for Hearing

The tests for hearing should be made, if possible, in a quiet place, and preferably in a large room, so that the examiner may stand thirty or forty feet, if necessary, from the one to be examined. The ordinary schoolroom answers the purpose very well if the test is made after school hours, when it is quiet.

Many instruments have been devised for testing the hearing, but these are quite unnecessary for making a simple test, for the voice, audible and whispered, is the best means that even the specialist has for testing the efficiency of hearing. A watch and a tape-measure are all the apparatus that a teacher or a mother requires to make a test sufficient to determine if the child needs the services of a physician. Tuning-forks of various pitches are quite necessary for an aurist to make a differential diagnosis of the various forms of ear diseases, but they are not essential for making a simple test of efficiency or for determining if a defect in the hearing is present.

Test of Hearing for the Watch.— The watch is not always a reliable means for determining the usefulness of the hearing. In some forms of deafness the watch may be heard fairly well, while the hearing for conversation may be quite defective; and in other cases the hearing for conversation may be better than for the watch. But the watch affords a convenient and more invariable source of sound than the voice, and should be employed together with the latter. Different watches have ticks varying in loudness, hence the same watch should be used in making a series of tests. The distance should be noted at which a dozen or more of apparently normal persons can hear the watch to be used in making the tests. The average distance at which these persons hear the watch should be taken as the standard. We will suppose this distance is twenty-four inches. If a person can hear the watch only at four inches, we record his hearing for watch

as $\frac{4}{24}$, which means that at four inches he can hear a watch which should be heard at twenty-four inches. This fraction does not express accurately the numerical relation of his hearing to the normal, for the loudness of sound varies as the square of the distance, but it is customary to record it in this way. A more accurate numerical expression of the value of hearing in this case would be $\frac{1}{6}\frac{6}{4}$, obtained by squaring $\frac{4}{24}$. If the watch can be heard only when it is pressed against the ear, we record "Contact" after "Hearing for watch." If it can not be heard at all, the hearing for watch is 0. In making the test, have the person close one ear tightly with the finger, and hold the watch on the other side, directly before the open ear.

The hearing should be tested in a similar way with both the *audible and the whispered voice*. The voices of different persons may vary somewhat in distinctness, and it may be difficult always to give the voice the same loudness; but, with a little care, very accurate results may be obtained in this way, and the test is a better one for the utility of hearing than when the watch is used. In making the test, one ear of the person to be examined is closed, and the examiner stands on the other side, directly facing the open ear. He then pronounces slowly, in a moderate tone of voice, different numerals or the names of different cities, or other familiar words, and asks the person being examined to repeat the words after him. He increases his distance from the ear until words can not be distinguished accurately. The farthest distance at which the words are heard is noted. The hearing for the voice, like that for the watch, is recorded as a fraction, the numerator of which is the farthest distance at which the words are heard, and the denominator, the distance at which the normal person hears the same voice. The normal distance for the audible voice, as taken in some hospitals, is thirty-five feet.

The hearing should be tested in a similar way by means of the whispered voice. The normal distance at which the whispered voice is heard is taken by some to be twenty-five feet.

The above tests may vary somewhat under different conditions. It is impossible to secure an absolutely quiet place for testing, and the adventitious noises will vary at different times, but the tests will be sufficiently accurate to determine any abnormality of importance. If the child has a "cold," this should be taken into account, and a test made later, as the hearing is often temporarily reduced during an acute inflammation.

Slight variations from the average hearing need not be considered abnormal, but if the hearing distance for the watch or voice is one-half what it should be, or less, the child should have the attention of a physician who is competent to discover the nature of the trouble and prescribe the proper treatment. The earlier in life a defect in hearing is discovered, the better are the chances for improvement from treatment. Many cases of deafness are neglected until it is possible to do little or nothing for them, which might have been cured wholly or in part by early treatment directed toward the cause of the trouble. Besides defects in hearing, a mother or teacher should always regard as symptoms requiring attention, earache, discharges of pus from the ear, or mouth-breathing. These symptoms in a child often indicate an obstruction to breathing, of more or less degree, in the naso-pharynx, which, if treated early, may usually be entirely relieved, but which, if allowed to continue, may cause a permanent defect in hearing.

JAEGER'S TEST TYPE.

ARRANGED BY J. F. BYINGTON, M. D.

No. 1.

This type should be distinctly read at a distance of fourteen inches from the eyes. If it can not be read at that distance, there is some defect of vision which may require correction. Dimness of vision for near work, such as reading or sewing, coming on at about forty-five years of age, does not necessarily indicate an abnormality of the eye. The average person at this age begins to feel the need of glasses for near work, although vision may always have been perfect before that time.

No. 2.

The cause of poor vision at the reading distance in persons over forty-five years of age, is hardening of the crystalline lens of the eye, which makes it impossible to adjust the eye for near objects. Defective vision at the reading distance in young persons is usually due to some abnormality in the shape of the eyeball.

No. 3.

If you read fine print with difficulty, do not put off the use of correcting glasses, thinking that thereby vision will be better conserved. Your eyes, if properly corrected, will be less subject to diseases which impair or destroy the sight.

No. 4.

The art of lens grinding, one of the greatest boons to mankind, is not properly appreciated. Spectacles of a very crude type were first used in the thirteenth century.

No. 5.

The art of printing has done much to make glasses a necessity to a considerable part of mankind.

No. 6.

Near work taxes the eyes more than vision at long range.

No. 7.

All visual defects are not corrected by glasses.

No. 8.

Your eyesight is valuable.

HYGIENIC REFORM AT THE FAIR

BY G. C. TENNEY

IT is not any part of my purpose to weary the reader's mental legs and feet by leading him in an imaginary tramp about the spacious grounds; or to try to excite his surprise and wonder by a description of the gorgeous glory of architecture.

EDUCATIONAL BUILDING

While the mass of people go to satisfy the lust of the eyes or the pride of life, to surfeit on the pleasures of the Pike, or for the sake of going with a crowd, those who desire real benefit will obtain more by a careful selection of some of the thousands of subjects presented for thoughtful study than by wearing themselves out in an aimless tramp from place to place in contending with conscienceless, crushing crowds at the various centers of attraction. A ride about the grounds, first by the intramural railway and then by automobile, and a trip in the Ferris Wheel acquaint the visitor with "the lay of the land." These, with a visit to the Boer War, a view of the truly magnificent illumination, a concert in Festival Hall, will satisfy an ordinary appetite for the spectacular. Then settle down to quiet, methodical study. Art and science, travel and research, have brought all their treasures here and spread them out in a display that is bewildering to one who gazes at the whole. The remote and obscure parts of the earth are here in actual life. The Hottentot and his hut, the Irrogote without his clothes, the Negrito eating his dog, the Eskimo and his outfit, the Jap in his rising glory, and the Russian with his belated show,— all are here.

The philanthropist is here also. Those who are striving to uplift humanity, to reform the downward rush of life and turn the procession into up-

SANITARIUM EXHIBIT IN EDUCATIONAL BUILDING

ward ways, have brought to the World's Fair their work. The great palace devoted to Education and Social Economy is filled with that which represents the work that is being done for the betterment of our race. Here are the great universities and colleges of the world, with the reformatories and remedial agencies now at work contending against the forces of spiritual, mental, and physical degeneracy. The immense building is filled with an exhibition of the results obtained by the study and experience of those who have the welfare of humanity at heart.

The point of special interest in this part of the World's Fair is in a booth situated on the south side of the building to the right of and near the south entrance. It has a white front trimmed with gilt and bears the well-known legend, "Battle Creek Sanitarium." In front is a small table supplied with literature of a descriptive kind, and about the walls are photographs representing the institution and its work. In the center is the famous electric-light bath. By its side are the vibrating bars and the vibrating chair of mechanical Swedish movement. Three attendants are kept as busy as they can possibly be all day explaining to the thousands who throng

the place the principles and work here represented. The chair is in constant use, with perhaps a score waiting to occupy it, for its fame has already extended to all the grounds and been carried to every State. It is called the "rest chair." Weary, congested feet here find immediate relief with rest for the aching bones and flesh. A constant stream of thankful people are going away from that little booth with restored limbs and with new ideas as to the conditions of proper living. This is the point of special interest, because more people pause here to study than at any other point in the building, and no object on the grounds will be more gratefully remembered by the tired multitude than the "rest chair" that offered its genuine comfort and healing to all comers, free of charge. Of course, associated with this are the busy but kind and patient attendants who intelligently and untiringly minister the principles of true living by word and deed.

Over in the great Agricultural Palace, in a central position, is located another exhibition of these same good principles, in the form of a fine and neat food display by the food department of the Battle Creek Sanitarium. The lady in charge can only partially accomplish all that is required of her by the multitudes interested in the vital question of good diet. But busy tongue and hands dispense the blessings of light and truth reduced to concrete forms in the various foods which represent the best research of our age.

In the Liberal Arts building, along its north side, the publishing branch of the Sanitarium has a display of the

HEALTH FOOD EXHIBIT IN PALACE OF AGRICULTURE

"silent messengers" of truth in the varied publications issued by the Good Health Publishing Company. Here people find a good display of books, men and women to the wisdom and beauty displayed in the truths which these things represent.

It is a source of gratitude that the

EXHIBITION OF HEALTH PUBLICATIONS

periodicals, and smaller literature, a large amount of which is distributed freely to interested visitors. Much attention is bestowed upon all these exhibitions by thoughtful and intelligent people, who recognize in them the coming remedy for the world's increasing infirmities. One intelligent physician remarked truly, "These things will do for people what drugs can never do." Another said, "It is astonishing with what rapidity the medical world is coming to a recognition of the virtue and power of these methods of caring for the sick." Hundreds of willing testimonies are given every day by physicians and cultured

cause of true reform is so well represented there, and that nations and kings are coming to the brightness of its rising. The high estimation which leading men in our nation place upon the movement for health and hygienic reform is evidenced by the action of the authorities of this great Fair in offering, without solicitation, to devote one of its days to the celebration of this work and the special promulgation of its principles. This extraordinary favor is to be interpreted as an expression of sympathy with and interest in the principles represented by the Battle Creek Sanitarium and affiliated institutions.

She stood in the trim back porch, ironing snowy linen with irons heated upon a gasoline stove just inside the window. The wreathing honeysuckles half screened her sight, but when she saw us, she came forward with sweet cordiality, and we felt in five minutes that we had known her five years. A great Newfoundland lay stretched upon the veranda, and as we came up the bordered path he arose with decent courtesy to do the honors of the house, and he now went about offering a huge immaculate white paw to each of us. May choked apoplectically with suppressed laughter when her turn came, then went off in a gale that carried every one with her, and with it went also all constraint. With simple directness Miss Phillips showed us over our kingdom, and turned the same over to our keeping with such confidence that we could not but express amazement. "Ah, but I know you," she said, smiling brightly. Later we found that she had formerly been a teacher under our own beloved superintendent, and his letter of recommendation, thoughtfully borne by Beth on her first visit, had brought us into this high favor.

In the tiny barn we met our first defeat. Who should milk the cow, and who *could* harness the horse! Miss Phillips hastened to assure us that she would send them to a farm for the summer if we did not wish to be troubled with them, but she smiled in a pleased way at our noisy protest. Maud shyly threw a round arm over Billy's sleek neck, while I proffered a hay sandwich to Spotty, which the lady accepted graciously. Through Miss Phillips we secured for a trifling sum the services of Tim Aker, son of Matthew Aker, our next neighbor. Later, we found that there was never enough of anything but children in the house of Aker, which accounted for the alacrity with which our need of assistance was supplied. Moreover, through this source — nobody knew just how — May's desire to test the effect of social rank was gratified, for we were left to absolutely undisturbed enjoyment of our delightful home, and we were commonly referred to in the village as "the factory girls." The pert misses of the village looked upon us and our severe garb with cold eyes. Their half-dozen trips to the city had not left them blind to our shortcomings.

Such days, such nights, such joys, as crowded upon us. Up in the airy, white-draped chambers sleep and peace hovered with cooling touch. The rooms upstairs were connected by a wide double doorway which we left open, thereby securing most perfect circulation of air. In the long shadowy evenings we lounged in the pretty parlor, where Beth played old songs, and Maud and I accompanied on banjo and guitar, while May's sweet alto seconded Beth's soprano. Then came the delightful retiring hour, with no glare of electric light, no moth-luring lamp — just God's sweet twilight. In perfect abandonment of luxury we sent back drowsy answers to one another's call, and listened to the matchless chorus of the frogs until sleep fell softly upon us.

Then there were the mornings, when the little home was flung open from top to bottom; such flourishing of snowy bed linen and blankets; such whisking of brooms in search of traditional dust; such appetizing odors as floated out from the dainty kitchen. A year before, when we were sweltering in fashionable discomfort in the stuffy parlors of the Ideal Lakeside Hotel, the character and habits of ovens — I speak of the conventional article — were as unfamiliar as the culinary practices of the Zulus.

The silence of amazement fell upon us; then we all spoke at once. "Tell us where." "What kind of a place is it?" "When does she want to vacate?" But I, from my perch on the window-seat, croaked a note of discouragement by way of affording a proper balance to the general enthusiasm: "It's probably some old shack full of discomfort and fleas."

"I've seen it," said Beth, simply.

"Seen it?" and we fell upon her. She drew from her purse a little slip, cut from a city paper, and read aloud the facts. Then she explained that, not to disappoint us, she had visited Woodlea, had seen and talked with the lady who owned the place, had been more than satisfied, and the house now awaited our acceptance.

"What is it like?" exclaimed Maud and I in a breath.

"It is white and clean, and it nestles among its green vines like ——"

A plump little hand fluttered up and lay tenderly upon Beth's lips. "Girls," said May, softly, "since the domicile has Beth's unqualified approval, why not save unto ourselves the dear delight of surprise?" And we did.

"A small village is a gossiping place," said I darkly, after our minds had become accustomed to the glories, and had begun to look upon the practical features. "And all the shades and distinctions of aristocracy are painfully pronounced, and the demands of its 'social life' distracting," said Maud. "And we *must* have peace and freedom," said Beth, doubtfully.

"Ladies," said May, firmly, "we must get a rumor launched that we're factory girls, or laundry hands, or charwomen, sent to draw a breath of oxygen under the auspices of the 'Fresh Air' charity. A few dark allusions to murky tenements and sweltering workrooms will secure unto us solitude like unto Crusoe's, and in all truth," cried she, "we *are* working women." We laughed at her project, but reminded her that this is a country that knows no caste.

The next two weeks were lively epochs. Trunks were overhauled; finery and flimsy nothings were tabooed, and their place occupied by shirt-waist suits, cool and clean and well-fitted; linen in abundance; warm loose jackets; plenty of comfortable shoes; hats made with a view to protecting the head; gloves, strong and supple, with no tendency to produce crushed and purple fingers. And ahead of us lay the prospect of absolute comfort.

Each arrayed in a plain, but well-tailored costume, we stood one morning in the great smoke-hung station, awaiting the north-bound train. We left the train at the last point before our destination, and walked across fields for very wildness of joy which filled us. But alas, how true it is that one can not please one's self and others at the same time; for we learned later that thereby we disappointed an anxious public gathered at the station to see, estimate, and assign the owners of the four plain trunks left upon the platform. We learned that this was looked upon as an unfair advantage, and that it was a factor in creating the social boycott that awaited us.

It was 10 A. M. when we came into the village. Being our own agreement, no one inquired directly as to the location of our Eden, and Beth's delicate face was a delicious study in expression. "Here we are," she said, and turned abruptly into the yard of a beautiful, vine-covered cottage. There were smothered exclamations of delight, for we had come by a back street, and thereby found ourselves immediately in the presence of the sweet-faced mistress.

cried May, aiming a pillow with practiced hand into the depths of the cozy corner where Maud comfortably reclined. That young lady caught it neatly upon an uplifted arm, and smiled encouragement for better luck.

"Two weeks, and then come the delights of bedrooms at four stories elevation, where, for the trifling consideration of ten dollars per week, one may sit in straight-backed chairs, and look from one's window upon the blue expanse of Silver Lake twinkling merrily in inaccessible beauty," and Maud yawned wearily.

"Or sit on the veranda," added Beth, "and embroider gorgeous center-pieces that one does not want." "And be constantly tortured by the sight of fellow sufferers as stiff and foolish and uncomfortable as one's self," laughed May.

I, Lou Smith, sitting at Beth's piano drumming snatches of old songs, now wheeled suddenly about: "There's the country, you know. We tried that one summer. It's better than the sandy stretches of Silver Lake." But various shades of dissatisfaction sat heavily upon the circle of faces.

"My dear friend, have mercy upon us,— mercy of that unstrained quality," quoth May, tragically. "Can you not see upon our sad countenances a chastening memory of that season of castigation which fell upon us under the roof of 'Farmer Tweak's Summer Home'? O me! I can feel even yet the pangs of trepidation that seized me when I passed my plate for a second helping, and like poor little Oliver Twist, called for 'more.'"

"But," said Maud, reflectively, "Farmer Tweak's place had some advantages; don't you remember how ravenously hungry we used to get ——"

"Precisely," interpolated May, "the very circumstance I have just mentioned ——"

"And how deliciously dreamy the sounds of the barn-yard on a hot day; how pleasant the dewy grass in the morning; how charming the rose garden. Let's try the country."

"I wish we could *live* in the country for one blessed summer-time in our own way, with freedom to do just as we liked," said I from the window, where I sat watching the street lights start into life.

The vacation of the city teacher is not a matter to be looked upon lightly. From it she must draw a large measure of her re-enforcement of vitality. We looked upon it even more seriously this particular year, for during the winter we had enjoyed the benefits of a course of lectures and demonstrations which had given us wider views of life and its possibilities, and made much of the old routine seem unbearable. Strange how long one is content to eat husks, yet how unpalatable they become after better things. Plan upon plan was proposed, discussed, and dismissed.

"Ladies, I have a plan." It was Beth who spoke, and it was only then that we reflected that as yet she had not broached a project. On occasions when Beth thus formally addressed us, we gave instant attention. Beth, with her twenty-six years of maturity; Beth, with her adorable deep eyes, some innate property of which held one, made one think of heaven and one's mother; Beth, our friend — we listened.

"There is a furnished home for rent during this summer in a little town a hundred miles north of this city, the owner of which wishes to spend the summer elsewhere, and will rent it just as it stands for twelve dollars per month, if she can find desirable tenants. How would you look upon such a proposition?"

OCTOBER'S BRIGHT, BLUE WEATHER

O, SUN and skies and clouds of June,
And flowers of June together,
Ye can not rival for one hour
October's bright, blue weather.

When gentians roll their fringes tight
To save them from the morning,
And chestnuts fall from satin burs
Without a word of warning;

When on the ground red apples lie
In piles like jewels shining,
And redder still on old stone walls
Are leaves of woodbine twining;

When all the lovely wayside things
Their white-winged seeds are sowing,
And in the fields, still green and fair,
Late aftermaths are growing. —*H. H. Jackson.*

ONE SUMMER-TIME

BY JESSIE ROGERS

MISS SMITH says will you please come over to our room when you're finished." Having delivered himself of which message, Johnnie Hagan stood balanced on one foot, a member already tanned and toughened by the sun, and awaited a reply.

Through the vista of open doors I saw Elizabeth Henderson tap Johnnie's pug nose affectionately with her pink crayon, then turn and bestow the finishing touches upon the gorgeous June calendar on the west board. Johnnie, the small envoy I had deputed from Room 2, lingered to watch the work of her deft fingers, and I knew full well that he had been her sworn champion through one blissful year, and that his chivalrous soul had been torn at its close between desire to "pass" and desire to remain with his dear teacher.

Shyly the loving little hands busied themselves with the well-remembered delight of putting teacher's desk in irreproachable order, a privilege cherished in the days before the promotion. Presently, when the preparations for the next day were completed, Miss Henderson donned her hat, and teacher and ex-pupil came down the hall to Room 3, where I stood talking with Maud Marshall of No. 3 and May Hildreth of No. 4. We promptly agreed to meet in Beth's little parlor at 7:30 that evening, to plan for the summer's outing.

At the appointed hour we were gathered in the pretty room, a place made very familiar to us by four years' association, for during that time our work had brought us constantly together. Moreover, each of us stood alone, without the blessings or restrictions of home ties. But we were not disposed to be soured or saddened by our deprivations. Such similarity of circumstance strongly welded our bond of friendship. Other times and seasons we had met in that same little room to decide in counsel the same old question, "Where shall we go?"

"Two weeks until school closes,"

SNELLEN'S TEST TYPES

200

R

100

B N

80

T X P

60

A F O D

40

L R E P T

30

K V Y F B N

25

D A Z O T Y R

20

N Z P L R D O X

15

A F E T D X V R O

10

R B N T X P A F O D L

Now we looked upon them calmly, with confidence that bespoke experience. It was a red-letter day when we came upon that School of Health! Do *you* know the exquisite joy of seeing your triumphs disappear from a daintily laid table? and have you not observed the wrapt and satisfied expression that sits upon the countenances of those who have just incorporated the visible evidences of your skill?

* * *

Then something happened. Something always happens. One perfect morning I was balancing a pie tin on the tips of floury fingers, and trimming from its edge with discriminating hand the creamy crust, meanwhile lost in egotistical admiration of my handiwork, when Tim, knight of the stables, dashed in, with wild dismay. By a union of effort we gathered that John Butler, a farmer boy, had met with an accident which had quite dismembered him. Beth's brown eyes grew wide with horror, and when the general annihilation had involved both legs, one arm "for sure," and the other in prospect, she fled hatless down the village street to the house where the injured boy had been taken. In the midst of utter confusion he lay unconscious, the blood gushing from a deep incision in the right foot, which we learned later had been caused by stepping on a sharp scythe left carelessly in the hay. Without ceremony she rushed into the house filled with wailing, panic-stricken people, who wrung their hands, and implored one another to tell somebody what to do. Straight to the bed she went, and with one gentle but effective sweep removed from under the limp form the four pillows some kindly soul had supposed would minister to his comfort. Then pouring a tumbler of water upon the pallid face, she called for a basin of water and towels. Snatching a sheet from the bed, she tore it into strips. I had followed close after, and like the rest now helped to carry out her short, sharp directions. Beth is so gentle, so tender, but when she commands, it seems a law of nature to obey. I understood that day why all the evil angels of the primary grades were invariably passed through her hands.

In a very short while the boy lay in a cool, darkened room, upon a clean bed, the blood-soaked mattress being far removed, and his wound so treated and bandaged and comforted that when the fluttering eyelids lifted, he wondered to find himself in bed. Beth bent tenderly over him, when she knew that he was quite conscious, and proffered a cooling drink. Without allowing him to waste strength in questions, she said simply, "You had an accident this morning; it has left you quite a sick boy for a little while, but you are going to be all right in a little time if you'll be very, very still. The doctor will be here soon." A big boyish hand reached out awkwardly and closed over her soft firm fingers. Then the sleep of exhaustion fell upon him, and we left him,— Beth lingering to suggest some expedients to be used "until the doctor comes."

(To be concluded)

If thou art sad and weary, think!
There's light beyond! Nor stop to drink
The last drops from the bitter cup,
Nor sip the gall dregs from its bottom up,
But dash the potion from thy lips away,
And turn thy vision upward toward the day,
And seek in memory's halls a sunny place
Where sweet peace nestles, and Hope shows her face.

— *K.*

A TRAVELER'S IMPRESSION OF JAPAN

BY PAULINE S. COLVER

WHILE traveling through Japan, it was interesting to see the various types of people and their manners

JAPANESE WOMEN CARRYING THEIR CHILDREN

of living. The oval-faced, narrow-eyed, small, aristocratic class is greatly outnumbered by the full-eyed, flat-nosed, chubby-faced common people. The latter class, having always been accustomed to hard labor, are comparatively strong; while the upper class, after centuries of inactive life, have inherited weak constitutions. From birth until the age of four or five years, a Japanese child is carried on the back of the mother or older children in the family, and this accounts for the short, bowed appearance of its legs. Chairs are practically unknown in Japan, so the people spend half their time sitting on their feet, this tending to dwarf the lower extremities. However, modern education and conditions of life show a gradual improvement in this respect.

In Kyoto we visited a Japanese kindergarten. The teachers were young Japanese girls of college education. Here the children (from three to nine or ten years of age) were divided into classes and arranged quite the same as in our kindergartens. It was a novel sight,— the little tots arrayed in bright-colored kimonos; some building houses with queer-shaped blocks, while others were making various oriental designs with gay papers and cardboard. In each classroom reigned perfect order, and every little student was deeply interested in whatever he happened to be doing, paying little or no attention to us or our enthusiastic remarks. The smaller children were being taught to walk, instead of depending upon being carried on the backs of their parents. While at work at their blocks, they were seated in tiny chairs around a low table, instead of squatting on the floor.

We were fortunate enough to be there during the lunch hour, and this was the most interesting part of all. At a signal from the teachers, each tot went into a small room at the side of the main classroom, and after a few moments of wild excitement, returned carrying a small lunch pail wrapped in gay-colored cloth forming a knotted handle at the top. At another signal they were all seated around the low tables with the lunch placed directly in front of each owner. Up to this time there was no confusion whatever, and not a word was spoken, but when the last signal was given, the din commenced. They all talked at once, and hastily began to open the lunches. This was the picnic of the day, and they made the most of it. The lunch pails were all alike, being divided into

three sections. The lower one contained a good-sized cup full of delicious white rice, boiled and steamed in true Japanese style. In the next section was a little dried fish, and the top part, smaller than the lower ones, held different relishes, such as red peppers or boiled greens. There were, also, strange-looking green and purple pickles, or small pieces of uncooked vegetables. All the lunches looked exactly alike, and the teachers informed us that they were the same, year in and year out. The way those tiny hands maneuvered with their chopsticks, eating rice without dropping any, was quite marvelous.

What impressed the writer most was the fact that all classes were represented around that lunch table — from the rich and noble of birth down to the very poorest, and they all had exactly the same food to eat. The rich man's child, in her finely embroidered kimono, was eating the same dish of plain rice as the coolie's child who sat next to her; and as the children bring their lunches from home, it goes to show that all classes follow practically the same simple diet.

The Japanese may be called vegetarians; for it is only within a recent period that meat has come to play any part in their bill of fare. Fish, flesh, and fowl were once strictly forbidden as articles of food by the tenets of Buddhism, but gradually one after another came to be allowed. Fish is one of the staples now, but only a little is eaten, as a relish with rice. Even at the present time, meat is very scarce, and is not used in large quantities, even by the upper class. Chicken, game, beef, ham, and pork are found for sale in most large cities, but beef is cut up into small mouthfuls and sold to the Japanese by the ounce; while chickens are carefully and minutely dissected, and sold by parts, as the wing, the leg, or an ounce or two of the breast. The Japanese are amazed to know that we foreigners buy a whole chicken or five or six pounds of beef at one time and devour it all in two or three meals.

Rice is, of course, the staple article of diet; in fact, it is "the staff of life" of the Japanese. Among the very poor classes, even rice is a luxury, and they subsist principally upon barley or millet, *never* tasting a bit of fish or meat. Various vegetables, particularly beans, are much used, fresh or pickled. Seaweed, fish, eggs, and nuts are largely eaten; and a sauce made of beans and wheat, and sold in America as *soy*, is the universal condiment.

Vegetable soups form an important part of their meals, and, since no spoons are used, these soups are drunk with a loud, sucking noise, which, by the way, is a fixed habit in all drinking. Oftentimes in the hotels we sat near a table where six or eight Japanese were dining, and when they began to drink their soup,— each one making this sucking noise,— it was almost impossible to continue our meal. Throughout the whole meal they kept up this smacking of the lips and all manner of strange sounds, very annoying to the average American, but considered the best of form in Japan.

The principal beverages, even more common than water, are tea and *sake*. The latter is an alcoholic liquor brewed from rice, is taken hot, and is served not only at meals, but nearly all the time. Although so much of this sake is imbibed, one rarely sees a Japanese who has had *too much*, for it is taken in small quantities. But little water is drunk, as it is often polluted.

The Japanese are devoted lovers of nature, and do not consider it immodest to be seen, even in public, almost in the garb of nature. In hot weather children go stark-naked, and men often discard the kimono and wear only a loin-cloth. The ordinary Japanese costume consists of a skirt, a loose silk gown (kimono) fastened at the waist with a sash, short white socks with separate places for the big toes, and either straw sandals or wooden clogs. In winter two or three padded gowns are added. In all seasons many go barefooted, barelegged, and bareheaded. The women powder and paint, oil their hair, and adorn their heads with pretty combs and hairpins, but never wear hats of any description.

The dress is easy and graceful, but is so often open at the neck that pneumonia and throat troubles are extremely common, and cold in the head is universal during the winter months.

The Japanese have a mania for bathing; whole families and even neighborhoods bathing together in great tanks of water heated to 110°. They go direct from their boiling baths into the cold, and this practice, no doubt, is accountable for much of their colds and lung troubles.

THE TEACHER'S LUNCH

BY CLARA LOUISE STRONG

PROBABLY no professional worker needs a greater abundance of vitality than does the school teacher. The nature of her work — we speak of it as "her" work because the majority of teachers are of the feminine gender — calls for a constant outgoing of nerve energy during the greater part of the day, and often the evening is devoted to the preparation of lessons, examination of papers, or other school work.

Statistics show that teachers are among the most frequent victims of that American disease which has been called "Americanitis," and which in the vocabulary of physicians has been variously termed nerve exhaustion, nervous prostration, and neurasthenia.

Physicians to whom the weary teacher may go in search of relief from racking headaches, backaches, and general nervousness, often say, "You must have a rest and change," or, "You need a tonic." Frequently, however, the former advice is passed by as impossible, and the teacher, grasping at the latter idea,

eagerly accepts some druggist's concoction, which, according to tradition and popular belief, will "restore lost tone" to the nerves. She takes this drug faithfully, and "feels better already," as she tells her friends.

The short-sighted teacher does not stop to consider, or possibly she has never learned the scientific truth regarding her own wonderfully constructed nervous system. If she knew that the drugs with which she puts her overtaxed nerves to sleep, or with which she goads herself on to mental and physical labor when the exhausted nerve cells are protesting against the excessive strain, would finally destroy their power to recuperate, would she allow the habitual crime against her body, soul, and spirit?

It is safe to say that many a case of nerve exhaustion or neurasthenia could easily have been prevented by feeding the depleted nerve cells with pure food and giving them a reasonable chance for restoration by sufficient sleep, instead of filling them with poison from some bottle labelled "Nervura" or "Nerve Tonic," or with substances commonly called foods which are in reality absolute poisons.

Does the teacher who has her two cups of coffee before going to her work realize that she has taken with each cup 1.70 grains of poison in the form of uric acid, and has made herself a lesser power than she might have been without the hampering influence of this poison?

Does the teacher who has her two cups of tea with her lunch during the noon hour know that she has taken 1.21 grains of uric acid, and that during the afternoon her body will be more weary because of its struggle to save her from the deleterious effect of the poison, and her brain less ready to meet the constant demands made upon it by her work of teaching?

A city teacher exclaims, "Oh! I am using beef tea for my noon lunch now, and I do believe I can work better." She is taking a stronger dose of the same poison; for beef tea contains 4.30 grains of uric acid per teacup. The added stimulation given her by this extra amount of poison, excites her heart, making it go faster, and making it "feel like work;" but her poisoned blood will by and by bring her to a state of chronic nervous prostration. The feeble nerve cells will strive in vain to replace the depleted granules. They have been overpowered by the enemy, and are unable to rally their forces.

The autointoxication resulting from the use of beef tea, beefsteak and other forms of flesh, tea, coffee, cocoa, cheese, etc., is the most common cause of nervous exhaustion.

Hot milk, hot cereal coffee, or hot malted nuts can be quickly prepared, and for many teachers would prove a wise substitute for tea.

It is a simple matter to prepare a delicious dish of hot cream toast with poached or soft-boiled eggs by moistening the toast in the hot cream, and putting the eggs upon it. The eggs can be quickly poached by dropping in the hot cream.

Ripe olives are very nutritious, and form a pleasing addition to a simple lunch. Nut meats, such as almonds and pecans, are rich in the food elements most needed by a weary nervous system, and these, masticated with toast or well-browned wafers, form an excellent lunch. If one feels the need of something hot, or of liquid, a glass of hot lemonade is very refreshing. Sandwiches made with nut butter, or with cottage cheese, or with yolks of hard-boiled eggs combined with cottage

cheese, may give to the teacher's lunch the variety which is an important consideration, since variety is not only "the spice of life," but the *only* spice that should be used in food.

Savory protose and protose roast, sliced cold or heated over an alcohol stove if gas is not convenient, are just the thing for the teacher who wants a simple, healthful, and substantial lunch. She will find herself better satisfied and far better nourished than if she paid four times the cost of her lunch for a beefsteak dinner at a neighboring restaurant.

We suggest a few simple lunches for those who have the opportunity to use an alcohol stove or gas range, or perhaps can have hot water supplied from a home near the school. An endless variety may be discovered by the teacher who is really in earnest about following Nature's simple plan.

MONDAY

Hot Canned Baked Beans with Lemon
Rice Biscuit and Malt Honey
Bread and Butter Sandwiches
Steamed Figs

TUESDAY

Ripe Olives Cottage Cheese Sandwiches
Hot Malted Nuts Breakfast Toast

WEDNESDAY

Savory Protose Hot Lemonade
Bread and Butter
Malt Honey Food Candy

THURSDAY

Sliced Peaches Dry Malted Nuts
Health Cocoa Egg Sandwiches

FRIDAY

Hot Cream Toast
Poached Eggs Cream Sticks
Health Chocolates

Or if one must have cold lunches —

MONDAY

Stuffed Eggs Bread and Butter
Sliced Apples with Malted Nuts

TUESDAY

Orange Sliced with Banana
Nut and Fig Bromose Malt Honey Candy
Whole-wheat Wafers

WEDNESDAY

Apple Juice or Oranges
Protose Roast or Pecans
Breakfast Toast Meltose

THURSDAY

Figs and Raisins Hard Yolks of Eggs
Cottage Cheese Sandwiches
Whole-wheat Cream Sticks

FRIDAY

NutButter Sandwiches
Baked Beans Lemonade
Ripe Olives

The teacher needs, above all things, a sound mind, but she can not have it if her diet is such as to load the blood with impurities and irritate the nerves until it becomes an impossibility for her to be happy and pleasant in her manner with the children. Her nerves will not let her be what she would; her whole being protests against the unnatural diet to which she has subjected her flesh. Robert Browning says: —

"Let us not always say,
'Spite of this flesh to-day
I strove, made head, gained ground upon the whole!'
As the bird wings and sings,
Let us cry, 'All good things
Are ours, nor soul helps flesh more now than flesh helps soul!'"

The personality of the teacher, her individuality, what she *is* in the depths of her being, is what affects most powerfully the subconscious life of the child. No teacher of high aims can afford to let herself be made less spiritual by a diet consisting of irritating condiments and indigestible dainties which are an abomination to the flesh and correspondingly debasing to the soul, though it may be an unconscious degradation.

All students of psychology must admit the intimate relation of mind and matter, and that, in following the advice of Henry Ward Beecher, to "get

and keep a fine, clear brain, and give it lunge and vigor," one must of necessity get a strong and vigorous body which shall perform its functions unhampered by cinders, and work in harmony with the laws of nature.

The fruits of tree and vine, the berries, nuts, and grains so lavishly provided by an all-wise and all-loving Creator, give such a wide range for choice in the matter of diet that we wonder how man could ever stray so far from Nature and her simple ways.

The influence of the teacher upon the life of the child can hardly be overestimated. The confidential relationship with her children is a teacher's blessed privilege and trust. Can she not through her children reach the mothers and fathers, carrying to them the light of true wholesome living, and bring the circle within her influence into harmony with God's loving law? Let us not live in blindness to our opportunities in the work God has given us to do. Let us realize with Owen Meredith,—

"No stream from its source flows seaward,
How lonely soever its course,
But some land is gladdened;
No star ever rose or set without influence somewhere.
No life can be pure in its purpose and strong in its strife
And *all* life not be purer and stronger thereby."

BY WHOM COMETH THE OFFENSE?

BY MARY WOOD-ALLEN, M. D.

A RECENT daily paper contained an account of the suicide of two boys, sixteen and thirteen years of age, and the attempted self-destruction of a boy of nine years. Every daily paper has notices of the suicide of one or more adults. While these strike us with a sense of horror, we can to some degree understand how years of physical suffering, repeated disappointments and failures, or the dread of impending disgrace, might unbalance the mind and lead to suicide. But it seems utterly impossible to understand what combination of circumstances could lead to the self-destruction of a child who has not reached the years of responsibility, or of the youth who stands on the very threshold of life's most glorious opportunities.

Children naturally forget their pains and griefs so quickly that we are surprised if the remembrance of them lasts from one day to the next; and youth is so filled with ambitions and aspirations that the disappointments of to-day are usually crowded out by the hopes of to-morrow.

Self-preservation is the first law of being, and when the disheartening experiences of life must, in the very nature of things, have been limited, we are at a loss to understand what causes can have co-operated to overthrow this law, and replace it with the impulse of self-destruction. There must be a reason, or a combination of reasons; and upon some one must lie the responsibility for the condition which makes possible such a reversal of natural law.

"Offenses must come," said the great Teacher, "but woe unto him by whom the offense cometh." Upon whom falls this woe, when the offense is the suicide of children and youth?

In the case of the nine-year-old child the statement is made that his parents were cruel. Many children bear a vast

amount of cruelty and suffering with never a thought of taking their own lives. They may think of running away, of seeking a more desirable place, but not through the gates of death. In fact, there must be something quite abnormal in the nature or education of the child if he comprehends the possibility of voluntarily causing his own death. All of his natural impulses are toward the preservation of life. He consciously shuns the dangers that he recognizes, and instinctively avoids pains or evils of which he has no experimental knowledge.

With the meager information given in these newspaper reports, we can make no positive assertions as to the causes which have been influential in these particular suicides; but we can reason as to some of the probable or possible determining influences. It seems doubtful if a child of nine could, by any possibility, attempt self-destruction unless he had become in some way familiar with the details of such attempts by others. He probably could not read for himself the accounts in the newspapers, but he may have heard them read and discussed by older people. The horrible crimes reported as news too often form the staple conversation of the adults of the family, and the details, in all their gruesome minutiæ, are too frequently related in the hearing of the children.

It is a well-known psychological fact that the suicide is often a result of suggestion. It has been noticed that the report of one peculiar form of self-destruction is quite apt to be followed by a number of similar cases. As, for example, a man threw himself from the Arch of Triumph in Paris, and soon after a number of suicides, in various parts of the country, took place by jumping from high places.

Children are very impressionable, and if of the motor temperament, are constantly impelled to do that which is suggested to them. Even prohibitory commands not infrequently act as suggestions, and the child does that which he has been forbidden to do through the very suggestiveness of the prohibition. We can imagine such a child, listening to the vivid details of a suicide, and through the very intensifying of the horrors, his impulses turning in the direction of repeating in his own experience the tragedy which has been so minutely portrayed in his hearing.

The daily papers, with their chronicles of crime, are powerful suggestors of evil. It would be well if adults would refrain from filling their own minds with details of horrors; but most important is it that the impressionable mind of the child should be kept free from such debasing pictures.

Not long ago I saw a young girl eagerly awaiting the coming of the daily paper and grasping it with avidity, that she might revel in the details of a sensational murder, the tragic end of an intrigue. The mother only smiled at the daughter's eagerness, and commented with some pride on "Helen's interest in the news of the day." Accounts of murders and suicides are not nourishing food for adult minds, while for children they are absolutely poisonous.

It was stated that the older lads who voluntarily put an end to their lives were "in love," and this seemed to be considered an adequate reason for their unnatural deed. What is this state called "love," which impels the youth to escape from its agony through such a desperate measure? "Love worketh no ill," says Paul; and we are taught that God is love. Surely the "love" that leads to the taking of one's own

life is not the love thus mentioned in the Scriptures. Something else must be intended by the statement, "They were in love." It is worth our while seriously to consider this disturbing element and learn whence it comes, and why. Must the offense come, and are we of those by whom it cometh?

Much attention has been given of late to the study of the adolescent; to the revolutions and evolutions that mark his advent into the domain of maturity. We learn that this period of puberty is characterized not only by the endowment of physical virility, but by the awakening of new and strange emotions, the arousing of strong hopes and eager aspirations. With a sudden bound the child becomes the man; in a few months he adds inches to his stature and is embarrassed by the access of muscular structure without adequate nerve power to use it harmoniously. All at once he feels that he is a man, with all a man's desires and ambitions; but he is without a man's experience and judgment. He is a man in stature and feeling, but a child in reason and discrimination.

It is a time of crisis, of "storm and strain." If ever a human being needs sympathetic counsel and understanding guidance, it is when he is first crowned with the royal prerogative of manhood and enters upon his duties without the training needful to fit him to reign wisely over the kingdom of self.

Boys at puberty are usually left to their own impulses and the instruction of companions but little wiser than themselves, who counsel a spendthrift expenditure of the treasures of life because they know no higher wisdom. Sensational reading intensifies physical impulses, and the essence of being itself is wasted through a false idea of the value of sense-pleasure.

At this period of life the individual is most responsive to good impulses, and also most amenable to evil counsel. We are told by students of sociology that the greatest number of religious conversions occur between seventeen and twenty-one years, and, conversely, we are assured that the greatest proportion of criminals is found among youths of the same age.

Youth is the susceptible period, the time when a touch may change a destiny. Surely, the youth who stands on such critical ground needs all possible safeguards. One of the greatest of these is self-knowledge. If the lad understood himself, knew why he was so impulsive, so easily depressed and elated, knew his own value to the future through the physical changes that are taking place, he would be more patient with himself and know better how to gain self-mastery.

These are the days when mothers and sisters have wonderful responsibilities in their influence over the growing lad. They can offer opportunities for the awakening chivalry to express itself; they can teach the beauty and sacredness of true womanhood, and by their charms and their affection protect from the seductions of undesirable associations.

Parents too often are responsible for the premature development of romantic episodes, by their jokes and suggestive comments upon innocent friendships. By these insinuations the boy and girl are led to consider their comradeship in a sentimental light, and to surround it with an atmosphere dangerous to their peace, or, it may be, even to their morals. A friendship, natural and innocent, is thus transformed into a flirtation with all its jealousies, its hopes, aroused only to be disappointed; and the young mind, tormented by fears, tortured into hallucinations, may at last

begin to hold distorted fancies, to accept the horrible suggestions of a misguided imagination, and the end be suicide — and by whom cometh the offense? I fear the woe will fall most neavily upon us, who, through our lack of understanding watchfulness, our dearth of wise sympathy, our failure to give adequate instruction, have made such a tragedy possible.

There is another possible cause for the suicide of young persons and children, too horrible to contemplate, and yet, alas! existent, even among those who claim to be Christians. Much has been said of late concerning "race suicide," but this phrase does not usually imply the destruction of the race by the implanting of suicidal tendencies, even before birth. We can not know the influence of murderous thoughts held by the mother toward the unborn child; but we are justified in assuming that they will be known by their fruits. Who can tell what we might discover, could we, in these cases of child-suicide, be made acquainted with the history of their prenatal lives. In those fateful, mysterious hours, were they offended by the unkind thoughts with which their approaching advent was regarded? Were their little souls already oppressed with a dread of life, even before their individual existence was assured? The love that comes with entrance upon individual life can not undo the offense of having been undesired and unwelcome.

A mystery of life it is, that we
May mar the destiny of unborn souls;
That we may on the mind's black tablet trace
The record of our thoughts, yea, of our hates,
And make a murderer or a suicide
Because we longed to end the little life
That beat within our own. O, mother dear,
Nourish that little life with thoughts of love,
With tender care, and truest welcome give;
That in the years to come, a noble man
May bless you for his power to love, and live
To bless the world because you loved him well.

BATTLE CREEK SANITARIUM DAY AT THE WORLD'S FAIR

BY F. J. CONRAD

FAIRS were at first arranged by a number of merchants who gathered together in the villages or towns so as to attract customers for the sale of their wares. Every small village had a fair at one time or another, and a large city had permanent grounds, known as the "fair grounds," where an annual fair was held. The largest city in the country would have a fair, called The National Fair, and all the people would send their agricultural, mineral, and manufactured products, so that visitors to the fair might view the resources of the country. Amusements were added to increase the attendance. Fairs grew so in the size and variety of their exhibits that the name was changed to exposition, and many national expositions have been held. Finally, a country, proud of its resources and manufactures, invited the nations of the world to come, not only to see what it had within its confines, but also to make exhibit of the products of their countries. That was the beginning of international expositions.

The first one in America was held in Philadelphia to celebrate the centennial of our independence as a nation. At the Centennial the United States exhibited to the world the progress she had made in developing the great resources of this country, and placed

upon view her agricultural, mineral, and manufactured products, some art and music, and here and there a purely educational exhibit, but the merchant and the manufacturer with wares for sale predominated.

The next international exposition in America was the one held in Chicago to celebrate the four hundredth anniversary of the discovery of America by Columbus, and was called The Columbian International Exposition. Again we meet the merchant with wares for sale, but he does not predominate. The inventors have some space. Art has a building. Music has a large place in the affairs of each day. Literature is represented. Electricity, which had grown so rapidly just before the opening of the exposition, has a building of its own to exhibit its wonders. But he who looks for purely educational things, of how men are taught the arts and sciences, must seek the few spaces devoted to these things among the innumerable places devoted to the things that make the adornments of man and his home. If you look about long enough, you may find some tiny spots devoted to men's health, diet, and physical training.

The next international exposition in America is the one now going on in the city of St. Louis to celebrate the centennial of the purchase of the great Louisiana Territory, and is known as the Louisiana Purchase International Exposition, the greatest of all expositions, and why? We find buildings devoted to manufacturing, electricity, varied industries, and agricultural products, a building devoted entirely to music, government buildings, machinery hall, national pavilions, State pavilions, and many more too numerous to mention, but all of which we have seen before at the other expositions, while here, for the first time, education is recognized of such importance that there is provided a building, known as the Educational Building, in which are presented the exhibits pertaining to purely educational matters. As we go about the Exposition and are awed by the magnificence of the structures, the beauty of the statuary, the wonders of machinery, the marvels of electricity, and are charmed by the delightful music that greets our ear on every side, we have but to go to this Educational Building to find therein the secrets taught the artisans who charm us with these wonderful revelations.

All these things are pleasant for the eye and the ear, — mostly the amusements and adornments of man and his home — but what is there in the Educational Building that we find of the greatest good for man himself? The best thing for man is to teach him the best way to live, to acquire a healthy body so as to be able to support a healthy mind, and we find that this side of education is not neglected. In the Educational Building are spaces devoted to colleges of art, music, literature, medicine, mines, botany, and last and greatest, a space devoted to a school of health,— THE BATTLE CREEK SANITARIUM.

The professors in colleges and universities represented in the Educational Building, who have taught us how to draw, build, make music, control electricity, care for flowers and trees, dig up the minerals of the earth, are all very good in their way, but how much better are the professors who teach us how to breathe, eat, bathe, and sleep,— the professors of the BATTLE CREEK SANITARIUM SCHOOL OF HEALTH.

The graduate of the university is usually proud of his alma mater, and is interested in its welfare, anxious to see it grow and spread its teaching among his fellow men. He has gained

knowledge, and is anxious that others should profit by his experience. If that be true of the student who has been graduated from a school of mental training, how much more so should it be of a graduate from a health university.

We, the students of the Battle Creek Sanitarium Health University, can take as much pride in exhibiting to our friends in the Educational Building the wonders of our alma mater as the graduates of any of the celebrated universities. There we find something to show our friends, the methods pursued by our professors in training the physical body, just as the graduates of other universities can show their friends the methods pursued by their professors in training their mentality. The criterion of a scholar's worth in the world is the amount of knowledge he diffuses. Therefore, if you wish to be of any worth in the world, graduate of the Battle Creek Health University, it should not only be a pleasure, but a duty, to present to your friends the wonders of this School of Health.

A splendid opportunity awaits the students of the Battle Creek Sanitarium Health University (and when I speak of students I mean the patients who have been cured — graduated — at the Sanitarium) to renew their acquaintance with the doctors and the nurses who taught them, and to meet many fellow students (patients who studied with them) ; for September 29 is to be the Battle Creek Sanitarium Day at the World's Fair, in Library Hall, Hall of Congresses, when speeches will be delivered, papers read, and demonstrations of the methods employed in health education given by the teachers of this health school. The invitation is extended to the patients and their friends by the writer, a patient, and Chairman of Battle Creek Sanitarium Day.

Bad Posture of School Children.

Richard Timberg, of Stockholm, says :—

"The mechanism of breathing is impeded in action by the leaning posture. The most important respiratory muscle in the body is the diaphragm, the flat muscle which divides the chest from the abdomen. In leaning forward, the abdomen is compressed, and the movement of the diaphragm hindered, causing the act of inhalation to become less deep, and the whole breathing shallow and inefficient. The action of the heart, as well as that of breathing, is disturbed, and the internal organs become overcharged with sluggishly flowing blood, to the detriment of their activity. The development of the organs of breathing receives a marked check from lack of bodily exercise. When, during the years of growth, day after day for hours at a stretch, the act of breathing is performed with subdued power, superficially and feebly, without a full expansion of the lungs and chest, a poor development of these organs ensues, resulting in a flat, sunken, and immobile chest. This is a sign of weakness in those parts which may even indicate a tendency to lung disease. The sluggish circulation through the abdominal organs, caused by their compressed condition when the body is continually bent forward, is, no doubt, very often solely responsible for many a school child's persistent indigestion."— *The Posse Gymnasium Journal.*

Hothouse Plants.

Refinement in matters of social life proceeds hand in hand with refinement in other lines as civilization advances. From the standpoint of the physician and of the anthropologist, it is a question whether the physical side of mankind is improving or degenerating.

The method of bringing up children, especially in the families of the well-to-do, is too often a serious menace to the child's health and development. Too much indoor life, too much supervision, too little freedom of motion and of will is undoubtedly the cause of the many weaklings seen in the families of the wealthy. Such children have the characteristics of hothouse plants.

The remedy is, of course, to do away with the surplus care and attention bestowed on the child, to let the child do more for itself, have more freedom, more fresh air, more play with other children. Foods and medicines are only temporary helps for child weakness.

Nature is its own best doctor, and in the end can take care of "hothouse children" if fond parents will only give her the chance.— *Cincinnati Lancet-Clinic.*

The Reason Why.

A German spoke at a temperance meeting as follows: "I shall tell you how it vas. I put my hand on my head; there vas one big pain. Then I put my hand on my pody and there vas another. Then I put my hand in my pocket and there vas nothing. Now there is no more pain in de head. De pains in my pody are all gone avay. I put my hand in my pocket, and there ish twenty tollars. So I stay mit de temperance." — *Ex.*

An Object Lesson.

In mental as well as in physical dietetics, nutrition depends not upon the amount received, but upon the amount assimilated. That all else is not only valueless, but detrimental, was recently demonstrated in some of the New York schools, which were so crowded that they were obliged to have half-day sessions. Contrary to expectation, these schools made higher averages than those that had full time. The children's brains were not overtaxed, and the increased amount of time spent in healthy play and exercise in the fresh air kept their minds in better condition to assimilate knowledge.

Medical Progress.

The materia medica of twenty-five years ago is obsolete. No good doctor now treats symptoms — he neither gives you something to cure your headache nor to settle your stomach. These things are timely ting-a-ling's — nature's warning bell — look out! And the doctor tells you so, and charges you a fee sufficient to impress you with the fact that he is no fool, but that you are. — *The Philistine.*

The Way to Rest.

To understand how to rest is of more importance than to know how to work. The latter can be learned easily; the former it takes years to learn, and some people never learn the art of resting. It is simply a change of scenes and activities. Loafing may not be resting. Sleeping is not always resting. Sitting down for days with nothing to do is not restful. A change is needed to bring into play a different set of faculties and to turn the life into a new channel. The man who works hard finds his best rest in playing hard. The man burdened with care finds relief in something that is active, yet free from responsibility. — *American Analyst.*

TRUTH *

I

Our highest truths are but half-truths.
Think not to settle down for ever in any truth.
Make use of it as a tent in which to pass a summer night, but build no house of it, or it will be your tomb.
When you find the old truth irksome and confining,
When you first have an inkling of its insufficiency, and begin to descry a dim counter-truth looming up beyond,
Then weep not, but give thanks.
It is the Lord's voice, whispering, "Take up thy bed and walk."

II

The truth is one with the way and the life;
It is the climbing, zigzag road which we must travel;
It is the irrepressible growth which we must experience.
Hail the new truth as the old truth raised from the dead;
Hail it, but forget not that it, too, will prove to be a half-truth;
For sooner or later we shall have to dismiss it also at another and loftier stage of our journey.

* From "Plain Talk in Psalm and Parable," by Ernest Crosby, Small, Maynard & Co., Boston.

"Apostrophe to Water."

"Look at that, ye thirsty ones of earth! Behold it! See its purity! How it glitters, as if a mass of liquid gems! It is a beverage that was brewed by the hand of the Almighty himself. Not in the simmering still or smoking fires, choked with poisonous gases and surrounded by the stench of sickening odors and rank corruption, doth our Father in heaven prepare the precious essence of life, the pure cold water, but in the green glade and grassy dell, where the red deer wanders and the child loves to play — there God brews it; and down, down in the deepest valleys, where the fountains murmur and the rills sing; and high upon the tall mountain tops, where the naked granite glitters like gold in the sun, where the storm-clouds brood and the thunders crash; and away, far out on the wide sea, where the hurricanes howl music and the big waves roar the chorus heralding the march of God — there he brews it, that beverage of life, health-giving water. And everywhere it is a thing of beauty, gleaming in the dew-drop, singing in the summer rain, shining in the ice gem, till the trees all seem turned into living jewels, spreading a golden veil over the setting sun or white gauze around the midnight moon, sporting in the cataract, sleeping in the glacier, dancing in the hail-shower, folding its bright curtain softly about the wintry world, and weaving the many-colored iris — that seraph's zone of the sky whose warp is the rainbow of earth, whose woof is the sunbeam of heaven, all checkered o'er with celestial flowers by the mystic hand of rarefaction — still always it is beautiful, that blessed life water. No poison bubbles on the brink. Its foam brings no sadness or murder; no blood-stains in its limpid glass. Broken-hearted wives, pale widows, and starving orphans shed no tears in its depths. No drunkard's shrieking ghost from the grave curses it in words of eternal despair. Beautiful, pure, blessed, and glorious! Give me forever the sparkling, pure, cold water."— *Central Law Journal.*

Pain is not punishment, but a Divine fog-horn warning the wrong-doer off the perilous coast of trangression.

Chautauqua School of Health

THE BRAND BATH

THIS bath, which is a most useful one in the treatment of typhoid and other continued fevers, differs from the ordinary cold bath in several particulars. The procedure as employed by Brand and his disciples is as follows: —

The bath tub, containing water at a temperature of 70° to 78°, is placed near the bed. The patient is lifted from the bed into the tub as quickly as possible, the face and head having been previously cooled by the application of water at 50°. Care should be taken to immerse the patient to the neck. Exposure of the shoulders is likely to give rise to pulmonary complications. The head should be protected by a towel wet in ice water and wrapped about the head in such a way as to form a sort of trough leading down the back of the head. On entering the tub the patient is rubbed vigorously for two or three minutes, then sits up for a few seconds while two or three gallons of water at 50° are poured upon his head and allowed to run down the back of his neck. He then lies down again, and the rubbing is repeated. At the end of five minutes the affusion to the head is repeated, and the rubbing continued.

If there is weakness of the heart, the cold water should also be poured upon the front of the chest. The rubbing of the patient should be continued during the whole bath. When the patient first enters the bath, he often experiences extremely unpleasant sensations. Respiration is gasping and difficult. This inconvenience is at once relieved when the cold water is poured over the head. The bath is continued from ten to twenty minutes. If employed for infants or old persons, the bath should be very short. If the skin becomes blue, or if marked shivering or chattering of the teeth occurs, the patient should be quickly removed from the bath, snugly wrapped in a sheet, and covered with a blanket. A hot bottle should be placed at his feet if cold, and the limbs should be rubbed. Reaction soon takes place, and the skin is reddened by the increased movement of blood through it. The patient's temperature falls from half a degree to two or three degrees. The bath is usually repeated at the end of three hours or sooner — whenever the rectal temperature reaches 102°. The writer prefers not to allow the temperature to rise above 101.5° before administering an antipyretic bath of some kind. This rule may be easily adhered to during the whole course of the fever, except, possibly, during the developmental stage of the disease, when the temperature is rising.

The Brand bath has been used in many thousands of cases of typhoid fever, not only in Germany, where it originated, but in all civilized countries. The saving of life by this means has been enormous. One German authority has collected a series of one thousand cases in which the bath was employed from the beginning of the disease, with the result that every single patient recovered. In twelve thousand cases taken just as they came, in many of which the disease had attained considerable headway before the bath was employed, the mortality was reduced to three per cent. It is safe to say that from three-fourths to nine-tenths of all deaths from typhoid fever might easily be prevented by the systematic employment of the Brand bath, or its equivalent. When the bath can not be employed conveniently, the cooling wet sheet answers the same purpose. In occasional instances the patient's skin is cold and reaction does not occur readily. The rubbing wet sheet in bed or the towel rub is the best means of reducing temperature in such cases. Full directions for the use of this bath and other hydriatic measures in fevers may be found in the "Home Hand-Book of Domestic Hygiene and Rational Medicine"* and in "Rational Hydrotherapy."†

J. H. K.

*By J. H. Kellogg, M. D. Published by Modern Medicine Publishing Company, Battle Creek, Mich.

†By J. H. Kellogg, M. D. F. A. Davis Company, Philadelphia, Pa.

PREVENTION OF THE SPREAD OF CONTAGIOUS DISEASES

BY LENNA F. COOPER

THE old adage, "An ounce of prevention is worth a pound of cure," is clearly shown by the accompanying diagram — a graphic report of the State Board of Health of Michigan for the years 1890–98 of epidemics of typhoid

fever and measles, comparing the outbreaks in which isolation and disinfection were neglected with those in which they were both enforced.

Tables of other contagious diseases compare quite as favorably. The importance of isolation of the patient and of disinfection during and after illness in contagious diseases is no longer a disputed point, for the benefits have been proved beyond a doubt.

When a person is even suspected of having a contagious disease, he should be isolated at once; which means that he should be put in a room from which all carpets, draperies, upholstered furniture, clothing, bric-a-brac, and all unnecessary articles have been removed, and communication with others, except the attendant, should be cut off.

Those in attendance upon persons suspected of contagious diseases should be restricted in their intercourse with other persons, and should give heed to the following precautions: A long outer garment of washable material, covering all of the other clothing, should be donned before entering the room; a kerchief should cover the hair, and cloth slippers made of a heavy wash material, the shoes. These should be worn continually by the attendant except when obliged to leave the room. Before going from the room, the face and hands should be thoroughly washed with a *strong* solution of soapsuds, made by using one-half pound of brown laundry soap to one gallon of water (soap being now recognized as one of the best disinfectants known). The kerchief, slippers, and outer garment should be removed and left near the door (where they can be donned again upon re-entering the room), after which the attendant should slip quickly out.

Nothing should be taken from the room without first having been thoroughly disinfected. All towels, bedding, clothing, and articles used about the patient should immediately be placed in a receptacle containing a solution of soap (as previously described) and left there thirty minutes before being taken from the room. They should then be boiled for half an hour in a strong soapsuds. A set of dishes, which should not be taken from the room, should be provided for the patient, and should be thoroughly cleansed in a strong soap-

ISOLATION AND DISINFECTION RESTRICT TYPHOID FEVER

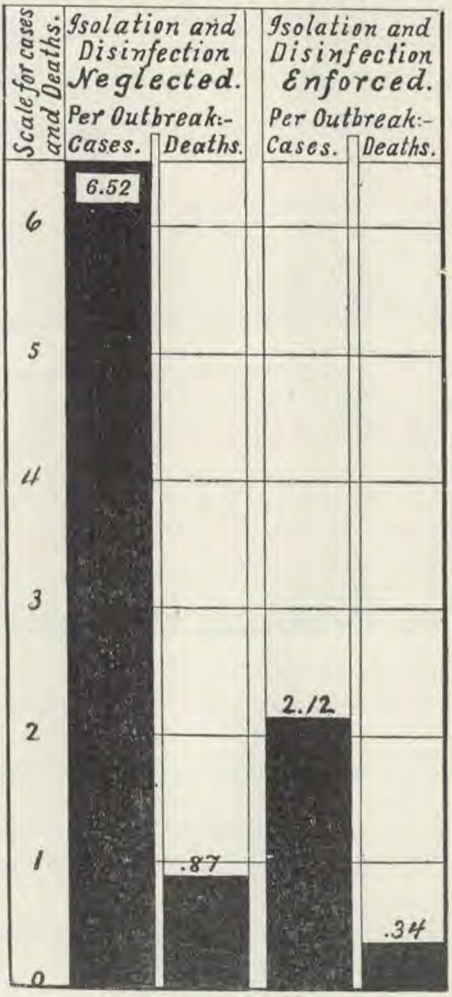
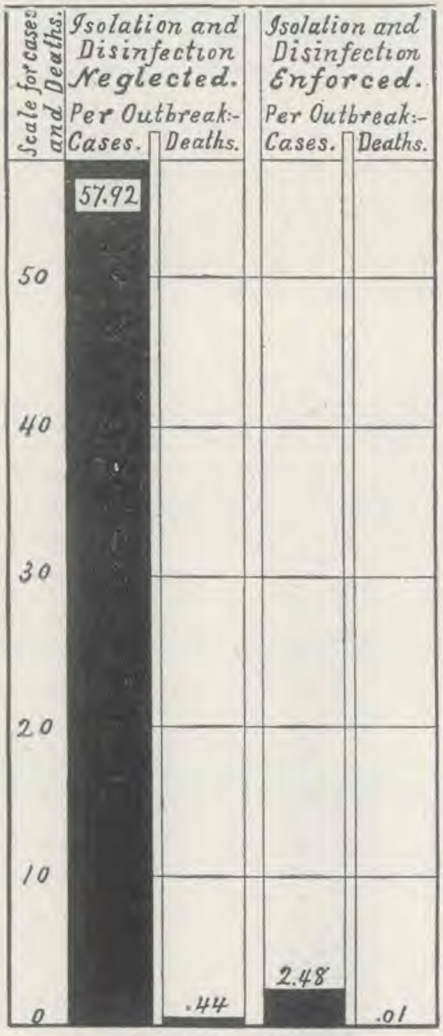


PLATE 1026.

ISOLATION AND DISINFECTION
RESTRICT MEASLES



[PLATE 1027]

suds after each meal. A separate set should be provided for the nurse, which should be treated in the same manner. All left-over food should be burned or buried. Nothing should remain over from one meal to the next. If possible, there should be an open fireplace or a stove in the room, so that all worthless clothes and other articles used about the patient may be burned immediately.

Careful attention should be paid to the care of the room. It is best to have at least two rooms set apart for the use of the patient and the attendant, especially if the disease be one of those extremely dangerous, such as smallpox, diphtheria, scarlet fever, etc.; or even better still, an entire floor, for this will give ample room for proper ventilation without exposing the rest of the family.

As has been mentioned, all unnecessary articles should be removed from the room before the patient enters. The floor, window-sills, and woodwork of the room, and as much of the furniture as possible should be thoroughly washed at least once a day with a solution of soap, and the door-knob should be kept thoroughly disinfected on both sides of the door. All discharges from the body should be received into vessels containing at least a pint of strong zinc solution (made by dissolving eight ounces of zinc sulphate and four ounces of common salt in one gallon of water), and should be immediately cared for, either by being conveyed to the sewer or by burying at some distance from any well. The nurse should thoroughly cleanse her hands with soap and water every time she comes in direct contact with the patient. The patient should be given a soap bath every day during quarantine, and preparatory to leaving quarantine a thorough scrubbing with a flesh brush should be given, that no particles of superfluous epidermis remain to spread the contamination.

A disinfectant bath of bichlorid of mercury, formaldehyd, or carbolic acid is often prescribed, but the most important thing is a thorough cleansing with a good laundry soap. The hair should be included in this cleansing. The nails should also be cared for, leaving no particles of dirt under them.

After the scrubbing bath, the patient should quickly dry himself, wrap a clean sheet about him, and step into an adjoining room, free from germs, to dress. He should not return to the infected room.

The room and every article therein should be most carefully disinfected. All articles of no value should be burned, and the others should be left in the room to be exposed to the fumes of sulphur or formaldehyd gas. The bed linen, towels, and washable clothing of the patient should be put into a soap solution and boiled, as previously stated. The blankets, bedding, heavy clothing, and articles which can not be treated in this way, should be hung on lines stretched across the room, so as to be thoroughly exposed to the sulphur fumes or formaldehyd gas. All books should be placed on end, so that the leaves stand apart. Letters and documents should be spread out so as to be exposed to the disinfectant, but if formaldehyd is used, care should be taken to place the written matter where none of the formaldehyd fluid will come in contact with it, for it will dissolve ink. Perhaps a better way is to put a few folds of muslin or some absorbent cotton in the bottom of a small wooden box, sprinkle it with two teaspoonfuls of the formaldehyd solution, and place the letters in this, fastening the lid securely, wrapping the box in several thicknesses of paper, and leaving this in a warm place for several hours.

All openings of the room should be closed as tightly as possible. A good plan is to paste up the crevices about the window-sills and doors with strips of newspaper about two inches wide, but the paper should be put on the outside, so as not to leave any crevices where germs may be found lurking. If sulphur is to be used, it should

IN READINESS FOR SULPHUR FUMIGATION

be placed in an iron kettle set upon two bricks inside of a tub containing some water. This is to avoid all danger of fire. Three pounds of sulphur should be used for a room ten feet square by ten feet high, or for every one thousand cubic feet of space, and if it is impossible to close all of the openings, an additional quantity should be used. It is best to use roll brimstone broken up, or flowers of sulphur. It may be necessary to use more than one kettle for burning the sulphur, as it is best that the combustion should be somewhat rapid, and continued for several hours. The sulphur may be lighted by placing live coals upon it or by moistening with a tablespoonful of alcohol and touching with a match. No one should remain in the room after the sulphur is lighted.

The room should be kept closed for at least ten or twelve hours; twenty-four is perhaps safer. Then take all blankets, bedding, etc., out and hang in the sunshine for several hours. Roll up the curtains, and open the windows to the fresh air and sunshine.

If formaldehyd gas is used, about eight ounces of forty per cent solution will disinfect one thousand cubic feet of space. This is best used in a still, an arrangement which can be placed outside the door, with a tube leading to the keyhole, through which the gas enters the room. The still can usually be rented from any first-class pharmacy when the formaldehyd is purchased. If this is not to be obtained, sheets hung in the room and sprinkled by means of a small garden sprinkler with the forty per cent solution and left to evaporate in the room will suffice. This should be done as quickly as possible and the person leave the room, as the vapor is quite stifling. In case the formaldehyd is used on sheets, an additional quantity of three or four ounces should be used. The same preparation of the room and its contents should be made as for disinfection by sulphur.

CARE AND TREATMENT OF TYPHOID FEVER

BY F. J. OTIS, M. D.

Of the care and treatment of a typhoid case, Dr. Osler, one of America's greatest physicians, says: "The profession was long in learning that typhoid fever is not a disease to be treated by medicines. Careful nursing and a regulated diet are the essentials in a majority of the cases."

The patient should be kept in a well-ventilated room, or in summer outdoors in the daytime. He should be strictly confined to bed from the outset. At the beginning of the fever, it is a good plan to give large quantities of very weak lemonade, at the same time flushing the bowels at least twice a day. This increases elimination and assists in removing the contents to such an extent that there is a minimum of food on which the germ may multiply. After this no solid food should be taken. Milk is not to be recommended, as there are many other foods much to be preferred; barley gruel, well-strained, or oatmeal gruel that has been cooked more than eight hours, is excellent. A gruel made from malted nuts is perhaps one of the best and undoubtedly one of the most nutritious substances. With these it is well to use fruit juices, the latter being inimical to bacteria. Sweet wine from California grapes, apple juice, blueberry, raspberry, strawberry, orange, or blackberry juice may also be used. The patient should be fed at intervals, depending upon the quantity of nourishment that can be taken at a time. If the fever remains high, one of the most excellent rational procedures for reducing fever may be used. The Brand bath or cold bath at 70° is recommended the most highly, yet the graduated bath is perhaps more acceptable to the patient, beginning with about the temperature of the body, and gradually lowering it until it is so cold that it readily extracts the superabundant heat of the body. Sometimes a pack followed by a very short cold rub will dilate the blood vessels so widely that the temperature may be reduced several degrees by afterward fanning the patient.

The patient must be kept quiet during convalescence, and must not be permitted to satisfy his abnormally ravenous appetite. Getting up too soon may be followed by a hemorrhage of the bowels, while the taking of too much food may overtax the system beyond recovery.

The most important thing in the care of the typhoid fever room is the protection of others. Inasmuch as a professional nurse is not always at hand, we append a few procedures suggested by Dr. Fitz to be followed in hospitals. To make these rules applicable to the home, we would add that a room should be selected well apart from the culinary department of the home; that there should be no tapestry, drapings, carpets, or unnecessary furniture in the room. The woodwork should be such as can be sponged with disinfectants or thoroughly washed with soap and water. No one connected with the culinary department of the house should have anything to do with the patient. This last precaution can not always be followed, yet when obliged to work in the kitchen, the attendant should never go from the patient to the kitchen without thoroughly disinfecting the hands and clothing that came in contact with anything in the sick room.

"1. Mattresses and pillows (when liable to become soiled) are to be protected by close-fitting rubber covers (or a suitable substitute).

"2. Bed and body linen are to be changed daily. Bedspreads, blankets, rubber sheets, and rubber covers are to be changed at once when soiled. Avoid shaking any of the articles.

"3. All changed linens, bath towels, rubber sheets and covers are to be immediately wrapped in a sheet soaked in carbolic acid (one to forty). Remove them to the rinse-house as soon as possible, and soak six hours in carbolic acid (one to forty). Then boil the linen for a half hour, and wash with soft soap. The rubber sheets and covers are to be rinsed in cold water, dried, and aired for eight hours. The bedspreads and blankets are to be aired eight hours daily.

"4. Feeding-utensils, immediately after using, are to be thoroughly cleansed in boiling water.

"5. Dejections are to be received into a bed-pan containing half a pint of carbolic acid (one to twenty). The nates are to be cleansed with paper, and afterward with a compress cloth wet with carbolic acid (one to forty).

"6. Add two quarts of carbolic acid (one to twenty), in divided portions, to the contents of the bed-pan; mix thoroughly by shaking, and throw the liquid into the hopper. The bed-pan and hopper are to be cleansed with carbolic acid (one to twenty) and wiped dry. The cloth used for the above purpose is to be burned at once.

"7. After the discharge of the patient from the hospital, the mattresses are to be aired every day for a week. The bedstead is to be washed with corrosive sublimate (one to one thousand).

"8. Follow directions until the patient is entirely free from fever."

THE NEED OF AIR CHANGE IN SCHOOLROOMS

THE purpose of breathing is to obtain from the air a supply of oxygen, which the blood takes up and carries to the tissues. Oxygen is one of the most essential of all the materials required for the support of life. Its function in the body is to set free or to bring into action the energy stored in the tissues in the form of digested and assimilated food. This energy is originally derived from the sun; it is, in fact, sunlight. The purpose of the oxygen, then, is simply to set free the sunlight which has been captured by the plants, organ-

ized into food, and appropriated by the body, and it is the real source of life and energy in the body. The amount of oxygen necessarily required for this purpose is about one and one-fourth cubic inches for each breath. As the blood passes through the lungs, this amount is absorbed when the breathing movements are sufficiently deep and active, and the air inhaled is of good quality. In place of the one and one-fourth cubic inches of oxygen taken into the blood, a cubic inch of carbonic acid gas is given off, and along with it are thrown off various other still more poisonous substances which find a natural exit through the lungs. The amount of these combined poisons thrown off with a single breath is sufficient to contaminate and render unfit to breathe three cubic feet, or three-fourths of a barrel, of air. Counting an average of twenty breaths a minute for children and adults, the amount of air contaminated, per minute, would be three times twenty, or sixty cubic feet, or one cubic foot a second.

Here is an important fact which may be easily remembered, and made of practical use as a means of determining the amount of fresh air required for a family or the ventilation of a schoolroom or a church. The importance of a constant supply of fresh air may be readily illustrated by simply holding the breath. Very few persons have sufficient resolution to stop breathing for two or three minutes, though experienced divers are sometimes able to hold their breath for a somewhat longer time. The breathlessness which results from a few moments' active exercise is due to the urgent demand of the tissues for oxygen.

It is not, however, the need of oxygen which renders important a constant and adequate supply of air by means of ventilation. Ventilation is needed chiefly for the purpose of washing away the impurities which have been thrown off from the lungs, and which have rendered the air of the occupied apartment unfit for further breathing. There is an abundance of oxygen, but it is impure and unfit to breathe.

Vast and irreparable injury frequently results from the confinement of several scores or hundreds of people in a schoolroom, church, or lecture room without adequate means of removing the impurities thrown off from their lungs and bodies. The same air being breathed over and over becomes densely charged with poisons, which render the blood impure, lessen the bodily resistance, and induce susceptibility to taking cold and to infection with the germs of pneumonia, consumption, and other infectious diseases, which are always present in a very crowded audience room.

Suppose, for example, a thousand persons are seated in a room forty feet in width, sixty in length, and fifteen in height; how long a time would elapse before the air of such a room would become unfit for further respiration? Remembering that each person spoils one foot of air every second, it is clear that one thousand cubic feet of air will be contaminated for every second that the room is occupied. To ascertain the number of seconds which would elapse before the entire air contained in the room will be contaminated, so that it is unfit for further breathing, we have only to divide the cubic contents of the room by one thousand. Multiplying, we have 60x40x15 equals 36,000, the number of cubic feet. This, divided by one thousand, gives thirty-six as the number of seconds. Thus it appears that with closed doors and windows, breath poisoning of the audience would

begin at the end of thirty-six seconds, or less than one minute. The condition of the air in such a room at the end of an hour can not be adequately pictured in words, and yet hundreds of audiences are daily subjected to just such inhumane treatment through the ignorance or stupidity of architects, or the carelessness of janitors, or the criminal negligence of both. J. H. K.

SCHOOL OF HEALTH SEARCH QUESTIONS

THE BRAND BATH

1. In what class of diseases is the Brand bath especially useful ?
2. Describe the procedure.
3. How should the cold wet towel protecting the head be adjusted ?
4. How may the difficult respiration often experienced at the beginning of the bath be relieved ?
5. When this bath can not be conveniently employed, what is the best measure ?
6. Where may full directions for the use of this bath and other hydriatic measures be found ?

PREVENTION OF THE SPREAD OF CONTAGIOUS DISEASES

1. In what way has the importance of isolation and disinfection in cases of contagious disease been proved beyond a doubt ?
2. Describe the measures that should be employed for personal disinfection of the attendant.
3. What substance in common use forms one of the best disinfectants ?
4. What should be used for disinfecting the patient's room after recovery ?
5. How should the room be prepared for the disinfecting process ?

CARE AND TREATMENT OF TYPHOID FEVER

1. What are the two essentials in the treatment of a typhoid fever case ?
2. What measures for flushing the system should be taken at the beginning of the fever ?
3. What foods are preferable to milk in this disease ?
4. Why is fruit juice especially valuable ?
5. What are the best methods for reducing the fever ?
6. What two important points must be observed during convalescence ?

THE NEED OF AIR CHANGE IN SCHOOLROOMS

1. What is the function of oxygen in the body ?
2. What amount is required for this purpose ?
3. What is thrown off through the lungs in place of oxygen ?
4. How much air space is contaminated with each breath ?
5. What is the result of re-breathing this contaminated air ?
6. How long would it take to poison all the air in an unventilated room forty feet in width, sixty in length, and fifteen in height, occupied by one thousand persons ?

Hundred Year Club

A GOOD PEDIGREE

HEREDITY is said to have as much influence on the length of one's life as environment or personal habits. That there is such a thing as a "tendency to longevity" would seem to be indicated by the family history of the centenarian whose picture we give, Mr. George Ives, of Fredonia, N. Y.

MR. GEORGE IVES

If aristocracy were determined by health, we might say that he comes of a very high-class family; for as far back as the family records can be traced, an early death in it is unknown. Mr. Ives's father lived to the age of ninety-eight years, and his grandmother, he states, "to long past a hundred." All of his six children are still living, and in good health.

When, on his hundredth birthday, his friends called to congratulate the centenarian on having attained to so great an age, they found him following a harrow over a plowed field, which, as every farmer knows, is very tiresome work. He sees no reason why he should stop work or cease to expect more birthdays because he is one hundred years old, for he is still as straight and active as most men of fifty. Much of his time is spent working on the land, doing all the work on a five-acre piece of ground. He shows with pride the fruits of the season's work, all of which he has harvested alone.

Mr. Ives's father was a market gardener, and he himself followed the same trade. It is probably owing to this fact that he seldom tasted meat in his youth, and has used it very sparingly since. His son says of the family régime that it was "very strict,—plain food, very little meat, hot water and milk in the place of tea and coffee, and plenty of baths and outdoor exercise." His system has never been defiled by tobacco, and he appears to have been simple and regular in all his habits.

The fruits of his temperate life he is now reaping in a vigorous old age, with perfect soundness of mind and body.

. . By the Editor . .

THE HAPPY SIDE OF THE BUTCHERS' STRIKE

FROM the standpoint of the diet reformer, the butchers' strike is one of the best things that has struck the country for a long time. A large number of the leading newspapers recognize the fact that the scarcity of flesh food can hardly be looked upon as a calamity in a country which is so well supplied as is this with wholesome and palatable foodstuffs. Meat supplies chiefly a single element of food — proteid. This is almost the sole constituent of lean meat. This element is found in meat in the proportion of about nineteen or twenty per cent. Beans and peas contain the same element in absolutely pure form in the proportion of twenty to thirty per cent, some varieties even as high as thirty-four per cent. Milk, also, is rich in proteids, more than one-third of its solid constituents being of this class. Eggs are very rich in the same element. The white of egg is twelve per cent proteid; the yolk, sixteen per cent. Wheat, corn, rye, and oats contain ten to fourteen per cent of proteids of the finest quality, easily digestible, and capable of supplying the body's needs.

The ox finds in corn the proteids out of which are built its massive muscles; hence the proteid of beefsteak is only the proteid of corn at second-hand. Man can appropriate the proteid from corn as well as can the ox. It is only necessary for him to submit the corn to the process of cooking, so that it may be easily dealt with by his less vigorous digestive organs.

The butchers' strike has taught thousands of people the useful lesson that flesh meat is by no means so necessary an article of diet as most people have supposed it to be. President Donnelly recently appealed to the general public to cease to eat meat until the strike was ended. This was excellent advice. The suggestion was certainly most intelligent and timely. We see nothing to add except the suggestion that after having gotten along well without flesh meat during the strike, it should be dispensed with forever afterward as a wholly useless and harmful article of food.

The cartoonists have found in the strike of the butchers a good subject for their pencils, and have set a whole lot of people thinking by their graphic presentation of how the thing looks from the standpoint of the poor beasts, the shedding of whose blood has been at least delayed by reason of the fact that the men who have been cutting their throats, smashing their skulls, dipping them into vats of boiling water while yet squealing, and flaying them alive, have laid down their knives, and have been spending their ergies battling against the great corpoenrations which have amassed enormous wealth through the sweat of their fellows and the shedding of the life-blood of millions of helpless beasts.

Personally, we should be pleased to see all the butchers strike, and will do our best to encourage them to keep on striking. If the whole country could be deprived of flesh food for a month, many people would make the discovery that they can get along without it altogether.

It is true the butchers have lost their wages and the packers have lost much in their profits; but what is their loss is the country's gain, for the money which might have been uselessly expended for flesh has remained in the consumers' pockets, and may be employed for some useful purpose.

MENTAL ATTITUDE AS A CAUSE OF DISEASE

THE discoveries of Pawlow (briefly touched upon in our September number) respecting the influence of the mind upon the digestive functions, have supplied a solid scientific basis for mental therapeutics, which has heretofore been lacking. Observation has shown that the mind does influence the bodily functions to a most remarkable extent, but it has remained for Pawlow to bring forward the laboratory proof of a definite relation between conscious mental acts and such functions as digestion and secretion.

It has thus been proved by actual laboratory experiment that the state of mind may determine either good digestion or indigestion, according as the mental state may be favorable or unfavorable. Fortunately, our mental attitude, like our bodily attitude, is, to a considerable degree at least, subject to voluntary control. One can by an effort of the will bring himself to relish that which at first acquaintance may be distasteful or repugnant. On the other hand, one may by a voluntary effort create a hostile attitude of mind in relation to things which in themselves possess no incompatible qualities. Hence, it is, to quite an extent at any rate, possible for a person to create at will indigestion or good digestion by an effort of the mind. One who is compelled to eat food he does not relish, is very likely to suffer indigestion in consequence; but by an effort of the mind the unpalatable foods may be made palatable, and thus the stomach may be aided to produce the necessary appetite-juice by which good digestion may be secured.

The same principle applies to other functions as well as the function of digestion. Some one has defined work to be doing that which one does not like to do; and play, doing that which one likes to do. So one may make play of work, or work of play, according as his mental attitude is one of content or satisfaction, or the opposite.

The success of Christian Scientists and various classes of mind healers with certain invalids affords most convincing evidence that a large number of persons suffer from maladies which have their chief seat in a morbid imagination or a wrong mental attitude. Thousands of neurasthenics are made miserable by depressing symptoms which are the outgrowth of a disordered state of the nervous system, and which have no organic foundation. Morbid sensations which are distressing and even highly painful in these patients not infrequently disappear instantly when some happy circumstance produces a favorable change in the patient's state of mind. On the other hand, an unfavorable mental change may bring about at once an aggravation of symptoms present or may induce a wholly new crop of unpleasant sensations. Every physician of experience has encountered such cases.

The lesson to be drawn from these facts and experiences is that a special effort should be made in the treatment of patients suffering from functional nervous disorders, and indeed from all functional derangements, to produce such a mental state as will favorably influence the disordered conditions. This is not by any means a matter which can in every case be easily accomplished, but it is part of the physician's duty to minister to the "mind diseased" as well as to treat the disorder of the body, and the number of cases in which the application of mental

therapeutics is of paramount importance is by no means small. There is a scientific foundation for "mind cure," but those who are administering so-called "mind cure," "Christian Science," and allied metaphysical methods, can not be regarded as employing a scientific method; for their procedures are based upon unsound principles, and their claims are in the highest degree preposterous, and can not be sustained by carefully verified facts.

A NEW YORK HEALTH COMMISSIONER ON THE DIET QUESTION

HEALTH COMMISSIONER DARLINGTON, of New York, in a recent article contributed to the *New York American*, advises that the American people should improve the present favorable opportunity to lessen their use of meat. He calls attention to the fact that Bright's disease is increasing rapidly as the result of American meat-eating habits, and shows that the laboring man can perfectly well substitute beans and peas for flesh foods without any injury. We quote his remarks as follows: —

"Though a meat eater myself, I incline to the belief that we eat entirely too much meat, particularly in the summer months. To the habit, I think, can be ascribed in part the great increase of Bright's disease among us, which is shown in the charts prepared by the New York Health Department for exhibition at the St. Louis Exposition.

"Americans formerly ate much more garden products than they do now, and they were no less vigorous and able to meet the conditions of active American life. We would be much better off now if we did not eat quite so much meat as we do.

"It seems to me that it would be a good idea for us to taper off quite considerably. Bearing in mind what I have already said about the Japanese, I think they may reasonably be cited as an example of what a people may be trained to do. On their peculiar national diet they are doing good work, and good scientific work, and I think experiments along this line would be highly advantageous. The experiments that have been going on lately at Yale are valuable in this respect.

"It will be a good thing if this meat strike turns our minds into practical experimental channels. For instance, a very good breakfast may be had from eggs and a cereal, wheat preferably in the summer, and oats in the winter. Milk and eggs may easily take the place of meat, and I would like to say right here that before long New York will have such a milk supply that nobody need be afraid of it. The Health Department is working hard toward that end.

"We are rearing up a generation of healthy children exclusively on cereals, milk, and eggs.

"We can get our proteids from vegetables, such as beans, for instance, and peas. Beans contain all the nourishing properties of meat, and the working man, who feels that he needs meat, but can not get it, can get along just as well on beans. The soldiers and cowboys in the West thrive on such a diet.

"But as I have said, it would not do to attempt the change all at once. The system that is accustomed to meat needs meat. You can stop an automobile by gradually lessening the speed and thus coming to a stop, but if you attempt to stop all at once, the result is bound to be disastrous."

A HEALTHY SPECIMEN

A RECENT mail brings us from a colleague a photograph of his little son, which affords so fine an illustration of what a healthy infant ought to be that we can not resist the temptation to show it to our readers, at the risk of being upbraided for so doing; nevertheless, hoping that the amiability developed by seventeen years of vegetarian experience may spare us.

Our readers will certainly agree that the picture represents as fine a specimen of a nine-months-old baby as they ever saw. The little one has never been ill for a minute, and is as brimful of good nature and intelligence as of health. He is exactly what a sound and healthy baby ought to be. The parents have been earnest disciples and teachers of dietetic and other hygienic reforms for many years, and are reaping the golden harvest to which all sowers of good seed are entitled, both for themselves and for their children. This healthy boy is called a "granose baby" for the reason that he has never eaten anything but milk and granose biscuit.

With so excellent a start in life, this young vegetarian ought to reach a high mark as a preacher of righteousness, exemplifying in himself that it pays to be good. The parents are Drs. D. H. and Loretta Kress, of the Sydney Sanitarium

A CURIOUS FACT ABOUT THE SMYRNA FIG

THE Smyrna fig, which has long enjoyed the reputation of being the sweetest and most delicious of all the members of the fig family, has recently been introduced into this country, and is now extensively grown in California. Some very curious and interesting facts respecting the acquisition of this new fruit as an American product are given in the following, which we take from *The World's Work*:—

"In 1880 a San Francisco newspaper imported and distributed to its subscribers a large consignment of Smyrna fig-tree cuttings. Many of these cuttings were planted and became fruit-bearing. But here a puzzling setback discouraged the growers. While the tree bore fruit of some promise, not one fig on one tree grew to full size or ripened. Instead, they shriveled up and dropped from the trees at about half their growth.

"Government fruit experts were appealed to, and this curious fact was found: The Smyrna fig is really only half a fig. That is, it is the female of a complete fig, for the development of which it is necessary that it be fertilized with pollen of the male, or Capri fig. This process of fertilization requires a third and most interesting element — a little bug, known to science as the *blastophaga grossorum*, and to the lay world as the fig wasp. This microscopic

insect is born in the Capri fig, and at the proper stage of its development issues from its home through the little hole in the bottom of the fig, passing, in its exit, through the blossom, where its body is covered with pollen. Led by instinct, the *blastophaga* flies to the Smyrna fig and enters through a similar hole, where the Smyrna blossom catches the pollen from its body and is fertilized. From this stage, the growth of the Smyrna fig to ripe maturity is only a matter of sun and days.

"Mr. Roeding had grown Capri and Smyrna trees, but had no fig wasps. Learning of the need of fertilization to produce the Smyrna fig, he made some experiments in artificial fertilization, using a wooden toothpick to introduce the Capri pollen into the Smyrna fruit. This experiment was so successful that he was convinced that if he could use the means provided by nature for this purpose, he could make his orchard a commercial success. For several years from this time he annually received, through agents in Asia Minor, consignments of Capri figs containing the fig wasps; but, in every case, the insect had died in transit.

"At last, however, in 1899, after eleven years of work, it was discovered that *blastophagæ* in some of Mr. Roeding's figs were alive and were rapidly propagating their species. The following year, satisfied that he was near success, Mr. Roeding made a journey of eight thousand miles to Asia Minor, and in the orchards of Smyrna spent several months studying the methods employed by the original producers of the fruit.

"He returned to California, where his crop was in fine condition. Since 1901, the Smyrna figs have been successfully grown in central California, and the industry is growing as fast as the trees can be planted. By the work of a patient man and a patient bug a new and profitable industry has been created in this country."

NATURAL FOOD AHEAD ONCE MORE

A PATIENT stated the other day, "Doctor, I can easily give up the use of flesh food; I can deny myself anything; but it is a question with me whether I can keep up my work or not. When I don't eat meat I feel weak. I am fearful that I will not be equal to the requirements of my profession [he was a lawyer] if I discard the use of flesh food." There are doubtless many who recognize, theoretically, that flesh food is not natural for human beings, and that it might wisely be dispensed with, who still hesitate to discard its use for the reasons assigned by the gentleman above referred to — a prominent politician from a southern State.

The following, which we quote from the *Chicago Chronicle*, ought to set at rest these misgivings. Many similar facts might be cited.

"In a long-distance swimming race recently across Toronto Bay from the Yonge Street wharf to the swimming club, on the island lagoon, there was fought a battle between vegetarians and meat eaters. The course was about two miles in length, and H. F. Strickland, of Toronto, a vegetarian, made the journey in the record time of fifty minutes. George H. Corson, another vegetarian, made the course in fifty-two minutes. Two Englishmen had come over to swim in the race,— sturdy beef eaters from the land of roast beef — but they found the pace too fast, and dropped out midway on the course.

"On the day of the race the vegetarians' sole diet was pea butter. All the previous week they reduced their ordinary vegetarian diet to simples, such as pea butter, peanuts, and raw fruit. Before setting out in the race they informed the astonished meat-fed Englishmen, who

were supposed to be the best men in the contest, that they were vegetarians, had eaten no meat for years, and intended to prove the superiority of their diet.

"They did so. As they glided through the waves they were borne up by the consciousness that they were vindicating vegetarianism. A long swim is one of the severest physical tests to which a man can be put, and in order to settle conclusively the respective merits of pea butter and beefsteak, another race, specially arranged for the purpose, is to be brought about, two men a side, over a two-mile course. It is sure to draw a large crowd of butchers and market gardeners to cheer their respective champions."

We hope to be informed of the results.

A FEW FACTS AGAINST FLESH EATING

THOSE who are interested in the promulgation of the principles of dietetic reform cordially welcome every new fact bearing on this important question. A most interesting observation has been recently made by Burian and Schur, two eminent German investigators. These scientists in experiments upon animals have found that in men the liver destroys about one-half of the uric acid circulating in the blood, whether derived from external sources, as a meat diet, or generated within the body by ordinary tissue changes. This is due to the fact that in man the liver and the kidneys receive equal quantities of blood. In carnivorous animals, however, as the dog and the cat, the liver is much more active, receiving a much larger blood supply in proportion to that received by the kidneys. The liver of the carnivorous animal is, in fact, able to destroy proportionally ten to fifteen times as much uric acid as the liver of man. This makes it possible for carnivorous animals to subsist upon a diet containing a large amount of uric acid. Even vegetable-eating animals, like the rabbit, have livers more active in the destruction of uric acid than that of man. The rabbit's liver was shown to be capable of destroying three times as much uric acid as the human liver.

These facts clearly indicate that the human constitution is not physiologically adapted to a flesh dietary; and it is readily apparent that a slight increase in the amount of uric acid normally circulating in the blood might in the human organism result in mischievous consequences, though capable of producing no effect in an animal better prepared to protect itself against the action of this poison. Uric acid is eliminated with very great difficulty because of its insolubility. When present in the blood in considerable quantity, it not infrequently happens that uric-acid crystals and concretions formed by the aggregation of crystals develop in the kidneys, resulting in gravel, which may even lead to the destruction of life. A dog might introduce into its blood a considerable amount of uric acid by a large meal of meat without injury, because all but a very small part, one-thirtieth of the quantity received, would be quickly destroyed by the liver, so that only an infinitesimal amount of extra work will be required of the kidneys, the organs which are the least prepared to deal with uric acid, and which are most likely to suffer from its influence. Man, however, eating the same amount of beefsteak, containing fourteen grains of uric acid per pound, sufficient to form a good-sized calculus, would throw upon his kidneys an enormous amount of extra work, since half the entire amount of uric acid absorbed must be eliminated by these delicate organs.

Here is an interesting fact for the consideration of meat eaters, and especially for those who have been led astray by the unscientific statements of Dr. Salisbury and others of his school, who recommend an exclusive meat diet as a remedy for Bright's disease and various other

chronic maladies, a recommendation which hundreds of people have followed to their great detriment, notwithstanding the deceptive appearance in some cases of slight temporary advantage, the cause of which Dr. Haig has explained.

Dr. Wylie versus Tobacco-using.

Dr. Wylie, of the United States Agricultural Department, a chemist and scientist of world-wide reputation, has devoted much attention during the past two years to the investigation of the effects of borax upon the human organism. He found that half a grain administered daily for some weeks was sufficient to produce quite decidedly injurious effects, as manifested by loss of appetite, distress in the stomach, fulness in the head, and general discomfort. He also found that a dose of half a gram, or about seven and a half grains, was capable of producing, almost immediately, decidedly unpleasant effects. Comparison of the results obtained with large doses and small doses and careful consideration of the whole question led Professor Wylie to the conclusion that "substances which are not natural to the body nor necessary in foodstuffs, and which exercise a marked injurious effect when used in large quantities for short periods of time, would have a tendency to produce an injurious effect when used in small quantities for a long time."

This principle which Professor Wylie so clearly announces is so evident that it needs no argument to sustain it. A poison is a poison, whether in large doses or in small. When administered in large doses, the poisonous effects are at once manifest, but if administered in small doses, the effects are not immediately apparent, but, being cumulative, make themselves manifest at some later period; while small doses used during a long period produce degenerative changes, the result of which may even be more serious than those which might be produced by the occasional administration of large doses, even though the latter might be attended by much greater pain and inconvenience than the former.

While Professor Wylie does not make the application, it is clear enough that the principle which he announces in relation to borax is equally applicable to the use of tobacco, alcohol, and all other poisons, even to the use of various drugs, such as strychnia, mercury, potassium iodid, and various coal-tar products used as hypnotics and for other purposes. The first pipe or cigar which the boy smokes makes him very sick. A sufficiently large dose of tobacco would make any man sick, even though he may have been long accustomed to the use of the weed. These facts offer sufficient evidence without the necessity of bringing forward other proof that tobacco is a poison, and that it can not be used even in small doses for a considerable length of time without damaging the body. The same principles apply, of course, to the use of alcoholic liquors in every form, and in all doses. Light wines used regularly are as certain to produce, in time, evil results as so-called "young whisky" or "bad whisky" used at longer intervals.

Why Eat a Scavenger?

A man who would sicken at the thought of swallowing a snail or an earthworm will deliberately engulf half a dozen slimy, wriggling bivalves, fresh from their ooze-covered shells, with their stomachs full of half-digested diatoms and other small urchins which sport in the dregs of the ocean bottom, and their brown liver-kidneys, full of bile and urine, the big and little intestines with their excrementitious contents. Far more consistent is the Frenchman who considers broiled snails a delicacy, and smacks his lips at angleworm soup.

"That man must had a palate covered o'er
With brass or steel, who on the rocky shore
First broke the oozy oyster's pearly coat,
And risked the slimy morsel down his throat."

. . . Question Box . . .

In answer to No. 10,121, last month, an error occurred which we are very anxious to correct. The statement was made, "A pound of beans as served upon the table contains about the same quantity of xanthin or uric acid as fifty pounds of beefsteak." In some way not explicable the beans and the beefsteak were transposed. The statement should be, "A pound of beefsteak contains about the same quantity of xanthin or uric acid as fifty pounds of beans as served upon the table." And if the beans are parboiled in cooking, what little uric acid they contain, is almost wholly washed out.

10,123. Frequent Micturition.— G. H. T.: "What is the cause of and cure for frequent micturition?"

Ans.— Highly acid urine, or inflammation of the bladder. If the urine is too acid, it may be rendered less so by the free use of fruits and by copious water drinking. A hot sitz bath will often afford relief.

10,124. Insomnia.— W. C. H., Michigan: "Am troubled with insomnia and hunger in the night. If I exercise before retiring, it is very difficult to get to sleep. I take a cold morning sponge bath three times weekly, and exercise with a Whiteley exerciser every morning. I eat only dinner and supper; have a craving for sweets; do not drink at meals. Use no tea, coffee, tobacco, or liquor of any kind. Have cold hands at times, and pain near the heart. Sleeping with windows open has benefited my catarrh. Taking a hot bath before retiring prevents my sleeping at all. Otherwise I feel strong. Please advise."

Ans.— Take a neutral bath just before retiring, at a temperature of 92° to 94°. The duration of the bath may be fifteen minutes to an hour, or even longer. The moist abdominal bandage may be worn at night. It should be well covered with mackintosh and flannel. Take pains to masticate the food very thoroughly. Take at night a little fresh ripe fruit or stewed fruit, but nothing else. Live out of doors as much as possible.

10,125. Itching of Feet — Catarrh.— C. W. B., Nebraska: "My foot itches and an eruption at times appears, which seems to heal, but still itches, and nothing will relieve it until the skin breaks. This trouble began three years ago, presumably from poison oak. Suggest treatment. 2. What will relieve a cough and cold in the head of an infant?"

Ans.— 1. You probably have eczema. Use the following lotions: —

DERMATITIS LOTION NO. 1

℞	Carbolic Acid	2 drams
	Menthol	1 dram
	Proof spirit q. s. ad	12 ounces

Apply after bathing the parts with hot water and resinol soap, and allow to dry. Then apply the following lotion: —

DERMATITIS LOTION NO. 2

℞	Ichthyol	1 dram
	Carbonate of Soda	½ "
	Oil of Sweet Almonds	2 drams
	Glycerin	3 "
	Distilled water	3 "

The general health should also be improved by care in diet. Avoid meats, butter unless sterilized, and all indigestibles. Live out of doors as much as possible. Take a cold bath every morning. Build up the general health in every way possible.

2. Apply a cold wet hand rub daily. Keep the child out of doors constantly. Expose the skin to the sun a few minutes two or three times a day. Apply to the nose the following solution with an atomizer: Menthol, 20 gr.; camphor, 10 gr.; thymol, 2 gr.; albolin, 4 ozs.

10,126. Constipation.— Mrs. M. N., Utah: "1. Prescribe treatment to relieve gas in the stomach. 2. Is this trouble the cause of constipation?"

Ans.— 1. Drink a few sips of very hot water containing a drop of peppermint, winter-

green, cinnamon, or some other essential oil; the application of cold water over the stomach is also a valuable measure in many cases.

2. No, but it is very likely to accompany constipation.

10,127. Daily Ration.—R. H. S., Washington: "For an adult actively engaged daily in hard mental and physical labor, taking three meals per day, is the following average single-meal ration excessive: Bread (wheat) 6 ozs.; meat, 2½ ozs.; potatoes, 4 ozs.; dairy butter, ½ oz.; vegetables, 2 ozs.; fruit, 2 ozs. (total of solid food, 17 ozs.); coffee, 10 ozs.? 2. How could this diet be improved upon as to quantity and quality? 3. Do you recommend Cornaro's eleven-ounce ration for every-day mortals?"

Ans.—1. Your single-meal ration is just right according to standards which until lately have been recognized. However, recent experiments conducted by Professor Chittenden, of Yale, seem to prove that with thorough mastication, two-thirds of the amount you name ought to be sufficient.

2. The coffee should be omitted. If, however, you insist upon some beverage at meal-time, cereal coffee or Sanitas cocoa should be substituted for the coffee. It would be much better to omit the meat, substituting a handful of nuts. The total amount might be reduced considerably if thoroughly masticated.

3. Yes, if proper food is eaten and properly masticated.

10,128. Nervous Dyspepsia.—C. S. S., New York, asks (1) for diet for nervous dyspepsia. He drinks much cold water during the day, which seems beneficial. All starchy foods disagree. He eats granose with canned fruit, baked apples or fresh, with entire-wheat bread, toasted. 2. Is the method of cooking eggs by pouring boiling water over them and letting them stand for ten minutes away from the stove, a good one?

Ans.—1. The diet is good. Some fat should be added, such as nuts, the yolk of eggs, sterilized butter.

2. Yes.

10,129. Failing Health.—Mrs. S. E. G., Michigan, gives the following symptoms: Very thin; sallow skin; dark spots on face; health failed after childbirth; back weak; cloudy urine containing blood; pain in abdomen. Is a course of treatment at the Sanitarium necessary for cure?

Ans.—Yes. The case needs thoroughgoing treatment.

10,130. Heart Trouble — Cider.—C. M. C. C., Illinois: "1. What is the cause and remedy for the heart missing beats frequently? This difficulty comes on irregularly. I employ cold towel rubs from the waist up every morning. 2. Is a glass of new cider an hour before dinner beneficial?"

Ans.—1. Probably a nervous affection of the heart.

2. We do not recommend cider. Fresh, unfermented apple juice is wholesome.

10,131. Tonsillitis.—Mrs. L. E. O., Nebraska: "Outline treatment, also preventive measures, for tonsillitis in a boy of sixteen. He has had it four times, and the right tonsil has been lanced twice."

Ans.—Probably the tonsils should be removed. During the acute attack a fomentation may be applied every two or three hours, and the cold compress during the interval.

10,132. Macerated Wheat—J. B. L. Cascade Treatment—Distilled Water.—F. F. B., Connecticut: "1. What do you think of macerated wheat (sent out from Kansas City, Mo.) for constipation? 2. What will cure constipation? 3. What is your opinion of the J. B. L. Cascade treatment? 4. What do you think of Dr. Wright's Colon Syringe? 5. What is your opinion of distilled water?"

Ans.—1. It is just as good as bran, but no better.

2. This depends upon the cause. In cases in which there is much pain in the bowels, with retraction of the abdomen, the abdominal walls drawn in more or less constantly, the constipation is often due to a contraction of the colon. Such cases are temporarily relieved by a large hot enema. In cases in which the bowels are much distended with gas and the abdominal walls are very lax, there is usually dilatation of the colon. In these cases the cold enema is the best. The addition of soap to the water in either case is often helpful. The cure of chronic constipation usually requires improvement of the general health, proper dietary, abdominal massage, and development of the abdominal muscles by exercise or by the use of electricity. Address the publishers, enclosing two two-cent stamps for a booklet entitled "The New Dietetics," which gives a list of laxative foods.

3. No better than the ordinary enema.

4. No better than any other syringe.

5. Distilled water is good, but no better in most cases than ordinary pure well water.

LITERARY NOTES

ONE of the most interesting contributions yet made to the literature of the Civil War appears in the September **McClure's** in an article entitled "Memories of the Beginning and End of the Southern Confederacy," being unpublished chapters of history from the reminiscences of Louise Wigfall Wright, daughter of Louis T. Wigfall, senator from Texas to the United States Senate, and later to the Confederate Senate, and also an officer on the staff of Jefferson Davis. The article consists of a series of letters written at the outbreak and close of the War, which reflect with remarkable accuracy and interest the thought and spirit of the times. They reveal the inside life of the Southern people, and reflect all the tragedy of high hope and bitter disappointment in their dear lost cause.

Many of us miss the joys that might be ours by keeping our eyes fixed on those of other people. No one can enjoy his own opportunities for happiness while he is envious of another's. We lose a great deal of the joy of living by not cheerfully accepting the small pleasures that come to us every day, instead of longing and wishing for what belongs to others. We do not take any pleasure in our own modest horse and carriage, because we long for the automobile or victoria that someone else owns. The edge is taken off the enjoyment of our own little home because we are watching the palatial residence of our neighbor. We can get no satisfaction out of a trolley ride into the country or a sail on a river steamer, because some one else can enjoy the luxury of his own carriage or yacht. Life has its full measure of happiness for every one of us, if we would only make up our minds to make the very most of every opportunity that comes our way, instead of longing for the things that come our neighbor's way.—*From* **Success.**

Reminiscences of Sir Henry Stanley, by A. J. Mounteney-Jephson, the last surviving officer of those who crossed Africa with him, appear in the September **Scribner's**. Many interesting incidents are told, and Stanley's leadership is analyzed. Mr. Jephson defends him from the charge of cruelty, and asserts that during three years his officers "never once saw him do a cruel or wanton thing, or anything of which our consciences disapproved." He says that "those who followed in his footsteps in Africa always spoke of his justice to the natives." This remarkable paper contains letters of appreciation from Sir Harry Johnston, Dr. Sven Hedin, and others.

Hang at least one picture in your kitchen in such a place that it will meet your eye a score of times daily. Let it be a landscape or a figure or a picture "that tells a story;" only be sure that it is not a scene that reproduces something of the daily routine. If practicable, change the picture for another once a week or month. Good prints of the best pictures can be had as low as one cent each. Take a look at the picture often, seeing what it means, or rather realizing each time what it says to you personally. This will break up the monotony, which is the deadliest thing about housework and some other occupations, and will help to prevent the formation of the "fixed idea" which is the seed of most mental and emotional troubles. Just try this for a month, and report. "Your money back" if you don't find this a suggestion to be thankful for—always bearing in mind that "the point of this suggestion lies in the application of it."—*Luke Lavender, in* **Good Housekeeping.**

The Life Boat for the present month comes to our table replete, as usual, with good and interesting matter pertaining to philanthropic, charitable, and health work. It has departments devoted to Mission, Hospital, and Neighborhood Gospel Work; A Children's Department, one for work among Prisoners, and another devoted to Physical Redemption. From cover to cover it is full of helpful, healthful articles which every one ought to read.

Published at Hinsdale, Ill. Subscription price, 35 cts. a year.

Life and Health. This is the name of a new health monthly published at Washington, D. C. This journal announces itself as an exponent of the principles of hygienic reform, and as it is the successor of the *Pacific Health Journal*, which has long done efficient work as a champion of dietetic and other reforms on the Pacific Coast, it is to be expected that it will prove an efficient addition to the educational forces which are operating in this direction. The subscription price is 50 cts. a year.

GOOD HEALTH

A Journal of Hygiene

J. H. KELLOGG, M. D., EDITOR

Subscription Price, $1.00 a year
Single Copies 10 cents : : : :
PUBLISHED MONTHLY BY

GOOD HEALTH PUB. CO.

115 WASHINGTON AVE, N.

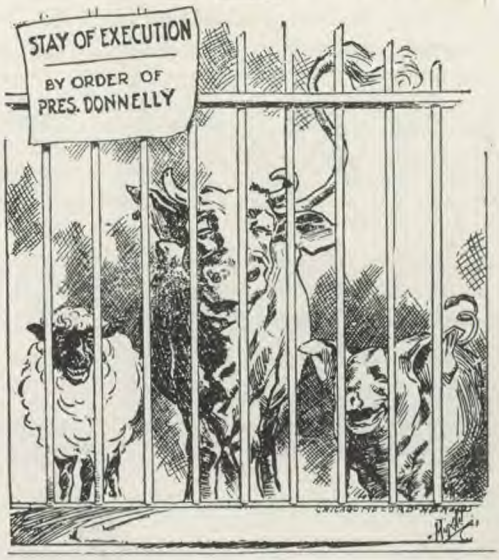
BATTLE CREEK. · · · · · MICHIGAN

NOTICE

THE International Vegetarian Congress will be held in Library Hall, Hall of Congresses, World's Fair, Louisiana Purchase Exposition, at St. Louis, Mo., U. S. A., on the 27th and the 28th of September, 1904. All are invited.

F. J. CONRAD,
Chairman of the International Vegetarian Congress.

SOME HAPPY FEATURES OF THE PACKERS' STRIKE.



From the *Chicago Record-Herald.*

From *The Evening Star* (Washington, D. C.).

HIS TIME TO GLOAT

I AM a vegetarian,
No heifer-fed barbarian;
I live on things agrarian,
    But never fool with meat.
I'm one of those that like, you see,
The grass that lines the pike, you see;
And so this packers' strike, you see,
    To me is quite a treat.

I laugh to think of those who eat
That horrid germ-fraught stuff called meat —
All now a-shake from head to feet
    For fear of rising prices.
No odds to us if beef should be
Two-sixty-five a pound, for we
Don't eat the dirty stuff, you see,
    But live on grains and rices.

I thought this morning, as I lay
And hungered for my breakfast hay,
How, ere the closing of the day,
    The price of pork might rise;
I pitied all who didn't know
How nicely ragweed pork chops go
When one is tired a bit, and Oh,
    The taste of pecan pies!

We oft eat roasts of who knows what
Served up to us all piping hot,
And "steaks" consisting of a lot —
    Of weeds we can not name;
A consommé of maple limbs,
A purée made of Watts' hymns —
These soups delight our fats and slims
    And eke out halt and lame.

While they who long for flesh are gaunt
Because of meat there is a want,
Our sirloin cabbages we flaunt,
    And liver made of radish;
We stuff on sausage made of oats
Instead of fragments saved from shotes;
On string bean hash each veggy dotes —
    Some people say we're faddish.

Head cheese we make from barley polls,
From cowslips we construct veal rolls
That you could not, to save your souls,
    From real meat discern.
In brief, to make a long tale short,
We don't eat naught we hadn't ort;
And if no meat should reach our port
    We wouldn't yearn a yearn.

— *Baltimore American.*

DR. JAY W. SEAVER, OF YALE UNIVERSITY

Will contribute to our next issue a paper on "Posture for School Children." Dr. Seaver's name is sufficient guarantee that the article will be a good one.

In the same number will be an article on "Healthful Occupations for Elderly People," by Dr. Kate Lindsay, of Boulder, Colo.

CHAUTAUQUA SCHOOL OF HEALTH.

FOR the past year we have been aiming to make this department a practical and efficient help to our readers. Now we should like to know your opinion of this part of our journal.

Tell us if in any way it has been a benefit to you.

What suggestions would you offer to improve it?

Would it be profitable to you to have it continued during 1905?

We also invite ideas for the next year's journal.

What would make the magazine better?

What subjects would you like to have discussed?

What new features can you suggest?

Let us hear from you.

THESE OFFERS

CAN NOT BE EXCELLED

	Publisher's Price	Our Price
Good Health and Vick's Magazine	$1 50	$1 00
" " " " " and Housekeeper	2 10	1 15
" " " Inter Ocean (weekly)	2 00	1 00
" " " Save the Boys	1 30	1 00
" " " Farm and Fireside	1 50	1 00
" " " Green's Fruit Grower	1 50	1 00
" " " Farm, Field, and Fireside	2 00	1 25
" " " Womans' Home Companion	2 00	1 25
" " " Bookkeeper	2 00	1 50
" " " Physical Culture	2 00	1 50
" " " Beauty and Health	1 50	1 00
" " " Health Culture	2 00	1 50
" " " Pearson's Magazine	2 00	1 50
" " " Pilgrim	2 00	1 50
" " Housekeeper and Leslie's Monthly	2 50	1 75
" " Woman's Home Companion, and Cosmopolitan	3 00	1 75
" " Harper's Bazaar, and Cosmopolitan	3 00	1 75
" " and New Voice	2 00	1 50
" " " Modern Medicine	2 00	1 00
" " " American Boy	2 00	1 25
" " " Country Gentleman	2 50	1 75
All of the above may be new or renewed and the following as noted.		
Good Health, Housekeeper and Little Folks (New Subscriptions only to Little Folks)	3 00	1 75
Good Health and Youth's Companion (New Subscription only to Youth Companion. We will forward renewed Subscription for above for $2.35)	2 75	1 75
Good Health and Ram's Horn. (Eight Months $1 25 Four Months $0.75. Please add 15c if the subscription to Ram's Horn is a renewal)	2 50	1 75

We will also combine GOOD HEALTH with any other magazine not mentioned in our various offers, with Bibles, books, health literature, invalid supplies, rubber goods, Good Health Adjustable Waists and Bath Cabinets, and other supplies that we may handle. Name the article you wish to obtain and we will give you our price thereof.

Good Health Pub. Co.,

BATTLE CREEK, MICH.

Sanitariums

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

COLORADO SANITARIUM, Boulder, Colo.
HOWARD F. RAND, M. D., Superintendent.

ST. HELENA SANITARIUM, Sanitarium, Napa Co., Cal.
T. J. EVANS, M. D., Superintendent.

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

PORTLAND SANITARIUM, Mt. Tabor, Ore.
W. R. SIMMONS, M. D., Superintendent.

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

CHICAGO BRANCH SANITARIUM, 28 33d Place, Chicago, Ill.
FRANK J. OTIS, M. D., Superintendent.

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

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

TREATMENT ROOMS, 1117 4 St., San Diego, Cal.
T. S. WHITELOCK, M. D., Superintendent.

GARDEN CITY SANITARIUM, San Jose, Cal.
LEWIS J. BELKNAP, M. D., Superintendent.

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

SPOKANE SANITARIUM, Spokane, Wash.
SILAS YARNELL, M. D., Superintendent.

DETROIT BRANCH SANITARIUM, 54 Farrar St., Detroit Mich.

TREATMENT PARLORS, 865 5th St., Milwaukee, Wis.

COLORADO SPRINGS SANITARIUM, 320-322½ North Tejon St., Colorado Springs, Colo.
G. R. B. MYERS, M. D., Superintendent.

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

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

NASHVILLE SANITARIUM, corner Church and Vine Sts., Nashville, Tenn.
O. M. HAYWARD, M. D., Superintendent.

CLEVELAND TREATMENT ROOMS, 230 Euclid Ave., Cleveland, Ohio.

TREATMENT ROOMS, 44 E. Main St., Middletown, N. Y.
A. J. READ, M. D., Superintendent.

SEATTLE SANITARIUM, 612 3d Ave., Seattle, Wash.
A. Q. SHRYOCK, M. D., Superintendent.

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

KEENE SANITARIUM, Keene, Texas.
P. F. HASKELL, M. D., Superintendent.

LOS ANGELES SANITARIUM, 315 W. 3d St., Los Angeles, Cal.

PENNSYLVANIA SANITARIUM, 1809 Wallace St., Philadelphia, Pa.
A. J. READ, M. D., Superintendent.

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

LEICESTER SANITARIUM, 80 Regent St., Leicester, Eng.
F. C. RICHARDS, M. D., M. R. C. S., Superintendent.

CALCUTTA SANITARIUM, 51 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 Yamanoto-dori, Nichome, Kobe, Japan.
S. A. LOCKWOOD, M. D., Superintendent.

GUADALAJARA SANITARIUM, Apartado 138, Guadalajara, State of Jalisco, Mexico.
J. W. ERKENBECK, M. D., Superintendent.

INSTITUT SANITAIRE, Basle, Switzerland.
P. DE FOREST, M. D., Superintendent.

SKODSBORG SANITARIUM, Skodsborg, Denmark.
J. CARL OTTOSEN, A. M., M. D., Superintendent.

NEWFOUNDLAND HEALTH INSTITUTE, 282 Duckworth St., St Johns, Newfoundland.
A. E. LEMON, 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.

Health Food Restaurants

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

The Pure Food Cafe, 13 S. Main St., Salt Lake City, Utah.
Hygienic Company, 1209 G St., N. W. Washington, D. C.
Dining Room, Church and Vine Sts., Nashville, Tenn.
Hygeia Dining Room, 279 Woodward Ave., Detroit, Mich.
Hygeia Dining Rooms, 5759 Drexel Ave., Chicago, Ill.
Hygienic Cafe, 426 State St., Madison, Wis.
Hygienic Cafe, 865 5th St., Milwaukee, Wis.
Pure Food Cafe, 607 Locust St., Des Moines, Iowa.
Pure Food Cafe, 403 E. 11th St., Kansas City, Mo.
Good Health Cafe, 145 S. 13th St., Lincoln, Nebr.
Nebraska Sanitarium Food Co., College View, Nebr.
Pure Food Store, 2129 Farnum St., Omaha, Nebr.
Vegetarian Cafe, 322½ N. Tejon St., Colorado Springs, Colo.
Vegetarian Cafe, 1543 Glenarm St., Denver, Colo.
The Vegetarian, 755 Market St., San Francisco, Cal.
Vegetarian Dining Rooms, 317 W. 3rd St., Los Angeles, Cal.
Portland Sanitarium Rooms, Mt. Tabor, Ore.
Vegetarian Cafe, 214 Union St., Seattle, Wash.
White Rose Restaurant, W. H. Nelson, 36 W. 18th St., New York City.
Boston Health Food Store, W. F. Childs, Room 316, 100 Boylston St., Boston, Mass.
Vegetarian Cafe, S. 170 Howard St., Spokane, Wash.
The Laurel, 11 W. 18th St., New York City.
Hygeia Cafe, 203 3rd Ave., Peoria, Ill.
Pure Food Cafe, 1807 Franklin Ave., St. Louis, Mo.

Factory of the Compensating Pipe Organ Co., Ltd.

THE COMPENSATING PIPE ORGAN

The most unique and remarkable instrument of the present day, giving a power and tone quality impossible in the ordinary pipe organ, and overcoming the difficulty of correcting the variations of pitch in pipes and reeds.

ASK US QUESTIONS ABOUT IT

COMPENSATING PIPE ORGAN CO., LTD.

Battle Creek, Mich.

MUSIC!

A CENT A SHEET

YOU can own the best music in the world—vocal and instrumental—for about one cent a sheet.

Our "Library of the World's Best Music"—eight beautiful volumes, sheet music size—contains all the famous compositions of the masters, as well as the popular pieces of recent years. It is within your easy reach.

"The World's Best Music."

The eight volumes in this library are light and easy to handle, and they open flat at the piano. The library contains **300 instrumental pieces,** such as popular and operatic melodies, dances, classic and romantic pieces, etc.; **350 best old and new songs,** including duets, trios and quartettes; **500 biographies** of musicians; and **400 illustrations,** many of which are handsome chromatic art plates in colors.

In the instrumental section there are 100 recent pieces by American composers, selections that sell at 25 and 50 cents each in retail stores. The whole library is thoroughly indexed, so that any desired selection may be found instantly.

This is the only musical library in existence intended for the home, and for pianists and singers of average ability. It contains the world's *best music* but *not the most difficult.* Wagner, Chopin, Liszt, Chaminade, Brahms, Mendelssohn, Mozart, Paderewski, Sullivan, and all the great composers are represented, but by selections that appeal to the taste of those of ordinary musical culture.

The Editors. The pieces were selected by an experienced board of editors, including such renowned musicians and composers as Victor Herbert, Reginald De Koven, Helen Kendrick Johnson, Gerrit Smith, and others equally well known, whose names are a guarantee of the value and importance of the work.

Every Home Can Afford it.

The 2,200 pages of music in this library would cost you over $200.00 if purchased one piece a at time. The set regularly sells at $38.00 in cloth and $46.00 in half leather, but you can secure it for about half that amount by ordering through our Music Club, which has purchased the entire edition.

No Money Required Now Mail the coupon to-day and you will receive a set for examination, charges prepaid. You may return same at the end of five days at our expense if not satisfactory. If the library pleases you, and you wish to own it, you can pay at the rate of $1.00 or $2.00 per month. Through our Club, the price is only $22.00 for the cloth binding, and $26.00 for the half-leather. You must mail the coupon promptly if you desire to investigate, as only a limited number of sets are available.

50 Bookcases to Be Given Away.

We have about fifty elegant oak-wood bookcases, made especially to hold a set of the "World's Best Music." **Their retail price is $4.00,** but we have decided to offer them as premiums to prompt subscribers. To obtain a bookcase free with your set, it will be necessary to send the coupon at once. This bookcase is a present from us, and does not increase the cost of the books in any manner.

What an associate editor of "The Ladies' Home Journal" says:

"I have seldom seen anything so well worth having in one's home. I have lingered over each part with peculiar pleasure, and have no hesitation in saying that you have made a collection of great value, both in the music and in the artistic and biographical features."—MARGARET E. SANGSTER.

The University Society, 78 FIFTH AVE. NEW YORK

COUPON

Good 10-'04

The University Society, New York.

Please send me on approval, express prepaid, a set of **"The World's Best Music,"** in half-leather. If satisfactory I agree to pay **$1.00** within 5 days and **$2.00** per month thereafter until **$26.00** has been paid; if not satisfactory I agree to return the set within 5 days. Also send me your **$4.00** bookcase, which I am to retain, free of charge, if I keep the books.

Name.....

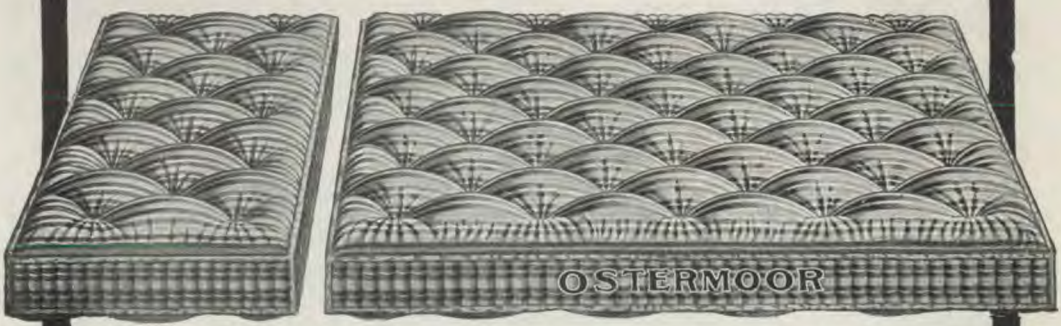
Street.....*City*.....

In ordering cloth, change **$26.00** to **$22.00.**
If you prefer to pay $1.00 per month, alter coupon accordingly.

Which Will YOU Sleep on To-night

—a mattress stuffed with the hair of dead horses or cattle, or the clean and sanitary

Ostermoor Mattress $15.



The OSTERMOOR MATTRESS is *built* (not stuffed) with a product of Nature as pure as Nature herself—snow-white cotton, treated and prepared by a mixture of brains and machinery in a way that has made OSTERMOOR the mattress *par excellence*—moisture-proof, dust-proof, germ-proof, vermin-proof—everlastingly resilient, soft and fresh. OSTERMOOR, the only mattress that never requires renovating or renewing—an occasional sun bath its only renovator, and under no condition does it sag or become lumpy or uneven. "The proof of the pudding is in the eating." The proof of the mattress is in the sleeping. We allow you to sleep on it 30 nights free, and refund your money if you are not satisfied *in every way*.

Beautiful 136-Page Book FREE

If you ask, we will send you our handsome, beautifully illustrated book, "The Test of Time"—136 pages of interesting information and valuable suggestions for the sake of comfort, health and success—with over 200 fine illustrations. Write for it now while it is in mind.

REGULAR SIZES AND PRICES:

2 feet 6 inches wide,	25 lbs.,	$ 8.35
3 feet wide	30 lbs.,	10.00
3 feet 6 inches wide,	35 lbs.,	11.70
4 feet wide,	40 lbs.,	13.35
4 feet 6 inches wide,	45 lbs.,	15.00

All 6 feet 3 inches long.

EXPRESS CHARGES PREPAID

In two parts, 50 cents extra

Special sizes at special prices

Look Out! Dealers are trying to sell the "just-as-good" kind. Ask to see the name "OSTERMOOR" and our trade-mark label sewn on the end. Show them you can't and won't be fooled. *"It must be Ostermoor."*

OSTERMOOR & CO.
152 Elizabeth St., New York

Canadian Agency: The Alaska Feather and Down Company, Ltd., Montreal.

SPECIAL OFFERS

BIBLES, Remit us $2.50

And we will send you GOOD HEALTH one year, and a $3.50 HOLMAN BIBLE, bound in Egyptian morocco with divinity circuit, red under gold, size 5¼x7¾. The type is bourgeois, 8vo., easy to read. Contains column references, fifteen maps, four thousand questions and answers on the Bible, concordance of nearly fifty thousand references, and a new illustrated Bible dictionary. We will send a smaller Holman Bible, size 4⅜x6½, with fine minion print, 16mo., in place of the larger size, if desired. Thumb index, 50c extra.

Send for our 1904 Catalogue.

COMBINATIONS

We will send GOOD HEALTH one year with the following for price set opposite each:

Life Boat	**$1.00**	**Life Boat and Medical Missionary**	**$1.25**
Medical Missionary	**1.00**	**Vegetarian**	**1.25**
Ideal Home Magazine	**1.00**	**American Motherhood**	**1.25**
Bible Training School	**1.00**	**Youth's Instructor**	**1.50**
Atlantic Union Gleaner	**1.00**	**Southern Watchman**	**1.50**
Advocate of Christian Education	**1.00**	**Signs of the Times**	**2.00**

The *Review and Herald* may be included in any of the above offers by adding $1.50. New or renewed subscriptions accepted. All sent to different addresses if desired.

HEALTH BOOKS

We will send you any of the following named books, written by J. H. Kellogg, M. D., Superintendent of the Battle Creek Sanitarium, with one year's subscription to GOOD HEALTH and *Medical Missionary* for the prices set opposite each:

The Stomach, Its Disorders and How to Cure Them, cloth	**$2.00**	**Man the Masterpiece, cloth**	**$3.50**
Half-buff	**2.50**	**Half-buff**	**4.00**
Art of Massage, cloth	**2.75**	**Library**	**4.25**
Half-leather	**3.50**	**Home Hand-Book, cloth**	**4.75**
Ladies' Guide, cloth	**3.50**	**Half-buff**	**5.25**
Half-buff	**4.00**	**Library**	**5.75**
Library	**4.25**	**Or Science in the Kitchen, by Mrs. E. E. Kellogg, in Oilcloth**	**2.25**

HAVE YOU A COLD?
DO YOU SUFFER WITH CATARRH?

TRY OUR MAGIC POCKET VAPORIZER

A simple, convenient instrument for the treatment of Catarrh, Colds, and all diseases of the nose, throat and lungs.

Write for descriptive booklet and terms.

Price only $1.00

With one year's subscription to Good Health, new or renewed, only $1.25.

ADDRESS

Address GOOD HEALTH PUB. CO.

115 Washington Ave. N. . . BATTLE CREEK, MICH.

The Largest and Most Thoroughly Equipped of Sanitariums

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

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

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

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

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

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

Special ward for surgical cases with perfect appointments.

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

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

THE SANITARIUM, Battle Creek, Mich.

THE COLORADO SANITARIUM

Thirty miles northwest of the city of Denver is a well-equipped and well-regulated institution for the treatment of all chronic disorders. Buildings with all modern conveniences, including steam heating, electric lights, elevators, gymnasium.

Baths of every description, including the Electric-light Bath.

Massage and Manual Swedish Movements.

Electricity in every form.

Medicated-Air Rooms for the treatment of diseases of the lungs.

Special accommodations and separate building for tubercular patients.

Classified Dietary.

Laboratory of Hygiene, for bacteriological, chemical, and microscopical investigations.

Experienced Physicians and well-trained nurses.

COLORADO SANITARIUM, BOULDER, COLORADO