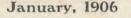
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VOL. XLI Edited by J. H. KELLOGG, M. D. NO. 1



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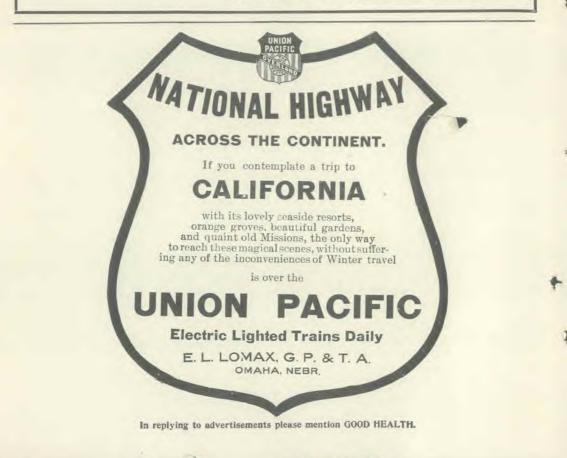
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SPECIAL NUMBERS

SPECIAL TEMPERANCE AND ANTI-NARCOTIC NUMBER (February)

HOUSEKEEPERS' NUMBER (April)

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INVALIDS' NUMBER (August)

-

devoted especially to the home care of the sick. This number will be of special interest, as it will contain a great variety of new and effective measures of treatment which may be employed in the home. Every home must make provision for sickness. It will come sooner or later. This number alone will be worth vastly more than the subscription price.

The June number will be devoted to OUTDOOR LIFE. There will also be a special MOTHERS' NUMBER (October), which will be of great practical interest.

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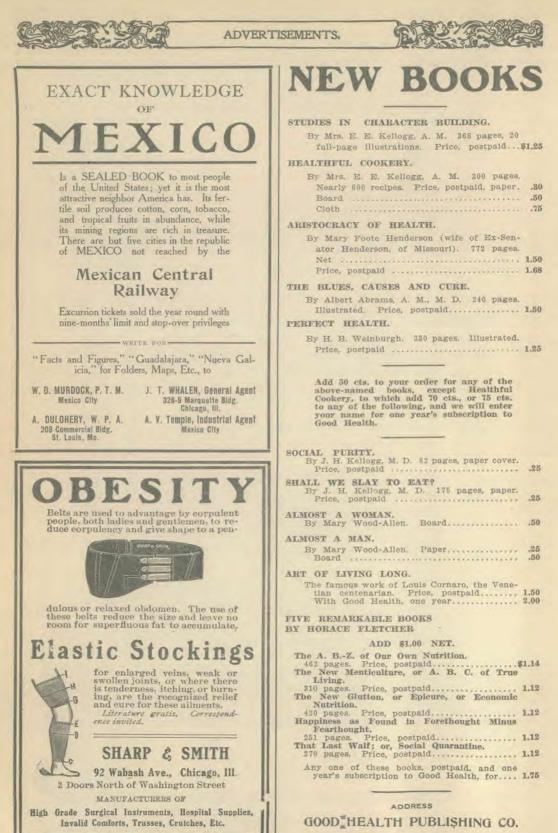
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VOL. 2, NO. 2; MAR., 1905 HE VALUE OF REST AT THE OUTSET OF TUBERCULOSIS. By Dr. Hugh M. Kinghorn, of Sar-anac Lake, N. Y.

THE, CAUSES OF TUBERCULOSIS. By Dr. O. C. Probat, Professor of Hygiene and Diseases of the Chest, Star-ling Medical College, Columbus, Ohio.

SOME FALLACIES ABOUT HEALTH RESORTS.

VOL 2, NO. 3; APR., 1905 IOW TO LIVE AFTER RETURNING FROM A HEALTH RESORT. By Dr. Jay Perkins, Providence, R. I.

DUST AND ITS DANGERS.

VOL. 2, NO. 4 ; MAY, 1905

SLEEPING OUT OF DOORS. By Dr. E. L. Trudeau, of Saranac, Lake, N. Y.

AN OUTDOOR HOBBY AS A PREVENTION OF DISEASE.

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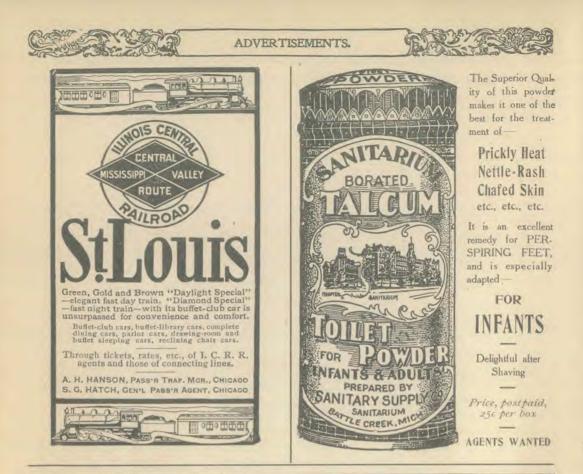
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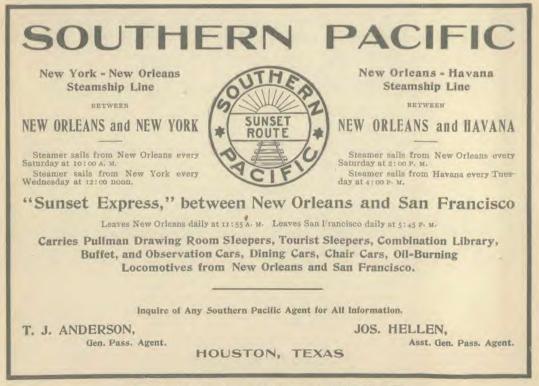
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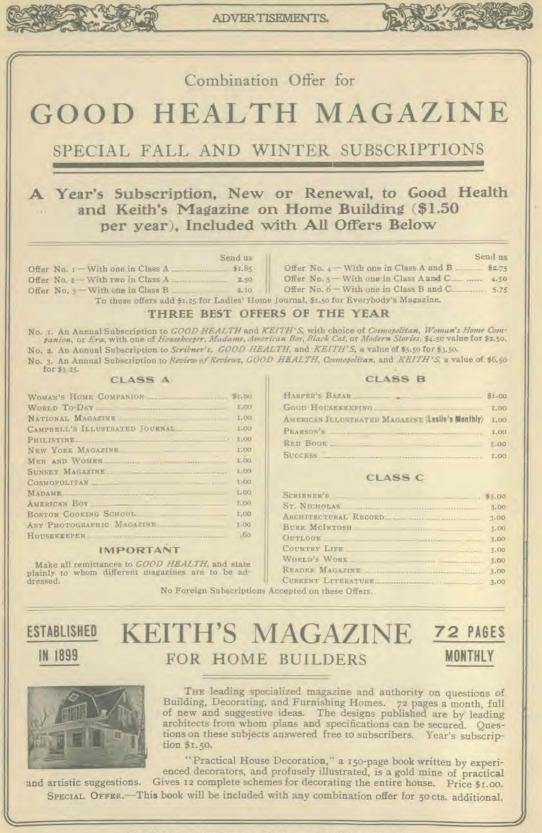


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GOOD HEALTH

A Journal of Hygiene

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No. 1

THE TRUE FOUNDATION FOR PERMANENT HEALTH

BY J. H. KELLOGG, M. D.

PURITY of the blood is the one essential of permanent health. It is by means of the blood that the body is created, renewed, and maintained. If the blood is in good condition, everything else in the entire body will be right.

The quality of the blood is indicated by one's condition. Pimples on the face, a coated tongue, rheumatism, diabetes, obesity, are evidences of impure blood. In fact, every chronic malady may be traced to some wrong condition of the blood.

The white cells in the blood, of which there are seven thousand to every little drop, are tiny creatures which are not merely carried along by the current, but seem to move about by their own volition, seeking the germs which have gained entrance to the body. Guided by a marvelous intelligence, they collect in great numbers where there are germs to be destroyed.

In order that the blood should be active in defending the body and destroying germs, it is of the first importance that it should be clean and pure. When the blood is healthy, the cells are vigorous and active. When the blood loses its vitality, the cells immediately begin to suffer, and we see evidence of their loss of power to defend. When the skin loses the power to defend itself, we have pimples, eczema, psoriasis, and a variety of other diseases of the skin and the mucous membrane. Nasal catarrh, tonsillitis, sores in the mouth, and decay of the teeth are caused by the mucous membrane losing the power to destroy germs. Further down in the body we have catarrh of the stomach and catarrh of the liver.

The liver is one of the essential organs for destroying germs. It gathers them out of the blood, destroys them, and sends their dead bodies out in the bile. When the liver loses its power to destroy germs, they escape and accumulate in the gall-bladder, forming little masses which become the nuclei of gall-stones. The gall-bladder becomes irritated and inflamed, the mucous membrane secretes an excess of cholesterin, a resinous substance, which is precipitated and forms gall-stones; which irritate the gall-bladder and maintain the disease. When the blood is what it ought to be, the germs will be destroyed, and gall-stones will not be formed.

The whole body goes into decay because of the loss of power to defend itself. The real cure for all these diseases consists in increasing the defensive power of the body. No chronic invalid can be cured of his malady without improving his vital status. He must be changed bodily, reconstructed, through the complete renewal of his blood. It is the possibility of this reconstruction that makes possible the recovery from any disease. When the condition of the blood is improved, then as it rebuilds the body day after day, as the old matter passes out

2 THE TRUE FOUNDATION FOR PERMANENT HEALTH

and the new matter passes in, it is reorganized on a better plan, stronger and more vital tissue is built up, and this more highly vitalized tissue rises above the morbid conditions which have previously existed.

Pure blood must be made of pure food. You can not make pure blood out of pigs' feet, tripe, oysters,— the scavengers of the sea,— and other abominations of that sort; neither can the best blood be made from any kind of flesh food, because it is all second-hand food. When one eats pork, he is eating the corn or other food which the pig has swallowed and rolled around in the mud.

The only way to get and maintain this strong vital resistance that the thoroughly healthy man has is to be in constant training for it. A man who is ready for a prize-fight never fails to fulfil his engagement because he has caught cold or contracted pneumonia, or anything else of that sort. He is proof against any germ on the face of the earth, and if he should keep himself continually in fighting trim, he ought to live to a great age. But the business man does not think it worth while to keep himself in fighting trim. He sits down, and lets his machine, the body, go to pieces, and then wonders why it does not work well. He might as well let a piano get out of tune and then wonder why he can not play on it; or let a typewriter get dirty and wonder why he can not write on it; or let the sewing machine get clogged with dirt and wonder why it can not be used. The human machine gets out of repair just as any other machine that is

not taken care of. The business man pays no attention to his machine; he simply works on, adding farms to his land, and gold to his accumulations. By and by he finds himself completely wrecked, unable to work any more. Then he goes to a doctor and expects to be made all right with a few drops of medicine of some kind.

Healing power can not be bottled up and dispensed in that way. It takes the same power to heal a man that it does to make him. We must eat pure food, and build ourselves up with wholesome material; we must make the life normal, and stimulate all the sluggish life processes to more rapid activity. This may be done by means of massage, electricity, exercise, and baths.

Exercise does for the body what the mountain side does for the stream of water. When the water runs down the mountain side, it is a babbling brook, leaping out into the air now and then, throwing itself into spray, exposing itself to the air and sunshine, and the waters are crystal pure. In the valley or on a level plain the water may form stagnant pools, and get covered over with slime of all sorts, and inhabited by all kinds of filthy creeping things. Some people let themselves get into the condition of that stagnant pool, and then wonder why the frogs croak in their brains, and why the birds do not sing instead. When a person gets into the condition where the body is like a stagnant pool, a radical change must be made in his life. He must begin by getting vitalized. new blood into all his cells and tissues.

I AM glad to think I do not have to make the world go right, But only to discover and to do With cheerful heart the task that God appoints. — Jean Ingelow.

TAKING THE "COLD-AIR CURE"

learned the even greater pleasures and

ANY persons who delight in out- the sunshine while screening from the door life in summer have not yet wind, are most satisfactory if a windsheltered porch or veranda is not avail-

benefits of the open in winter, and consequently they hibernate with the approach of cold weather, and spend that most exhilarating season in their dens.

Statistics prove that tuberculous patients improve much faster in winter than in summer; and for other chronic diseases it has been found that one winter

spent out of doors is worth two summers.

No benefit, however, is derived from outdoor life in the cold weather, if the "sitter-out" taking the cure is in a condition of discomfort. It is of the first importance that the patient be warm and comfortable, and it is well worth while to take pains and make some outlay, omitting no item that can

add to the physical comfort.

One of the first essentials is shelter ; for air in motion has a more cooling effect than a still atmosphere many degrees colder. Revolving sheds enclosed on three sides, that can be adjusted to admit



TAKING THE "COLD-AIR CURE "

able. In some cases the revolving shed is superior to the veranda, for it can be turned to follow the sun, without the patient's having to shift his position. Glass screens are advisable when they can be obtained, as they admit sunshine and light while sheltering from the wind. But if nothing better is to be had, canvas or wooden screens may be made to



WELL-PROTECTED FOR AN OUT-OF-DOOR NAP

answer the purpose very well.

The selection of a comfortable and suitable chair is also a matter of importance. The adjustable wheelchair will be found very convenient if it is necessary to shift the position. Canvas chairs

TAKING THE "COLD-AIR CURE"



SUNSHINE AND FRESH ATR IN ZERO WEATHER

stretched on wooden frames are comfortable and inexpensive. An upholstered chair, or one fitted with a mattress, will be found warmer.

An adjustable table, which can be swung over the chair or away from it, is convenient for holding books, work, or writing materials. A book rest attached to the table enables the patient to keep his hands covered while reading, thus adding to his warmth and comfort.

In the matter of clothing, the outer wraps are of the utmost importance. The underclothing should not be heavy, but heavy wraps are indispensable. A thick

wrap in the shape of a garment fitted to the body keeps out the cold better than merely wrapping oneself in a rug or blanket. This outer garment may be made of astrakhan, heavy woolen cloth, or thick plush, with a padded, quilted lining. If caught with a girdle or sash at the waist, Canadian fashion, and fitted close at the wrists, the escape of heat will be lessened. The coat should have a high, rolled collar that can be turned up to protect the ears and the back of the neck, For the hands while in use, the best protection has been found to be a thin cotton glove, covered by a thick woolen mitt. One who has tried this device says that it is possible to use the hands so covered, until the cold freezes the ink at the point of a fountain pen in actual use.

If the neck and ears are well protected, the head covering need not be thick. For women, a soft shawl forms a good protection for the head and ears. For men, a cap that can be used to cover the ears, and with a shade in

front to afford some protection from the glare of the sun, is advisable.

For those sleeping out in a reclining position, the sleeping hood is a luxury. This hood has a flap in front which may be either turned back, or drawn down over the eyes and nose, leaving only the nostrils and mouth exposed. It is also provided with a cape, which protects the neck and shoulders from drafts of cold air.

One who wishes to be thoroughly comfortable while sitting out of doors must pay special attention to the footwear. Two pairs of stockings will be found



A SLEEPING BAG FOR COMFORT AND CURE

TAKING THE "COLD-AIR CURE"



FRESH-AIR TUBE IN USE

warmer than a single pair, even though the under pair be only of thin cotton. Care should be taken to have the shoes roomy and comfortable. A fur sack or padded sleeping-bag should be used if possible for covering the lower limbs. Fur foot-muffs such as are used by automobilists, are excellent for sitting out of doors in cold weather. When these can not be obtained, quilted foot-muffs stuffed with cotton and layers of newspaper, or with wool, may be made.

It is very important that the wrapping up should be scientifically done. If a well-padded sleeping bag is used, one rug will be sufficient; otherwise two are necessary. If rugs are not obtainable, horse blankets will answer the purpose, or failing these, ordinary blankets, but two blankets must be used in the place of one rug. The wraps used should not be

smaller than five by six feet. An experienced s itter-out gives the following description of the best method of arr anging the wraps: —

"Spread the rug on the reclining chair. After sitting down, grasp the part of





VENTILATION THROUGH THE FRESH-AIR TUBE

the rug lying on the right of the chair and with a quick motion throw it over the knees and feet and tuck it well under the legs. Then do the same with the part of the rug on the other side, but leave the edge free. Now grasp the edge of the rug lying on the right side and pull it up, hand over hand, until the end which was lying free beyond the feet is reached. Then pull up the far ends of the rug, taking care to uncover as little as possible of the legs, and tuck both sides under the knees. This will give three or four layers of rug over the legs, but only one over the feet. It forms a bag out of the rug, however, and no air can enter. A second rug, folded and thrown over the first, makes such a covering that the coldest weather can be defied."

For those who are unable to take the cold-air cure out of doors, there are

> various devices by means of which they may obtain most of its benefits without any inconvenience. Our illustration shows a fresh-air tube, which is one of the most successful and at the same time one of the simplest

means of enabling the house-bound invalid to be practically out of doors while actually in the house. It can be adjusted to fit any window and to reach the bed in any position in the room.

Those who suffer discomfort from

chilly sensations when keeping the windows wide open during the night in the very cold weather, will find the fresh-air tube invaluable. The room may be kept warm and closed, and yet only the purest outdoor air be admitted to the lungs.

THE CAUSES OF RESTLESS SLEEP IN INFANCY AND CHILDHOOD

BY KATE LINDSAY, M. D.

I T is said that the American people are fast becoming a nation of sleepless invalids depending upon narcotics, hypnotics, and other drugs to get any kind of rest. This is a good thing for the vender of patent medicines, the druggist, and the physician; but, alas, it portends an increase of the already vast army of the insane, to say nothing of the hysterical, neurasthenics, and other classes of chronic invalids who are vainly "seeking rest and finding none."

When and where is the foundation of the almost universal abnormal wakefulness laid?

Cures and methods of treatment for all forms of adult insomnia abound everywhere — advertised on every fence, barn, and tree by the roadside, and in the papers and other periodicals of the day.

The wealthy employ the skilful masseur, or go to some sanitarium where they can have concentrated on their cases the combined hygienic influences of skilled nursing, water treatment, electricity, and the use of motor therapeutics, as well as diet, and rest from physical and mental exertion. But who takes any note of the number of sleep-disturbed little ones, from the baby a few days old up to the youth and maiden in the high school?

Watch babies under two years old while they are asleep, and see how large a

percentage are disturbed in their rest, as proved by the various abnormal facial expressions, from the smile to tetany, spasms, and other muscular twitching, lying with eves partly closed, crying out in the sleep, sudden starting and, when older, rolling about in bed, kicking off the bedclothes, grinding the teeth, and at times awaking rigid, and screaming aloud in the throes of night terrors. It would be safe to say, taking even our rural population, that more than twenty-five per cent of all farmers' children are more or less victims of sleep disorders. Many are sleep-walkers and -talkers. In fact, from the history of most infancies and childhoods it would be hard to find one person who had not been more or less the victim of broken sleep or even insomnia in early life.

During thirty years of active medical work the writer has observed the common, every-day habits of common, everyday people,— not so much in the slums and city charity hospitals as in the ordinary homes in the country. Only a few months ago the little daughter of a friend was left in the writer's care. She was a healthy, active, farmer's child, two and a half years old, who had never had any serious illness. Yet that evening, under the combined nervous strain of an exciting frolic with other children and a hearty supper near her usual bedtime, her sleep was very restless, and she turned in her dreams into so many positions that she might have competed with an acrobat. Although the room was cool, and the air out of doors bracing and coming into the room in volumes, through a large, halfopen window, no bedclothes would the restless one tolerate, no matter how light and porous. She cried out in her sleep, ground her teeth, and tossed about for more than an hour. At last, when tired out with her somnambulant gymnastic performances, she lay comparatively quiet and could be kept covered. Every now and then she cried out suddenly as if in fear, or peevishly, as if failing to get what she wanted. Next day she was more fretful and sensitive in the morning than usual. But soon the interest in her companions and playthings called the attention of the higher centers from the discomfort due to an unrested, overworked nervous system, and her day's life went as usual, her mother merely remarking, "Mary always has a restless night if she plays too hard in the evening and eats too hearty a supper," evidently never thinking that oft-repeated violation of Nature's demands for rest must result in permanent nerve and brain depreciation, and lay the foundation for hysteria. neurasthenia, and a host of other nerve disorders in after life. The child's daily life and environment were superior to those of most farmers' children. Her parents were careful to keep her properly bathed, and reasonably clothed for all kinds of weather. Her food was wholesome and given at regular meal-times. The home was well ventilated, with fairly sanitary surroundings. She was out of doors a great deal, and her restless sleep was always the result of some extra afternoon or evening play and excitement, and, when under this undue nerve strain, eating an overhearty supper, which children, as well as adults, are prone to do when the appetite is overstimulated by party pleasures and the suggestion of seeing others dine.

What was only an occasional occurrence with this little one is often habitual with other children not so well cared for.

A father complained to the writer recently that his six-year-old boy kept him awake at night by his restlessness. He pitied himself, but never thought of the child when he wished to know if his own sleep would not be more sound if he had the boy sleep in a crib alone,

The little sufferers from night terrors are objects of such acute suffering as to merit the sympathy and help of those who are responsible for their care and comfort.

A little girl of five was in the habit of waking the family several nights each week with heart-rending screams. It often took much time to restore her to the normal nerve quietude. She was always worse after an evening of frolic with her four older sisters and brother. a game very popular with them all being called "Bear." This little one especially craved the excitement, and was always teasing Harry, the big brother, to get his fur coat and be the bear. After watching her excitement and fascination bordering on abject terror, manifested by hysterical screaming whenever caught by the bear, it was no surprise to hear her frantic calls at midnight for mama to deliver her from the bear. Her stronger-nerved older brother and sisters seemed unhurt by the frolic, but poor little Annie was put to nervous tortures by the thoughtlessness of the others in indulging in this play dissipation.

In early infancy, disturbance of sleep comes wholly from physical discomfort, as gas on the stomach, causing colic

pains, spoiled food, over- and under-feeding, starvation, which may be the effect of excess of food as well as of scanty fare; foods of improper quality and unsuitable for the age of the little one; tight bands and woolen shirts, as well as wrinkles and folds, and pins which prick; soiled, wet napkins, causing chafing; and too much or too little covering, causing discomfort from overheating or chilling the surface; skin irritations, as so-called prickly heat, nettle rash, eczema; insect parasites, as lice, the itch mite, mosquitoes, bedbugs, fleas, and gnats, and last, but not least, the common house fly, which makes the life of the little one miserable and cheats it out of much needed rest, and not infrequently infects it with deadly germs.

In summer it is often difficult to keep the little one cool enough to sleep, and parents, forgetting that every human being gives off much surplus heat, and that infants suffer from this when compelled to occupy the same bed with adults, almost criminally allow these unhygienic conditions to continue. Often the baby needs only a clean, cool crib to rest in to get sound, instead of broken, sleep.

In winter sometimes a feeling of chilliness, especially cold feet, will cause restless slumber. A cold in the head, causing snuffles, is also often the cause of disturbed sleep.

When very young, a child should be turned several times in the night, or it will be awakened by the discomfort of one position maintained too long, causing overfilling of the depending veins.

Frequently sore mouth, as thrush, and the irritation of teeth, make the baby restless.

After six months, rickets is a very common cause of restlessness, and the child who habitually kicks off the bedclothes and has a sweating head should be examined for evidence of this disorder.

As the child grows older and begins to take notice of outside objects, the excitement and stimulation of the emotions begin to exert either a quieting or a disturbing influence on the baby's nervous system.

Many parents, especially fathers, regard their children as they would some trained animal. The baby is put through his paces, much as the monkey or the puppy, for the amusement of the family. It is tickled to make it laugh, has its cheeks pinched, and its ribs punched, and is kissed, without its permission or any means of defense, by its elders with tobacco-laden breath, foul breath from teeth, or, it may be from a mouth and throat full of pneumonia, diphtheria, or other disease germs.

Often at bedtime a child is kept awake for a frolic with adults, and so thoroughly aroused and excited that hours will pass before it is in a restful frame of mind and body.

Watch the lambs frisking on the hillocks and skipping over the stones while their dams look steadily on without interfering with the gambols of their offspring, and learn a wise lesson of noninterference in relation to the sports and plays of infancy.

The physical development of brain and nerve is nearly completed by the end of the seventh year; and it is during these years of rapid brain and nerve cell growth that most of the deaths due to convulsions, cerebrospinal meningitis, and other nerve disorders occur. The unstable nervous structures break down readily under the influence of any nerve strain or overexcitement of the emotions, the result of joy, fear, or anger. The brain centers are also easily excited to an abnormal activity by the morbid irritation of any organ, be it the stomach, overloaded with food, or the nose, obstructed by catarrhal excretions or abnormal growths.

The poorly fed infant not only suffers from broken sleep, but often has convulsions.

The mouth-breather cultivates insomnia, dulness of intellect, and disorders of the pulmonary organs; as, enlarged tonsils, tuberculosis, pneumonia, and chronic bronchitis.

Better than new systems of treating insomnia and neurasthenia, and the

building of more hospitals for the insane, is the removal of the common causes of infantile restlessness and insomnia, and the cultivation of normal rest and sleep habits in the young.

Yellow fever and malaria, the two great scourges of the "Sunny South," yield to the destruction of the cause - mosqui-American sleeplessness will suctoes. cumb to a like common-sense destruction of its foundations, and with it would depart much of the almost universal craving for narcotics and stimulants.

How Does It Get There?

The subscriber who sends us the following clipping for publication, has, during a four-years' illness, received the services of no less than thirty-four physicians. He therefore has a fellow-feeling for the old negro who wondered how the various medicines prescribed for him could each be made to touch the right spot: -

In Jackson, Miss., there is an old negro who all his life has complained of numerous ailments. Nothing pleases him more than to expatiate on his "misery."

One day an old employer met the aged Jake, and the following conversation ensued : -

"Well, Jake, how are the headaches to-day, and the liver, and the gout in your left foot?"

"Thankee, Mistah Jinkins; they'se doing putty well; thankee, sah. I'se takin' a powerful lot o' medicine lately."

"That so, Jake? What are you taking?"

"Oh, I'se takin' some powder for de head, some little pills for de liver, and some kinder stuff for de gout. But I ain't got much faith in medicine. All mah life, sah. I'se been frettin' myself to figure out how dem diff'rent kinds o' medicine gits in de right place arter you takes 'em into yo' system."- New York Tribune.

A Unique Hospital.

London has recently added another to its long list of free hospitals. "We are, as a people, justly proud of our hospitals," says Lady Henry Somerset. "The trouble is, we have not vet learned to be ashamed of our diseases, and vigorously to attack the cause."

This latest addition to London's great charities is a hospital for infants, unique in that the drug and the dispensary have no place therein. Milk is the medium of cure,-"" milk which at the model farm dairy in Sudbury has under aseptic conditions been divided into its constituent parts, and then brought together again in varying proportions, to simulate as far as possible the 'living liquid' supplied by Nature through the appointed source."

On sunny days the cots of the tiny patients are placed in the garden. Pure food and fresh air, Nature's two great restoratives, are the only remedies used in this thoroughly up-to-date hospital.

[&]quot;ALL might live well upon fruit and grain; None needeth his board with blood to stain -Let wolves and savages gorge the slain!

[&]quot;Away, away with such heartless cheer If happiness, health, and wealth be dear,— If you wish to see a Good New Year."

THE PENNSYLVANIA SANITARIUM

THE dedication exercises of the Pennsylvania Sanitarium took place November 1, at the new quarters of the institution, 1929 Girard Avenue, Philadelphia, Pa. These exercises, in an impressive manner, marked the beginning,



THE PENNSYLVANIA SANITARIUM

under new conditions, of a movement which began in Philadelphia four years ago. While new to many of the people of Philadelphia, these methods and principles stand as old as the hills, and are born of truths which are as sure and effective as the law of gravitation.

On the occasion above mentioned, Hon. Wilson H. Brown, sheriff-elect of Philadelphia, acted as chairman, while the dedicatory address was delivered by Dr. J. H. Kellogg, superintendent of the Battle Creek Sanitarium, which stands as parent of more than one hundred branch institutions in different parts of the world. Dr. Kellogg spoke in part as follows: — "We have come here this afternoon to initiate a new enterprise. This building, all of the appliances in it, all the people who work in it, are here to be dedicated by these exercises to the service of God and humanity.

"On such an occasion as this, it is very natural that we should look somewhat into the origin of things. Perhaps most of you have come here with the thought that you are to welcome something new; but the essential features of this work are almost as old as the world. Away back in the very earliest history of men we find that the sanitarium methods were in use.

"There are a few things here, however, that are new. This building is new (I am very glad of that, because we will have the best of its use); and the name is comparatively new. The people do not all yet understand what a sanitarium is. It takes something more than a building or a name to make a sanitarium. There must be principles; there must be methods; there must be trained men and women; there must be an organization; there must be a purpose other than a mere commercial purpose.

"Just a word about the principles that make a sanitarium. The first principle, and the greatest one, is the true principle of healing. In these institutions we undertake, in the first place, to recognize the true law of cure, which is this: Nature heals. When a sick man is restored to health, it is not the something put into him that has healed him, nor the something done to him; but it is a power within him that has healed him. There is a curative power within the body. When I say nature, I do not mean a great, blind, unintelligent, abstract force operating automatically. By nature, I mean the power in and behind nature .the great divine Force which has created

things, and which is operating throughout the whole universe. Deitl, the most learned pupil of Rokitansky, one of the greatest of European physicians, more than fifty years ago recognized this truth. It is strange that the world has been so slow to accept the proposition which he made to his pupils. He said, 'Nature heals. That is the first and greatest law of therapeutics. Nature creates and maintains; therefore she must be able to heal.'

"Now, my friends, that is the foundation principle of this institution. And recognizing this fact, we must look to nature for the forces of healing. We find, first of all, the sunshine, which is the origin of all the force we see manifested about us. The sun shines upon the fields; food is created; we eat the food ; that food shines out ; it is converted into energy in our bodies. Our muscles are simply operating the force which came from the sun. The heat of our bodies is the heat which came from the sun. This powerful energy,- sunlight, - which converts one kernel of corn into a thousand, which is performing miracles in every vineyard, turning water into wine, multiplying loaves to feed the millions,- this veritable miracle-working power we bring into operation in our institution here as a curative force, and we see marvelous results. Finsen, in Copenhagen, showed how it will cure cancer and lupus. Others have shown how it will cure various forms of skin disease, and many other forms of disease within the body as well as on the outside of the body.

"Then, we have the heat which comes with the sunshine. It can be used in a great variety of ways in connection with water and electricity. Heat, used together with light, or without it, is one of the great forces used in connection with baths; many sorts of baths are obtained through the use of heat. Then we have massage, gymnastics, dietetics, X-ray, and a great variety of things; but the chief idea is to utilize all the forces of nature. In these institutions we apply not one force or two forces, but a great number are associated together and applied to the invalid at the same time, so that there may be, not one lift, but many lifts, and thus results can be brought about which can be accomplished in no other way.

"These ideas are not new. They were known to the most primitive people. Baths have been employed from the most remote ages. Massage, heat,—these various appliances have been known from the very earliest times.

"These healing forces which are utilized by the sanitarium system, as we call



ELECTRIC-LIGHT BATH

it, are vastly more powerful than any other forces that can be brought to bear upon the sick man. The power required to restore to health a man who is a mere skeleton, is so great that it can not be put into a bottle and held in with a cork. You do not seek for it in the chemists' shops, nor in the alchemists' laboratories. It is universal; every one can have access to it.

THE PENNSYLVANIA SANITARIUM

"It is sad to see the world going down so fast; to see disease multiplying so rapidly. Last year a million and a half of people died from just twelve diseases: 51,000 of la grippe; 73,000 of typhoid fever; 76,000 of diphtheria; 416,000 per-



COLD MITTEN FRICTION

sons from pneumonia alone: 413,000 died of tuberculosis last year, in this country alone; 10-, 000 died of Bright's disease. And these maladies are multi-

plying. While we have dropped off a little in typhoid fever by getting pure water, the number dying of pneumonia is increasing every year. There must be something wrong in our habits of life; and it is a part of the work of our sanitariums to try to lead people back to the right methods of life — the simple life the natural life. 'Return to nature' is our watchword.

"One purpose of this institution is to help on this return-to-nature movement, and to stand up as a sort of protest against the downward tendency of the age. Professor Bouchard, of Paris, Roger, and other eminent physicians, French physicians particularly, have within the past ten or twelve years been calling the attention of the whole medical world to the fact that a large share of the diseases from which we suffer are poison diseases. A large share of confirmed invalids are in a state of chronic poisoning. If you have just eaten, and your dinner does not

digest, you think there is something the matter. But suppose it is not until next year that you get sick, or until five years, or ten years,- you do not trace it to what you ate. Bouchard has been investigating this matter, and he has shown the world that as the result of the burning of foods in our bodies there are produced certain poisonous substances which are the foundation of most chronic maladies -Bright's disease, apoplexy, arteriosclerosis, and that very common malady of which so many people die - old age. The man who dies short of one hundred vears dies prematurely. As an eminent French scientist remarked some time ago, ' Man does not die ; he kills himself.' This is true of the average man. And it is because of these wrong habits. We must cut off the poisons - not simply give antidotes. So one thing we make very important in our sanitariums is that the diet shall be a toxin-free diet. It is one of the essentials of the institution.

"I wish to say to you that what we are bringing to you here in Philadelphia, we are not bringing for the first time. This is a water-cure in a certain sense; but water has been used in Philadelphia a great many years. If you go back a hundred years, you will find your most eminent physician, Benjamin Rush, introducing into Philadelphia some of the very methods employed here in this institution. He was one of the first to use the clay poultice now sold in the drug-stores under a variety of names. Other eminent physicians in this city have been employing various sanitarium methods for many years. Massage has been employed in the Battle Creek Sanitarium for forty years. Dr. Weir Mitchell has made it popular within the past twenty-five years, and now it is used all over the world; the entire medical profession is employing it. Dr. S.

THE PENNSYLVANIA SANITARIUM

Solis Cohen, one of your eminent Philadelphia physicians, has for more than a quarter of a century been a pioneer, working very earnestly in behalf of these physiologic principles. He has edited one of the most voluminous works ever published on the physiologic method, which is employed here in this institution; and a few years ago, when I came to Philadelphia to see what the prospects were for opening an institution here, Dr. Cohen was the first person who met me in a friendly way; and it was his invitation which encouraged us to make a small beginning at that time. The work has prospered until now it has come to a larger presentation than we have been able to make before.

"I should like to say just a word further with reference to the personnel of this institution and its character. We have not invited you here to welcome a commercial enterprise. This work stands simply for truth, for Christian principles; it is philanthropic and altruistic in purpose. There has been no endowment; there have been no large contributions. It is a self-supporting institution — a self-supporting philanthropy.

"The physicians of this institution and the leading nurses have had years of thorough training and experience at Battle Creek, where this method as a system has found its most complete, as well as its earliest, development. For some time the services of these physicians and a score of nurses have been at the command of persons in moderate circumstances, and the poor of your city who were in need of medical aid. Now, in this beautiful building, and with these elegant appliances and equipment, these same splendid curative measures are placed at the disposal of those who desire and are able to pay for more elegant and elaborate accommodations. The Pennsylvania Sanitarium is launched on its mission of health and healing for the thousands of invalids in Philadelphia and its vicinity, and with the blessing of a kind Providence will do a work increasing each year in efficiency and magnitude. I bespeak for this new enterprise your good-will, your co-operation, your patronage, and your prayers."

The philanthropic character of this work is recognized by the State of Pennsylvania by exempting the institution's properties from taxation.



THE WET SHEET RUB

The Pennsylvania Sanitarium endeavors to incorporate under one roof all of the known methods embodied under the term "physiological therapeutics." This includes the treatment of the sick by such natural remedies as diet, baths, massage, electricity, electric-light baths, gymnastics, and the out-of-door life. The method comprises more than a thousand different measures and combinations, which are carefully graduated to individual cases only after a careful examination of every bodily organ, blood, excretions, etc., and are administered by trained attendants who are especially educated for the work.

The present quarters of this institution are now located in the handsome property built by the late John Sharp, located at 1929 Girard Avenue, within a stone's throw of Girard College. Alterations have just been completed to the amount of fifteen thousand dollars, in fitting up extensive treatment-rooms and in furnishing the institution with the latest equipment for the treatment and care of the sick. On the top floor is fitted up a surgical ward and operating-rooms, where cases requiring surgical attention can be cared for in harmony with the most approved ideas of asepsis and surgical cleanliness.

The marvelous growth of this system in a single generation without the aid of

advertising or general commercial methods, is a most convincing proof of its superiority over other so-called systems. The progress made in the past fifty years has been greater than that of any art or science. It has been revolutionary, in fact. It is possible to promise recovery to thousands whose cases have been regarded as incurable. Patients who have tried everything known to science, without benefit, are now cured by the concentration, at one and the same time, of measures which individually have failed. Concentration is a principle as important in therapeutic effort as in military operations. The secret of success in curing thousands who have been pronounced incurable lies also in the thorough investigation of the blood, secretions, the strength, and all important organs; and in the use of curative means by which the whole body is renovated.

TO THE NEW YEAR

FIRM as the mountains, robed with snow, Strong as the oaks that upon them grow, Deep as the valleys far below,

Be the faith thou bringest, New Year,

Free, like the winds, from earthly care, Fresh and clear as the wintry air, High as the cloudlets, and as fair,

Be the hope thou bringest, New Year.

Warm as the fires that sparkle bright, True as the stars that crown the night, Pure as the snow, new-fallen, white, Be the love thou bringest, New Year. — Mary M. Currier.



FRESH AIR FOR CHILDREN

E VERY human being ought to spend several hours every day, cold or warm, in the open air, coupled with much bodily activity. Four hours of outdoor breathing daily is the least time compatible with health for adults, although ten are better. Children require a greater amount both of outdoor air and exercise, because they have, or ought to have, a higher temperature and a greater vigor in the circulation, because circulation has more to do in them than in adults,—it has to build up as well as sustain the system.

This shutting children up in the house, even in cold weather, being so afraid of a little fresh air, is consummate folly, is downright murder, for there is no numbering the deaths this extra carefulness has occasioned. Cool or cold air is not poisonous; it is healthful; more so than warm air; for in bulk it contains more oxygen, that great quickener of the blood and stimulator of muscular, nervous, and vital action. If heated atmosphere had been best for man, Nature would have provided it. It causes relaxation, which is accompanied with indolence, both mentally and physically, whether it be the heated atmosphere of a room or the atmosphere of the tropics.

The inhabitants of the northern countries are active, but become possessed with the same indolence in the tropics in a short period in such climate as found in the regular inhabitants. Hence, there can be no dispute as to the absolute necessity of cold air to stir up the system.

Now, henceforth, and evermore let it be remembered, unless parents wish to make inert blockheads of their children, do not keep them shut up in a hot stove room. However cold it is, let them go out, for all children like to go out, and their lungs will soon warm them up and keep them warm. And if your dear, darling, puny child is indeed so weak that fresh air gives it a cold, you ought to be sent to prison for rendering it thus tender.

Schools and nurseries are great disease breeders to both mind and body. Children require action, not confinement. They should learn on foot, not "sit on a bench and say 'A'." Especially should they have an abundance of fresh air. Yet to confine children or other individuals in a space where its size makes it possible to contain air only in a quantity that will be all breathed up in a few minutes and to burn out the vitality of even this by a roaring fire, then to keep them thus, stuffed with food, but panting for breath and action, one-quarter of their lives, and most of the balance not much better, signs and seals and delivers the death-warrant of many a fond and lovely embryo of humanity.

The children do not get half enough air. This occasions their being puny, sickly, and mortal. No wonder that half of them die in childhood. The wonder is that more do not. Nor are cities the places to bring up children. They can not go out of doors for fear of getting lost or run over, nor play within because they make some dust or dirt or scatter all their articles of amusement. They can not obtain fresh air in a coal-heated room.

The Creator made the beautiful country; men made the city.

But, parents, whether you inhabit the city or the country, see to it, I beseech you, that your children have a full supply of fresh air daily and perpetually. The ventilation of sleeping apartments is still more important, because we consume quite as great a proportion of air, yet are more liable to neglect its resupply.

Most of us spend one-third of our lives

in little rooms, capable of holding only from five to eight hundred feet of air. Not an hour's breathing timber. Then every crevice, even to the keyhole, must be stuffed to prevent the ingress of fresh air.— W. W. Chalfant.

FLESH-EATING SHEEP

BY D. H. KRESS, M. D.

TT seems that even the sheep of Aus-I tralia are becoming civilized, or are, at least, falling in with the habits of civilization. The Albury district stock inspector, after several days' tour through the country for the purpose of making investigations into the eating of poisoned rabbits by sheep and other stock, has arrived at the conclusion that the habit is much more general than he at first imagined. In nearly every part of the district, farmers and pastoralists have had experience of the eating of "green" carcasses, not only by sheep, but in some cases by horses and cattle. Some of the graziers have mentioned that sheep will fight with each other to get possession of rabbits, so greedy is their appetite for this

kind of food. Mr. Wilks, the inspector, believes that this is depravity of appetite.

It is recognized that only a depraved appetite in sheep could demand rabbit for food. Why not use the same reasoning regarding mankind? Suppose we should at some time in the future come across a flock of carnivorous sheep, would we therefore conclude that this was their natural food?—Certainly not. We should still say that it was a perversion of nature. Why not reason in the same manner regarding mankind? Man was at the beginning a fruitarian, subsisting on fruits, nuts, and grains. Flesh eating is just as much an evidence of depravity in man as it is in sheep.

Nature's Massage.

Massage is a natural and inseparable factor in the maintenance of the health of the physical structures. "In the active living machinery of animal bodies," says a medical writer, "the muscular activity is constantly manifested in a sort of massage, a never-ending exchange of intermittent pressure, compression, and relaxation.

"Take the diaphragm; its incessant ascent and descent in the act of respiration is nothing more or less than a continual massage, a ceaseless exhibition of passive

motion, influencing the organs, both above and below it, especially the organs of the abdominal and pelvic cavities. But here, too, the effects of this involuntary massage of nature, absolutely necessary to life, may be interrupted, and morbid conditions forced. Through tight lacing, or other abuses, these passive motions may lose their normal vigor, and in the utter absence of exercise without any within, constipation massage may promptly intervene, the appetite grows feeble, and the digestion is seriously impaired."

"ALWAYS AILING"

BY HELENA H. THOMAS

S ICK! Why, he is never well, for that matter. Indeed, my children are always ailing."

Here the mother, who was making her first call on her new neighbor, accompanied by her youngest, ended with a sigh, as she looked at the child, who fretted continually.

"That is strange!" rejoined the hostess, whose query in regard to the puny toddler had called forth the foregoing, "considering that their father is the picture of health."

"Yes, but unfortunately for all concerned, our children have inherited my weak constitution."

"What seems to be the matter?"

"Oh, a complication of stomach and bowel troubles. If it isn't one thing, it's another. I tell you, too, it makes the outlook anything but encouraging. To be sure, my husband is a master mechanic, and gets good wages, but the doctor and grocer get the lion's share of our income."

Besides this hint as to the state of affairs in that home, the new neighbor knew little further for a time (as few calls were exchanged during the winter), beyond continued proof of the truth of the mother's statement that her children were "always ailing," from the doctor's frequent visits.

With the opening of spring, however, the why of it was made clear to the woman who through the wintry months had wondered as to the cause of it. For the dividing line between herself and neighbor was within reaching distance of her living-room, hence it was impossible

for her to remain in ignorance of the management of the near-by home; that is, if the foregoing word can be applied to a home where indulgence only was in evidence, where children got whatever they cried for, and, consequently, cried when a wish was weakly denied.

The observant woman had wondered, too, through the months just passed, how her neighbor, with but herself, husband, and three small children, could dispose of the provision she saw carried into the other house, especially when, according to the mother's testimony, there was but one healthy stomach under the roof.

This, too, was made clear when the children were constantly in evidence, for they were rarely seen without a "piece" of some sort.

The baby was, as has been stated before, a delicate little fellow, whose diet should have been the most nutritious food, in small quantities, at least until Nature had had a chance. But, on the contrary, he munched early and late. Sometimes he appeared with a piece of pie, and a little later with something equally indigestible.

One day, as the three children emerged from the house, each with a huge slice of bread and butter, piled so high with sugar that more fell to the ground than was eaten, the mother remarked to her neighbor, who was sitting at an open window: —

"It seems as if my children are hollow from morning till night! Now. Johnnie, there,"—the youngest,—"for instance, had the heartiest kind of a breakfast! Ate two fried eggs, some

ham and potato, and two fat doughnuts, besides drinking two cups of coffee. And now just see him eat! But then, poor little fellow! he likely feels all hollow, he had such a vomiting spell in the night."

In view of this admission, it was little wonder, when the blind mother ceased speaking, that the listening neighbor, who attributed her comparative health to careful diet, and had breakfasted on fruit, dry toast, and cereal coffee, should so far forget herself as to exclaim: —

"Why, do you allow that child to drink coffee?"

"Yes, indeed! every one of my children drink coffee," was the emphatic rejoinder. "Strong, just as I drink it, too, and it doesn't hurt them a mite. My husband and I don't agree at all about how our children shall be fed, however; all because his mother was one of the strait-laced kind, and brought her children up on a regular skim-milk diet."

"Your husband seemed to thrive on it, judging from his robust appearance now," interrupted her listener, suggestively.

"That's what he often tells me!" was the somewhat impatient rejoinder, "but, all the same, while I live, my children shall not be denied what they want to eat."

"And throw away, too," was the laughing retort, as the speaker pointed to Johnnie, who was flinging the greater portion of his slice into the gutter, as she had often seen him do before.

The mother, who was too accustomed to such waste to pay any heed to it, merely joined in the laugh, and then continued : —

"Now I was brought up differently. My mother died before I can remember, and I was brought up by my grandmother, dear soul! who was indulgence itself. No skim-milk diet for me, I can assure you. So I tell my husband that I think it is a pity if I can not be as good to my own children as my grandmother was to me. And, in spite of husband's advice to the contrary, and the teaching of health-culture books, with which he deluges the house, I shall feed my children just as my grandmother did me without stint."

Her listener, however, bit her lips and kept silent, knowing full well that further suggestions from her would be unheeded.

"But sometimes I fear I will not be here long to do for them," continued the sighing mother, after a slight pause, "for I am getting so I can not keep anything on my stomach. I feel so weak, too, I could hardly crawl round were it not that I brace up on coffee. Jack says that only makes matters worse, but I can not live without my coffee! Besides, he can not convert me to his way of thinking."

Just here the grocer made his daily call, and after the recipient had taken care of the groceries, she recrossed to the open window, saying: —

"Just guess what our grocery bill was last month."

When a reasonable figure, considering the size of the family, had been named, the retort was: —

"Double it, and you will be nearer right."

"Excuse me, but if that is the case, I wonder how you can make both ends meet! especially when there is a doctor in almost constant attendance," was the impulsive exclamation of the careful housewife.

"Well, we do find it extremely difficult," was the frank rejoinder, "and poor Jack gets most discouraged sometimes, too. He is anxious to save toward a home, but I don't see how it is possible for us to get ahead any when it costs us so much to live, and some of us are sick all the time."

This she said with a martyr-like air, as she started for home to make "hot bis-

Physiological Solvency.

At this New Year season, when, if ever, one is inclined to be introspective, to take stock of his attainments and achievements, to inquire into probable causes of his failure to reach his ideals, the following passage from Dr. Haig will at least be found suggestive, and may serve as an indicator: —

" If the muscles produce force more smoothly, continuously, and pleasantly, with less friction, on a supply of albumens which are free from the poisonous products of dead animal tissues, and if muscular life becomes more pleasant from this cause, how much greater is the value of this physiological solvency, when we realize that it applies also to the great nerve-centers, the organ of the mind, and find that here also the result is better work, better and more easily performed; and not only better work, but a better, more kindly, true and noble relation to all the conditions and phenomena of life.

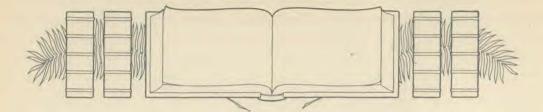
"Indeed, I think it is not too much to say that, just as in regard to force and nutrition, insolvency leads to ever less and less work, worse and still worse performed, as the reserves are one after the other called out and used up; so in regard to mind, does insolvency lead to ever less and less mental range and activity, and worse than all, to a narrow, mean, selfish view of the world and all it contains; and this mental attitude is, in many cases, the prelude to that complete loss of mental power and balance,— insanity.

cuits" for supper, "because the children are so fond of them." The left-alone neighbor shook her head, saying, "'None so blind as those who won't see."

"On the other hand, perfect, complete, and continuous solvency of mind and body, lifts both to ever higher and higher levels of power, beauty, and knowledge of the truth; forming at once the highest attainable development of the *mens sana in corpore sano*, and leading ever upward 'into the higher sunlit slopes of that mountain which has no summit, or whose summit is in heaven only.""

To Avoid Taking Cold.

The best way to overcome chilly sensations of the spine and back on the least change of temperature is to put your back up, so to speak; to contract the muscles of the back. If you are getting chilly about the back of the neck, stiffen the neck and set the muscles to work. When you are sitting still and find yourself getting chilly, set the muscles to work, and you will soon get over it. If you do not start your muscles going; you will soon find them going of their own accord. You will begin to shiver,-an involuntary action of the muscles. If you will set your muscles at work before that shivering comes, you will be able to prevent it. Contract your hands, your legs, the muscles of your back, raise up your chest, stiffen your neck, then turn it vigorously, slowly, from side to side, or bend it backward and forward. This will keep you from taking cold. One never need take cold when sitting still. You can make your muscles work just as hard when sitting down as when walking around, and it may be more convenient.



ANOTHER YEAR

BY E. E. ADAMS

- ANOTHER year a sheet of paper white Whereon his own record each one must write
- Though what the year will bring we can not tell,
 - If good or ill it shall be we may know full well.
- For man is his own star; and though not ours
- To say if thorny or if strewn with flowers Our way shall be, yet is it ours to say
 - If gain or loss, defeat or victory, shall crown each day.
- Not in uncertainty, but well assured
- That all that comes to us may be endured. That in each conflict we shall victors be,----
- It may be ours to live and fight thus certainly.
- This blessed equilibrium can be

Maintained alone by him who strenuously Keeps in subjection to the highest law

His earthly temple, heavenly influences to draw.

He who by appetites and passions rife Defiles his body, clogs the stream of life, Will find his soul defiled, and sadly learn

The Spirit's moving he can now no more discern. And physical stagnation by neglect

- Of exercise and health will take effect
- Upon the spirit; through this heedless folly One soon will find himself a prey to melancholy.
- Calmness and patience in the hour of stress Come not to poisoned nerves; but hitterness,
- Irritability, and sore dismay
- The helpless soul leave unto circumstance a prey.
- But he in whom the stream of life flows free, Renewed in mind and heart each day may be;
- The new-strung nerves, fed from life's sources pure,
 - Are balanced, strong and steady, trials to endure.

In tribulation, to the quickened ear

- The heavenly Comforter can whisper near;
- And the keen eye, in darkest night discern

The Hand that shall his sorrow into gladness turn.

- With Nature's laws we'll live in harmony; So shall our pleasures sweeter, purer be,
- And sorrow, trial, and anguish shall at length
 - Be changed for us into an everlasting strength.

IN PEACE PREPARE FOR WAR

BY DAVID PAULSON, M. D.

THOSE who are subject to rheumatism, predisposed to catarrhal and bronchial troubles, and who readily contract colds, instinctively dread the winter season. The best way for this class to get ready for winter is to begin beforehand to take daily instalments of it in the form of cool baths. A poor circulation and a relaxed and debilitated condition of the skin that is unable to react properly when exposed to cold weather is responsible for the majority of these disorders. A daily application of cold water to the entire body, lowering the temperature of the water as the body grows accustomed to it, will gradually get the skin into such a condition that the individual may be almost entirely freed from these serious conditions.

The best time for cool bathing is im-

How Virchow Answered a Challenge.

A story is told of two of the most noted of Germans,-Bismarck, the statesman, and Virchow, the scientist. The latter had severely criticized the former in his capacity as chancellor, and was challenged to fight a duel. The man of science was found by Bismarck's seconds in his laboratory, hard at work at experiments which had for their object the discovery of a means of destroying trichinæ, then making great ravages in Germany. "Ah!" said the doctor, "a challenge from Prince Bismarck, eh? Well, well! As I am the challenged party I suppose I have the choice of weapons. Here they are!" He held up two large sausages, which appeared to mediately upon rising in the morning, while the skin is warm, as the reaction will then be more perfect. To begin with, it will be advisable to moisten only one part of the body, as one arm, and then dry it thoroughly before wetting another part of the skin. By this method the whole body is not compelled to react at once. After a little training the entire surface may be sponged with comparatively cold water, and yet a complete reaction will be secured if the cold sponge is followed by thorough friction.

After this has been practised two or three weeks the average individual can safely wring a sheet out of cold water and wrap it around the entire body for a few seconds, and still secure a good reaction by vigorously rubbing the skin until it is in a good glow.

be exactly alike. "One of these sausages," he said, "is filled with trichinæ; it is deadly. The other is perfectly wholesome. Externally they can't be told apart. Let his excellency do me the honor to choose whichever of these he wishes and eat it, and I will eat the other!" No duel was fought, and no one accused Virchow of cowardice.

No one will question the good sense of Prince Bismarck in refusing to accept Virchow's challenge.

Every sausage is a challenge to the man who eats it. It may have trichinæ in it, perhaps tapeworm, certainly plenty of germs; and the manufacturer alone knows how many sorts of beasts enter into its composition. The average sausage is more or less of a menagerie.



THE natural man does not need to be taught how to walk. In opening this new department, we have in mind the ordinary civilized individual to whom walking is one of the lost arts. "Few men," as Dr. Johnson remarked, "know how to take a walk,"— so few, indeed, that Emerson recommended the publication of an "Art of Walking, with Easy Lessons for Beginners," who were to be called Apprentices. It is our aim to be of service to these apprentices to the noble art of walking.

"'Tis the best of humanity," said Emerson, "that goes out to walk." Whether their excellence was the cause or the effect of their walking, he did not state. Certain it is, however, that walking has a marvelous effect on both the physical and the mental faculties. Not only is it the most excellent of physical gymnastics, which by its rhythmical motion favorably affects every muscle and organ in the body, but it is also of great value as mental gymnastics. "Walking," said Rousseau, "has something which animates and vivifies my ideas." And Sidney Smith declared, "You shall never break down in a speech on the day on which you have walked twelve miles."

In order to get the greatest benefit from walking, it must, of course, be done in the right way. Study the illustrations on page 34, and experiment in getting your weight so poised that it carries itself, and that you do not have to drag it along, or consciously lift the weight of the body at every step. Unsuitable clothing when walking will also bring weariness, and result in injury. The subject of a suitable walking costume will be treated at length in a future number.

Mere tramping for tramping's sake will not be of very great benefit to either body or mind. One should go out to see, to enjoy, to add to the interests of his life. Nothing is so well-calculated to supply this interest, with all its resulting benefits, as the study of Nature in all her moods and seasons. In beginning this study, few know how to observe, or what to look for. Many older people will doubtless sympathize with the little girl of whom Lord Avebury tells, who remarked disconsolately that the animals never had any habits when she was watching them.

A little training in the greatest of all sciences, the science of observation, will work a marvelous change in one's attitude toward Nature, and give a zest and pleasure to life in the open which will tempt one out of doors on all possible occasions. The most obvious of natural objects at all seasons in most localities are the trees and the birds. The two series of articles on these subjects, by experienced students, will initiate the beginner, and enable him to take up the study of Nature on his own account.

A PLAN FOR PLEASANT AND PROFITABLE ACQUAINT-ANCE WITH TREES

BY JULIA ELLEN ROGERS

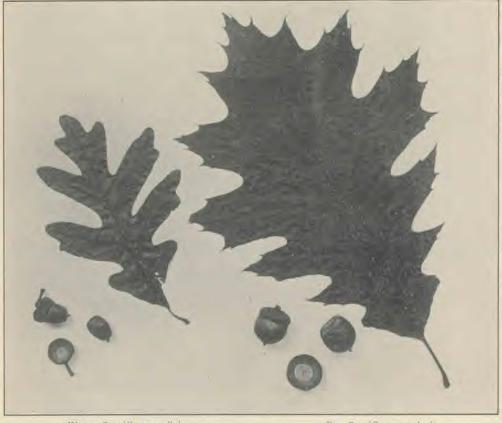
WINTER days are cold and graywhen they are not full of sunshine and a crisp, vitalizing quality rarely felt in summertime. It is as if the frost had precipitated all the noisomeness that belongs to the season of rapid growth and its accompanying decay, and the air of winter thus becomes a distillation of pure ozone. Who that has seen rosy-cheeked children coasting on a snowy hill can doubt or deny it? There is a joy that comes of outdoor, life in the winter season which the pleasures of other seasons can not compensate us for, if by any circumstances this particular pleasure is denied us. Nature in the restless activities of the growing season has no more wonderful revelations to make to sharp eyes and alert minds than she will freely reveal after she lapses into her winter sleep.

The proposition to form a walking club for the study of trees is not an erratic, impractical suggestion which is liable to " winter-kill " in the first flurry of snow. It is a part of a widespread movement that has been gaining impetus for many years. It is a phase of the turning toward sensible, wholesome modes of living,rational feeding and clothing the body, proper exercise, abstinence from drugs and stimulants and all their mischiefmaking train. In fact, it is one of the means of making and keeping the body a fit temple for the indwelling of the soul. To the mind and spirit of man Nature is the fountain of eternal youth. It was the intention of the Creator that the spirit should never grow old.

Few there be in this generation that cringe and crawl into a hibernating state when winter comes on. Only the sick must deny themselves the joy of putting on weather-proof clothing and going out into the bracing air. Only the hypochondriac, who is a root out of the ground in this sensible age, cowers over a radiator, daring to breathe no air fresher than that which has been through a furnace, until the far-off spring comes. What a pitiable starvation of soul as well as body comes to these timorous ones! What wonder they are aware of their stomachs and nerves and sleep but poorly o' nights!

Now our Walking Club is to be organized upon a very informal plan. It does not need a constitution and by-laws, nor club dues and fines. It is to be composed of people who like the taste of fresh air, and who believe that there is room in the busiest life for an hour a week spent with congenial folks who have eyes and ears and are eager to use them in pursuit of interesting facts. A systematic study club this may not promise to be. Its object is recreation, by means of the study of trees,- not books about trees. I shall be most happy if busy housewives and their husbands who, in the towns, are also tied to indoor employments for many hours a day, should join with the teachers, who give long hours to their duties, to make up the Club's membership. Busy professional men and women need the exhilaration such a weekly outing promises. The ministers will preach better sermons, and the teachers will gather inspiration that will change the whole atmosphere of the schools. The mothers of the children will find their household duties easier for the fresh, new interest they have acquired. And the children,

AN ACQUAINTANCE WITH TREES



WHITE OAK (Quercus alba) Type of the White Oak Group

for whom we all are working, will be quick to enter into our enthusiasm.

As non-resident, *ex officio* member of these clubs, it will be my part to relieve you of the necessity of procuring books for study, by suggesting subject-matter and plans of procedure. I have no objection to tree books for reference. But let the *trees* precede the *books* in all our doings.

I am going to assume that you do not know one tree from another. Then I am going to introduce you to the noble Oak Family, and promise that you will never need a second introduction. There is scarcely a region of moderate rainfall in the United States that has not some kinds of oaks. To a little stretch of woodland

RED OAK (Quercus rubra) Type of the Black Oak Group

near the town the Club will naturally walk in quest of these trees. How shall we know them? - By their fruits. All oak trees bear acorns when they are old enough. An oak a foot in trunk diameter usually bears a good crop. And acorns are easily discovered on and under the trees. A noticeable feature of oaks is their tendency to hold their leaves well into the winter. This sets them apart from their neighbor trees as winter advances. These leaves are single, oval palms with their margins more or less deeply cut into alternating bays and capes, to speak in terms of geography. These leaves are about as large as my hand. They are all leathery in texture, and turn from autumnal reds to purple

in many species, but a rich russet is the commonest color. It will be noted that these trees have their best leaves clustered in a whorl at the tip of each twig. Five is the usual number. The pith of oak twigs shows when cut across as a five-pointed star. The buds are lusty little growing points, matching in their vigor the sturdy trees they have overspread with the promise of next spring's crown of new leafy twigs.

There are two well-defined groups in the oak family. One includes the kinds that bear a crop of acorns in a single season. No acorns are on these trees in winter. Look for them under the trees. Look at the leaves. The annual-fruited oaks have only curved lines in their leaf margins. There are no bristly points finishing the lobes. The buds of these oaks are rounded little knobs, and the bark is usually pale in color. All oaks having these traits of character belong together in "The White Oak Group."

Now, in our search for oak trees of this group, we find others whose leaves have their lobes tipped with bristly points. They are handsomer in shape, you will doubtless think, than those of the white oaks. There are acoms under the trees, and many on them, for these trees are in less haste to be rid of their fruit after it ripens.

Some sharp-eyed member is sure to pull down a branch and call attention

to the fact that the buds are pointed. On top of this discovery comes the more exciting one that little acorns, solitary or paired, are to be found at the joints of the leafy twigs. They are not stunted dwarfs, that's plain, but plump little fruits of the oak. They are well-grown, but only half-grown, for these trees are biennial-fruited. Each autumn a crop of acorns is shed that has been two years on the trees. Dark-colored bark prevails among these biennial oaks. The black oak is typical of the group; hence we call it "The Black Oak Group."

It is well for the subject to be turned over to the Club at this point. Before I withdraw I will mention some familiar oaks in the two groups. The bur oak, swamp white oak, post oak, chestnut oak, and our noble white oak belong to the white oak group. In the black oak group are the red oak, scarlet oak, pin oak, Spanish oak, and black oak.

There are fifty species of oaks native to North America. No one region has any great number of kinds. The commercial standing of oak timber is well known. No nobler shade and ornamental trees exist. Therefore, it is quite enough for one month for the Walking Club to learn to recognize an oak on sight, and to know how they know it; and in addition to recognize, by a simple and easy test, to which of the two great family groups any individual oak tree belongs.

OUR BIRD NEIGHBORS

BY BELLE M. PERRY

H AVING eyes, they see not," might be said of most people regarding the world of nature about them. They do not know what a field of interest awaits them at their very doors. Once they begin to observe, however, they are sure to feel a sense of loss over what they have missed, and they wonder if all these marvels have really been going on before them year after year.

Ruskin says that "the greatest thing a human soul ever does in this world



By permission of A. W. Mumford & Co. WHITE BEEASTED NUTHATCH

is to see something. . . . Hundreds of people can talk for one who can think, but thousands can think for one who can see,"

The nature lover reads a meaning into these words which is impossible to the uninitiated. He has found the key to a pleasure in life which wealth and travel do not furnish. And no branch of nature study offers better opportunities for interest the whole year round than our common birds. Of course the high tide of the year for bird study is the spring. But the time to grow an interest that will make these wonderful days in May, June, and July something to look forward to as they never were before, is now.

Indeed, there is no time like the winter months to become acquainted with these birds that stay with us the year through, our "citizen birds," as the nuthatches, chickadees, and blue jays, and also those winter visitors which nest farther north,— as the brown creeper, snowbird, snowflake, kinglet, and winter wren.

And the way to a familiar acquaintance is so easy that even if one is confined indoors a large part of the daylight hours, with office cares, household duties, or ill health, he may still have some most fascinating opportunities for observation, providing he has a window that affords easy view of a near-by tree or good-sized shrub.

Would you entice the nuthatches and blue javs? Tie an ear of corn to a branch of your tree or shrub. Try to select a place that will make it easy for the birds to get the kernels. I have seen them perform some quite remarkable feats in getting corn. One will learn the best way by watching the birds. The ear should be tied on so it will not slip or yield on the branch. A good way to prevent this is to shell off two or three rows of kernels so the bare cob will fit closely, lengthwise the branch. Then tie it strongly with common twine, near each end of the ear, bringing the string down between the kernels till it strikes the cob. This will surely bring the birds, unless there is an open corn-crib not far away. I have counted a half dozen blue jays again and again in a snowball bush near my kitchen window. The dear little nuthatches, which I never knew until I began to lure them with food, have never come in such numbers, but they come, and the way they will hold a kernel in their claws, on a limb, and eat it bit by bit as they crack it with their long, strong bills, explains the origin of their name, from a similar way they have of breaking nuts. Their heads will come down like little hammers, and it is very interesting to watch them. And the blue jays, though they often gobble down a half dozen kernels without stopping,

are sure to finish their meal by breaking a few kernels into bits, after the way of the nuthatches. A friend who once had the pleasure of bringing up a blue jay baby that had been hurt, tells me that sometimes her pet would miss the kernels, and his sharp bill would come down on his own claws. And then there was some fiery blue jay language.

As soon as the spring days come, my birds show their independence by forsaking my feeding places and hunting their own food. A strange thing happened, however, last July. For months I had scarcely seen a blue jay, when one morning I discovered a number in my snowball, where there was still a part of an ear of corn. For several days they came occasionally and then disappeared. I think it was some sort of lesson for the young ones, for, though there was no apparent outward difference between the old and young, I easily recognized the babies from their coaxing, helpless ways.

I always keep several ears of corn out, these days, in different trees, but always in view from indoors, and the increasing number of empty cobs tells its own story, so far as the birds are concerned, and surely they do not enjoy their meals any more than the family enjoy watching them. One busy member of the household expressed the wish last winter that he might be sick for a couple of weeks, in order to watch the birds.

Only the nuthatches and blue jays eat the corn, but all the winter birds appreciate the suet and meat bones with which I keep the bird trees supplied the winter through. I tie a piece of suet round and round with twine to a thin board or shingle, and tack it at two points to a good place on a limb. Though we are not meat eaters, we do not hesitate to buy suet and bones for the birds. And of course we feed them cracked nuts, too. These are placed regularly just outside the window. The woodpeckers are among our most enjoyable visitors, and we have several varieties. Some are as small as a mouse and others as large as a robin. They are very fond of the suet. The way they brace themselves with their stiff, pointed tail feathers, against a tree trunk or branch, to keep themselves in place, and the characteristic of the nuthatch of going head foremost down a tree trunk, and walking on the under side of a limb with as much ease as on top, have been a revelation to many of my friends. I have counted as many as fifty birds at one time on the snowball. The majority, I am sorry to say, were the justly dreaded English sparrow, of which I will say more later.

Those of us who are fortunate enough to have a few nice evergreens on our grounds, are likely to be most favored



By permission of A. W. Mumford & Co. BLUE JAY

OUR BIRD NEIGHBORS



By permission of A. W. Mumford & Co. WINTER WREN

with certain very desirable birds, both in summer and winter. These trees, besides supplying food, afford the muchneeded protection against winter cold and summer storm that is sure to be appreciated and utilized. Every home yard should, on this account, have a few evergreens. Lacking them, the next best thing is to secure enough large evergreen branches from some place where they can be spared, to fasten large clumps of them in other trees. In the meantime there should be no delay in setting out trees when spring comes. I know that many people have a prejudice against evergreens, but they can be set in some unobtrusive place in the background, where a cluster of them will be very pretty.

The hardest time for the birds is when,

after a thaw and a rain, every tree trunk and limb is covered with a coating of ice. It is impossible, almost, for them to get to their insect eggs and weed seeds under the ice. It is on such days that the birds need to be remembered. I have seen them slide about in a most pitiable way on their icy footing when trying to get hold of the corn and suet. And I have gone out more than once and thawed off the ice from their feeding places. If people generally appreciated the services of the birds, as insect and weed seed destroyers and seed sowers, they would know it was time most profitably spent, apart from the pleasure and the humanity of it, to make systematic and intelligent plans, not only individually, but in municipal ways, for the needs of the birds.

Apart from the destruction of the birds by cold and storm, the common house cat and the English sparrow are perhaps chiefly responsible for the growing scarcity of song birds. Professor Forbush estimates that each cat kills on an average fifty song birds a year, and his estimate is supported by ornithologists everywhere. He has known one cat to destroy six bird's-nests in a day. Every bird student and real friend of the birds, no matter how fond he may have been of cats, is bound to come at last to agree with Professor Hodge, author of that admirable book, "Nature Study and Life," who advocates the use in our country of the municipal cat-trap so common in many foreign cities where a systematic protection of birds has been inaugurated. This method is often as much a mercy to the cats as a protection to the birds, for, as Mr. Hodge says, "they breed in great numbers in cities, where their lives are, for the most part, a prolonged misery to themselves and the community."

GAUTIER ON THE VEGETARIAN DIET

G AUTIER, the eminent French authority on dietetics, author of the most recent and authoritative work on foods, entitled, "*l'Alimentation et les Régimes*," while not advocating the nonflesh dietary, does not hesitate to admit that a diet of flesh is quite unnecessary. We quote from the work referred to (page 484) as follows:—

"It would be wrong to maintain that a non-flesh diet will compromise physical energy, although heredity and habit play here an important part.

"According to J. Sinclair, the Hindu messengers who carry despatches for long distances, eat only rice, while covering each day in running from one village to another a distance of at least twenty leagues (sixty miles), and do this not for a single day only, but every day consecutively, week after week.

"The Russian peasants, who live upon vegetables, black bread, milk, and leeks, work from sixteen to eighteen hours a day, and their strength often exceeds that of American sailors.

"The Norwegian peasants scarcely know the taste of animal food. They cover on a continuous run, however, in accompanying the carriages of tourists, a distance of three or four leagues without stopping.

"The modern Egyptian laborers and sailors, a class who, from time immemorial, have lived almost exclusively upon melons, onions, beans, lentils, dates, and corn, are remarkable for their muscular strength.

"The miners of South America, very temperate laborers who never eat meat, carry on their shoulders burdens of two hundred pounds, with which they climb, twelve times a day on the average, vertical ladders sixty to eighty meters (196 to 262 feet).

"The lumbermen of the Haute-Baviere, who live almost exclusively upon meal cooked with a little fat, without either eggs or cheese, do an enormous amount of work. On Sunday only they take a little meat.

"The Turkish soldier is surprisingly frugal. He drinks only water or lemonade, and lives upon a diet of rice and figs, scarcely ever touching flesh. It is well known that the vigor of the Turk is remarkable and his courage indisputable. The porters of Salonica and Constantinople, who live upon the same diet, are proverbially strong; hence the saying, 'Strong as a Turk.'

"I might add that I have known persons, men and women, very intelligent, who became vegetarians on principle or for hygienic reasons after having previously eaten flesh, as is the general case. They have assured me that they found themselves admirably sustained in strength and health.

"Vegetarianism is, then, an acceptable practise, sufficient and useful in certain cases. . . . Its advantages are those which result from frugality.

"Under the vegetarian diet, the tendency to uric-acid diathesis, gout, rheumatism, neurasthenia, etc., disappears or diminishes. The disposition softens, the mind seems to be quieted, and perhaps rendered more acute.

"I have shown what is the influence of a meat diet on the character of animals. As to the effect of the vegetarian diet upon the intelligence, here is the opinion of one or two celebrated men who made observations upon the subject.

"Addressing himself to his friend, Firmus, who abandoned the Pythagorean doctrine to become an eater of flesh, the philosopher Porphyry wrote as follows: 'It is not among the eaters of simple vegetable foods, but among the eaters of flesh that one meets assassins, tyrants, and robbers. . . . I can not believe that your change of diet was made for the sake of your health, for you have constantly affirmed that the vegetarian regimen has been better than all others, not only to maintain perfect health, but also a philosophic and understanding mind, which long experience has taught you.' And Seneca, who, after careful consideration, late in life adopted the vegetarian diet, wrote, 'Impressed by these arguments, I have myself discarded the flesh of animals, and at the end of a year the new diet has become not only easy, but delicious, and it has even seemed to me that my intellectual aptitudes were more and more developed."

Speaking elsewhere with reference to the effects of a vegetable diet upon the character of animals, this great authority remarks: "One can not help remarking that carnivorous animals are generally irritable and dangerous, and that the herbivorous, on the contrary, are easy to manage and to domesticate. The flesh diet, more or less exclusive, is, more than the race, a determining factor of individual character, whether it shall be gentle or violent.

"It is known that the white rats of our laboratories, as long as they are nourished on bread or grain, can be easily tamed, while they become savage when they are nourished on flesh. The same observation has been made in relation to the horse, and also the dog, though the latter is omnivorous.

"Liebig has related that a bear maintained at the museum of Giessen was very gentle and quiet as long as it was nourished exclusively on bread and vegetables; but a few days on flesh diet rendered the animal so vicious as to endanger the life of its trainer, who amused himself by periodically modifying the character of the animal by a change of diet. "It is known,' added Liebig, 'that hogs may be made so savage by a diet of flesh that they will attack men.'

"The flesh diet, then, certainly influences the personality. It renders a person more aggressive and headstrong. I do not speak now of its evil influence upon the general health, but merely of its influence upon the moral qualities."

BURKE'S RADIOBES

The announcement by Burke that he had succeeded in creating living matter by the aid of radium created quite a ripple in the scientific world, and excited anew the vain hopes of those who imagine that life is a sort of mechanical product or process which may be duplicated in the laboratory of the chemist or physicist if only the right method can be discovered. Sir William Ramsey, however, has easily pricked this scientific bubble by showing that the so-called radiobes of Burke were nothing more than minute bubbles surrounded with a little skin of albumin formed with the gelatin broth into which Mr. Burke sprinkled his grains of radium. The masquerade of the radium particles which so closely resembles the dance of life, is thus described by Professor Ramsey: —

"During the decomposition of the emanation into helium and other products, much heat is evolved, as was shown by Professor Rutherford: it has been shown before by the Curies that radium continually gives off heat, and Rutherford proved that far the major part of the heat was due to the spontaneous change undergone by the emanation, Now this energy need not all be manifested as heat : some, at least, may appear as chemical action. A solution of the emanation in water decomposes the water in which it is dissolved into its constituent gases - oxygen and hydrogen. And the rate at which the water is decomposed keeps pace with the rate at which the emanation changes - that is, at the beginning, when the emanation is fresh and there is comparatively much present, the amount of gases evolved is comparatively great; and as the emanation diminishes, so the decomposition decreases, less gas being produced in a given time.

"The solution of this gas in water has the curious property of coagulating white of egg or albumen. What is the precise nature of the change produced is unknown. Hence if kept in liquid containing albumen, it forms, no doubt, microscopic cells, for the gas produced is liberated in molecules, or it may be, even in atoms. Some solution, injected under the skin of a living being, surrounds itself with a sac, or bag, the walls of which are thick and hard, and are absorbed only slowly by the living organism. These phenomena require further study, and I regret to say that I have not had an opportunity of examining them more thoroughly, though I hope to do so.

" Mr. Burke made use of solid radium

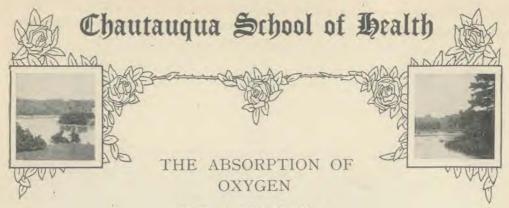
"THE longer on this earth we live

Of plain devotedness to duty,

bromide in fine powder. He sprinkled a few grains on a gelatin broth medium. possibly somewhat soft, so that the granules would sink slowly below the surface. Once there they would dissolve in and decompose the water, liberating oxygen and hydrogen, together with emanations, which would remain mixed with these gases. The gases would formulate bubbles, probably of microscopic dimensions, and the coagulating action of the emanation on the albumin of the liquor would surround each with a skin, so that the product would appear like a cell: its contents, however, would be gas, or, rather, a mixture of the gases oxygen and hydrogen. The emanation, enclosed in such a sac, would still decompose water. for enough would diffuse through the walls of the sac, which, moreover, would naturally be moist. The accumulation of more gas would almost certainly burst the walls of the cell, and almost equally certain in one or two places. Through the cracks more gas would issue, carrying with it the emanation, and with it the property of coagulating the walls of a fresh cell. The result of the original bubble would resemble a yeast cell, and the second cell a bud, or perhaps more than one, if the original cell happened to burst. This process would necessarily be repeated as long as the radium continued to evolve emanation, which would be for the best part of a thousand years. The 'life,' therefore, would be a long one, and the 'budding' would impress itself on an observer as equally continuous with that of a living organism."

- Steadfast and still, nor paid with mortal praise,
- But finding amplest recompense
- For life's ungarlanded expense
 - In work done squarely and unwasted days."

And weigh the various qualities of men, The more we feel the high, stern-featured beauty



BY J. H. KELLOGG, M. D.

REATHING is the receiving of air into the body, or rather the absorption of oxygen. In man and the higher animals this is accomplished by means of a most ingenious pumping device, by which the air is sucked in through the nose and the mouth. This breathing apparatus consists of the chest, the outer walls of which are made up chiefly of ribs and muscles; the diaphragm, which forms the floor of the chest cavity; and the lungs and the breathing tubes which are placed within the cavity. The lungs are a double, hollow sac, which is subdivided into an immense number of smaller sacs, or air cells, in the lining membrane of which is found an extremely rich capillary network, to which is distributed for purification the blood sent to the lungs from the heart. The lungs are covered by the protecting pleura. A similar membrane lines the chest. Air is conveyed into the lungs through the larynx, trachea, and bronchial tubes which are connected with the back part of the mouth. It is as much the duty of every enlightened person to give thought to the quality of the air he breathes, and to the manner of breathing, as to give attention to the food he eats, and the manner in which it is served and eaten. Pure air may indeed be regarded as one of our most necessary foods. In fact, death occurs more quickly when the body

is deprived of air than when deprived of other food or of water.

Air is made to enter the chest by enlarging the chest cavity or thorax. This is accomplished by a downward movement of the diaphragm and an outward movement in all directions of the lateral . chest walls. This is largely accomplished by the muscles which lift the ribs and pull them outward from the center of the body. The lungs are emptied by the natural return of the parts to a passive state, when the muscles cease their pulling upon the chest walls. In ordinary deep respiration, when the breathing movements are not interfered with, the movement consists chiefly of an enlargement of the trunk in the region of the waist. There is at the same time a marked bulging forward of the abdominal wall. This style of breathing is sometimes, though incorrectly, termed abdominal respiration. In abdominal respiration proper, there is a forward movement of the abdomen, but without marked enlarging of the waist. Abdominal respiration is most frequently seen in sedentary men and in infants. The opposite style of breathing, known as costal breathing, is seen in women who habitually wear waistconstricting garments. The principal movement is at the top of the chest.

Neither costal nor abdominal respiration is capable of bringing the lungs fully

into action. Only such portions of the lungs act as lie in contact with a portion of the chest wall which moves during the respiratory effort; and in those parts. which lie in contact with portions of the chest wall which remain idle, the air stagnates. Carbonic acid gas and other poisonous matters accumulate. The living cells are thereby poisoned and paralvzed. Pneumonia germs and other disease-producing microbes, and especially the germs of tuberculosis, are likely to find lodgment in these idle parts. The paralyzed cells are easily overcome by the invading germs, and so an acute inflammation may be set up, or, still worse, that dreadful disease, pulmonary tuberculosis or consumption, obtains a foothold.

"It is important to cultivate a proper mode of breathing, taking pains to expand the lower part of the chest. One does not use the abdominal muscles actively in ordinary respiration, but they are used passively in aiding respiration. As the breath is drawn in when the full chest is expanded, especially the lower part, the abdominal muscles are stretched. The diaphragm, in descending, presses the abdominal organs outward, thus rendering tense the muscles which form the front wall of the abdomen. In expiration, the muscles contract, as does rubber when released after stretching, and by the pushing of the abdominal organs upward, aid in crowding the air out of the chest and preparing for another incoming breath. In order to serve this useful purpose, the abdominal muscles must be strong and tense. Flaccid muscles can render no service. In forcible respiration, as in speaking, the abdominal muscles, as well as the muscles of the chest, must

Forever changing, and forever new,

be kept under constant control, sometimes being contracted with vigor to give an increased force to the voice. This action is especially necessary in public speaking and singing.

In speaking, one should breathe deep enough to feel distinctly the movements of the abdominal muscles. By this means greater volume will be given to the voice, the effort of speaking will be found much less laborious, and the voice will be much less easily fatigued. A high-pitched, strained voice should be particularly avoided as highly irritating to the throat, exhausting to the speaker, and disagreeable to the audience.

Persons who have not learned the use of the abdominal muscles in speaking or in singing, or in whom they are so weak as to be of no service; habitually use the muscles of the throat and the upper part of the chest in a strained way during loud speaking or singing, and greatly to their injury. Not only the voice suffers, but the habit of using the lungs in this way impairs digestion, the action of the liver, and the functions of all the abdominal organs, which need the benefit of the rhythmical movement produced by the strong action of the lower portion of the chest. This is the real secret of the great benefit experienced by many who have corrected their mode of breathing, transferring the principal action from the upper to the lower part of the chest. It should be remembered, however, that the whole chest should be moved, and the upper part of the chest fully expanded, in order to secure proper ventilation of every part of the lungs, thus preventing the lodgment and development of germs and the various acute and chronic diseases which result therefrom.

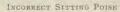
[&]quot;The world leads round the seasons in a choir,

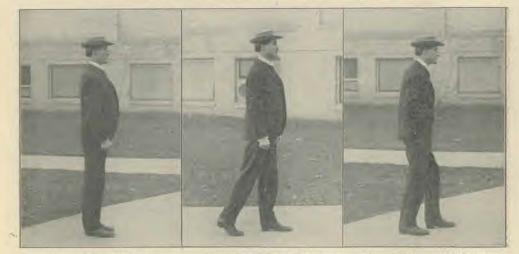
Blending the grand, the beautiful, the gay, The mournful and the tender, in one strain."

RIGHT AND WRONG WAYS IN COMMON THINGS



CORRECT SITTING POISE





CORRECT STANDING POISE

CORRECT POISE IN WALKING ' INCORRECT POISE IN WALKING



CORRECT POISE

INCOURECT POISE

INDIVIDUAL MENU FOR ONE DAY, SHOWING AN AMOUNT NEEDED AND FOOD UNITS FOR FACH ARTICLE

BY ESTELLA F. RITTER

537

[Foops, like all other organic substances, when burned produce heat. The amount of heat produced by a given quantity of food differs according to the amount of water and other elements incapable of producing heat which it may contain. When taken into the body, digested, assimilated, and used, foodstuffs produce the same amount of heat and other forms of energy as if burned outside of the body: hence the number of calories represented in a given foodstuff may be taken as a measure of its food value .- ED.]

BREAKFAST

Corn Flakes	I	OZ.	103
Cream	2	oz,	115
Steamed Bananas	2	oz.	65
Toasted Graham Wafers	I	oz.	123
Health Cocoa	6	oz.	131

Total Calories for Breakfast,

DINNER

DINNEN			
Vegetable Soup	8	oz.	129
Potato Roll	4	oz.	159
Protose Roast	3	oz.	147
Whole-Wheat Bread	3	oz,	215
Butter	I	oz.	228
Prune Whip	2	oz,	92
Total for Dinner			970
SUPPER			
Fruit Sandwich	3	oz.	335
Roasted Almonds	I	oz.	191
Grape Juice	6	oz.	138
Total for Supper			664
and the second			
Calories for Breakfast			537
Calories for Dinner			970
Calories for Supper			664
Total Calories for One Da	у.		2,171

Steamed Bananas .- Slice two ounces or one-third cup of bananas fine and steam in a double boiler for half an hour. When cool add one-fourth ounce or one teaspoonful of lemon juice and the same amount of orange juice. Serve cold or without cream

Health Cocoa .- Take one teaspoonful each of Health Cocoa and sugar, add a small quantity of hot water and rub to a smooth paste. Add enough water to make half a cup, and let boil two or three minutes in a granite or aluminum dish. Then add one-fourth cup of cream, heat just to the boiling point, and serve.

Vegetable Soup .- Take two ounces of potato (one-fourth cup), two ounces of carrots (one-fourth cup), two ounces of celery (one-fourth cup), one ounce of tomato (one-eighth cup), one-half ounce of onion (one teaspoonful), and one spray of parsley.

Peel and cut the vegetables into small pieces and add eight ounces, or one cup,



POTATO OLL

of water. When it reaches the boiling point, let simmer slowly for one hour. Press vegetables and liquid through a colander, and season with salt.

Potato Roll .- Mix four ounces (onehalf cup) of mashed potato (cold is just

INDIVIDUAL MENU FOR ONE DAY

as good if free from lumps) with one and one-fourth ounces (one-eighth cup) of cream and the well-beaten yolk of onefourth of an egg; salt to taste and beat until smooth; lastly stir in the one-fourth of the white of the egg beaten to a stiff



PRUNE WHIP

froth. Form into a roll and bake in a hot oven until heated throughout and slightly browned. Serve at once.

Pratose Roast.— Slice three ounces of protose one-fourth or one-third of an inch thick, and place in a dripper or other baking dish with just enough water to cover. Bake in a slow oven until the water is mostly evaporated and the slice a rich brown in color.

Prune Whip.— Sift through a colander some sweet California prunes which have been thoroughly drained from juice and from which the stones have been removed. Beat the white of one-eighth of an egg to a stiff froth and add two ounces of sifted prunes; beat all together thoroughly and bake in a custard cup in a hot oven for fifteen minutes. Cool, and turn out on a plate. Add one-eighth of beaten white of egg with one-half teaspoonful sugar and decorate top and bake until brown.



FRUIT SANDWICH

A very good way to prepare prunes is to soak them twenty hours in just enough water to cover, then steam them in the same water in which they have been soaked. Steam in a double boiler very slowly for three hours. Prunes thus prepared retain the fine flavor and sweetness. No sugar need be added.

Fruit Sandwich.— Cut slices of bread about one-fourth of an inch thick, spread with one-half ounce (one teaspoonful) of almond butter. Prepare a filling by chopping very fine one-fourth ounce (one teaspoonful) of walnuts; add to one ounce (one teaspoonful) of fig marmalade. Mix well, and spread between the slices.

THE ENEMA

THE enema is a most valuable substitute for purgatives. Cases are very rare in which a cathartic drug will be found necessary if the enema is properly used. By means of a fountain douche or some other appropriate form of syringe, water is introduced into the bowels, either warm, cold, or hot, as may be required. The application should be made with the patient lying, preferably upon the left side. The quantity of water employed is ordinarily two to three pints.

When it is desired to empty the entire colon, a coloclyster should be administered. This requires a larger quantity of water, two or even three quarts, and the patient should lie upon the left side with the knees drawn up, or in the kneechest position. fully employed when other means fail to accomplish the desired end. The temperature of the water should be 70° to 80° F. Two or three pints should be passed

When the purpose of the enema is

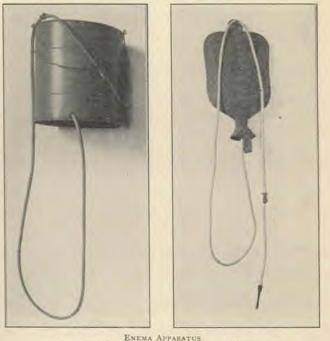
simply evacuation of the bowels, the temperature of the water should be 75° to 80° F. When there is a habitual and obstinate constipation, water at a lower temperature should be used. The temperature may be gradually lowered from day to day until water at 65° is employed. The colder the water, the less the amount needed, as cold water powerfully stimulates peristaltic activity.

When the purpose of the enema is to antagonize shock, hot water should be employed, temperature 102° to 106° F. Water two or three degrees hotter may be em-

ployed if necessary. This is an excellent remedy for shock or collapse in every form, except when due to intestinal hemorrhage or hemorrhage from the stomach. The collapse following the administration of ether or chloroform is best antagonized by the hot enema accompanied by cold friction of the surface. For this purpose the enema may be employed at intervals of one or two hours.

The hot enema is also very useful in cases of urinary suppression, as in the acute inflammation of the kidneys which frequently occurs in scarlet fever and diphtheria. It is useful also in cases of catarrh of the colon.

The cool enema is a most valuable means of lowering temperature in cases of fever. It may sometimes be success-



Metal Fountain

Siphon Bag

into the bowels, and after five or ten minutes should be allowed to escape. The same quantity should then be introduced again. This may be repeated many times, until the patient's temperature is lowered one or two degrees, as shown by a thermometer placed in the mouth. The cold enema should always be administered once or twice daily in cases of typhoid fever and other continued fevers.

It is sometimes necessary to withhold fluids, as well as foods, from the stomach. In such cases, water may be introduced into the system through the bowels by means of the enema administered at the temperature of the blood, or 100° F. The quantity should be small, not more than one pint to one and a half pints. This amount may be introduced three or four times daily, or as often as may be necessary to satisfy thirst.

When rectal feeding is resorted to, as in cases of acute inflammation of the stomach, the bowels should be thoroughly emptied daily by an enema at 80° F.

By the addition of soap, or a tablespoonful of salt, or a teaspoonful of turpentine, the stimulating effect of the enema may be greatly increased. This is necessary in certain cases in which it is required to secure complete and prompt evacuation of the lower bowel, as in the after-treatment of cases of abdominal surgery.

The patient should never be allowed to become habituated to the use of the enema when this can be avoided. In cases of permanent dilatation of the colon, it is sometimes necessary to rely upon the enema as the only means by which the bowel can be properly evacuated. In such cases it is necessary to employ the enema

only every other day, as a period of forty-eight hours is required for filling the colon. In ordinary health only the lower half of the colon is evacuated each twenty-four hours. When a person has become dependent upon the enema, it will generally be found that warm water has been habitually employed. The temperature of the water should be lowered 5° each day until the water is used at a temperature of 60° to 65° F. As the water becomes colder, the quantity may be made smaller, until in favorable cases. evacuation will be secured by the use of half a pint to a pint of cold water half an hour after breakfast. If this is insufficient, a half pint or a pint of cold water may be introduced into the bowel at night on retiring to bed. The disposition to evacuation of the water when first introduced may be overcome by strong resistance for a few minutes, after which the tenesmus will pass away.

J. H. K.

SCHOOL OF HEALTH SEARCH QUESTIONS

THE ABSORPTION OF OXYGEN

1. Of what does the breathing apparatus consist?

2. Describe the means by which air is made to enter the body.

3. In natural breathing, what part of the body is enlarged?

4. Describe abdominal and costal breathing.

5. What takes place in unused portions of the lungs?

6. What is the effect of correct breathing on the voice?

AN INDIVIDUAL MENU

I. Of what is the number of calories in a foodstuff an indication? 2. About what number of calories is required for one day's rations?

THE ENEMA

I. What quantity of water is required for an ordinary enema?

2. What is meant by the coloclyster, and how is it administered?

3. At what temperature should the water be used for cases of habitual constipation?

4. When is the hot enema useful?

5. How should the enema be given to reduce fever?

6. What substances will increase the stimulating effect of the enema?

7. Describe the best method of breaking off the use of the enema.

WHY NOT GIVE THE STOMACH A REST?

- ⁴⁴ LITTLE Willie isn't well Seems to have a bilious spell. We're afraid he's delicate. (Had some apple tarts at eight; Nine o'clock 'twas cookies, then Followed gingerbread at ten. At eleven slipped around And some cheese and doughnuts found.) Didn't heed the dinner bell; Wouldn't eat: he isn't well.
- "Little Willie isn't well (One o'clock 'twas bread and jell; Two o'clock 'twas pumpkin pie; Three, some cake upon the sly; Maple caramels at four; Hick'ry nuts at five galore) For when supper time came he Was as languid as could be! What can ail the boy? Do tell. Little Willie isn't well."

D o you think it surprising that Willie should have no appetite for his dinner when he had been stuffing himself with cake and candy all the morning? At this time of year there are so many good things about, to be eaten at all sorts of odd times, that there are likely to be a good many little boys and girls with no appetite for their regular meals for the same reason that Willie had none.

Would you not think it cruel to keep a servant hard at work day and night, allowing no time to rest and recover strength? You would know that you

could not keep that up very long. If such a servant should not refuse to work for you, he would very soon have to stop, because he would have no strength left for his work.

Yet this is the way a great many people treat the stomach, which is a faithful servant, doing its best to change the food put into it into good blood to build up the body. So far from giving it time to rest, they do not even allow it time to do its work properly. Before it has time to finish one task, another is forced upon it.

On each side of your mouth, on the inner lining of the cheek, there is a little gland which pours the saliva into the mouth. On the inner lining of the stomach there are many little glands, which pour out juices to digest the food. These glands are at work only when there is food in the stomach.

When there is food in the mouth, you work your jaws and tongue to move the food about and chew it up ready to be swallowed. When the food passes into the stomach, the stomach muscles work to churn it up and move it about so that it shall be all thoroughly digested.

Some of the food is digested in one or two hours, and other foods take three or four hours. But most of the food stays in the stomach until the whole meal is digested and ready to pass on.

When the food is all digested and has passed out of the stomach, the stomach

muscles which have been hard at work have time to rest from their labor, and the little glands can be preparing for the work of the next meal.

Now see what happens when one takes food at all sorts of odd times in between meals. If something is eaten an hour after a meal, when the work of digestion is well on its

WHY NOT GIVE THE STOMACH A REST?

way, the stomach, instead of going on to digest the meal properly, has to stop and begin the work all over again. The glands have to pour out fresh juice to suit the new food, and this interferes with the partly digested food. The food eaten at the meal is kept much longer in the stomach than it should be, and is quite likely to begin to spoil.

Your mother would not think of adding to some nearly cooked rice a fresh lot of rice

that was not cooked at all. If this should be done, the hard, uncooked rice would get mixed up with the other, and it would all have to go on cooking until the last rice was thoroughly cooked. But by that time the first rice would be spoiled.

The stomach is the kitchen where the food is in a manner cooked and prepared before it is carried to all parts of the body. And one meal should be thoroughly treated by the stomach and sent out before any more food is added. And even then, there should be an hour or two for the stomach to rest, so that it will be quite



ready for the work of the next meal.

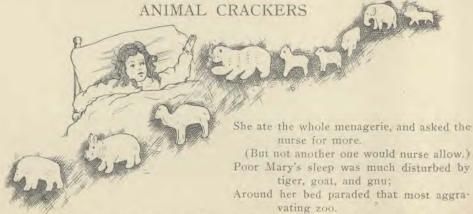
When the stomach is very ill-treated, and a lot more food is thrown into it than it can take care of properly, it simply throws it back again by the way it came. A "bilious attack" is the stomach's way of complaining that it must have better treatment if it is to do good work.

We should make up our minds to treat our stomachs well. Instead of wanting at once

some of everything we see that is good to eat, we should use the will power that God has given us, to control our appetite.

If we do not treat our stomachs well, we shall suffer for it in sickness and trouble. A stomach out of order is the cause of nearly all diseases. When the stomach is healthy, the whole body is kept in a healthy state. The stomach will be healthy if it is well treated. So you see it is largely a matter for each one of us to settle for ourselves, whether we will be healthy and happy, or sick and miserable.

E. E. A.



- MARY had a little lamb, two zebras and a boar;
- Elephants and camels, too, and others by the score.

Poor Mary's sleep was much disturbed by

- In horrid nightmare circles they all passed in review-

Mary is a vegetarian now!

- Herbert Paus, in St. Nicholas.

By the Editor

AN IMPORTANT INVESTIGATION

PROF. IRVING FISHER, the head of the Political Economy Department of Yale University, has become interested in the study of practical hygiene, and proposes to apply the exact methods of the trained scientist to the investigation of the question of diet as it relates to endurance. Professor Fisher has already collected a great number of interesting and important facts bearing upon this question. The fact that a man filling so important a position is willing to take the time and incur the expense necessary for a research of this sort is an evidence of the practical importance of this question. On another page we print a brief notice from Professor Fisher inviting correspondence from those who have made observations or who have had personal experience bearing upon the question of diet as related to endurance. His notice, to which we desire to call the special attention of our helpers, will be found on page 51. Kindly read Professor Fisher's note, and then if you desire to take part in this interesting research, which is certain to be productive of the most valuable results, put yourself in communication with him immediately in the manner suggested.

AT-

HYDRIATIC TREATMENT OF GASTRIC DISORDERS

ACCORDING to Brieger, hydriatic applications in disorders of the stomach have less effect upon the gastric juice than upon the circulation of the stomach and its motility. Fomentations and heating compresses made over the gastric region relieve pain. In gastric ulcer these measures are systematically employed. The mode of applying heat is in these cases a matter of secondary importance. The most common and effective procedures are poultices, the thermaphore, the hot stomach coil, and fomentations. These should be applied for at least three or four hours during the day. During the night the moist abdominal bandage is to be employed.

With fresh hemorrhages the hot compress should not be employed. Instead, cold compresses should be used and ice pills should be swallowed. Winternitz has also recommended the injection of small pieces of ice into the rectum for causing reflex contraction of the gastric viscera.

In motor insufficiency, atony, and hypopepsia, alternating douches should be applied to the abdomen as a means of exciting the functions of the viscera. This procedure is of great benefit in old cases of catarrh of the stomach. In these cases, as well as in nervous dyspepsia, hot fomentations, or still better, the hot stomach coil, followed by a heating compress are to be used. This measure is also of great service in nervous vomiting and in the vomiting of pregnancy.

When gastric symptoms are of nervous origin, the measures mentioned, together with such general procedures as shallow baths, cold rubbings, etc., are of very great

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value. Many of the milder forms of nervous dyspepsia require no other treatment. General cold procedures are of great value in chronic gastric disorders not of nervous origin, to improve the appetite and to relievethe psychic depression which is so often present in those cases.

In acute and chronic diarrhea the patient is first given a cold wet-sheet rubbing, then a sitz bath at 60° to 77° , continued for ten or fifteen minutes (the sitz bath should be accompanied by a very hot foot-bath). Many very sensitive patients can not bear this somewhat severe procedure. In such cases we may employ the wet girdle with a hot coil or hot-water bag over the stomach (the combined compress of Winternitz, or the hot heating compress). Its application should be followed by a short shallow bath.

In habitual constipation the secretory activity of the intestine may be increased and its muscles may be stimulated by thermic or mechanical irritation. This may be accomplished by means of a short cold sitz bath at 53° to 40° for three to five minutes, accompanied by vigorous rubbing to the abdomen (the cold rubbing or tonic sitz). This application may be preceded by a bandage or wet sheet rub. A short cold spray, or fan douche, applied to the abdomen, or a short cold shallow bath with vigorous cold abdominal gush or pour fulfils the indication. Massage should be applied along with hydrotherapy. If the constipation is not caused by relaxation or atony of the intestinal muscles, but is due to spasmodic contraction of the intestinal walls, antispasmodic measures, such as the prolonged sitz bath and hot fomentations to the abdomen, are indicated.

By means of a short cold sitz bath, a cold spray, a fan douche to the abdomen, and a Scotch or alternating vaginal douche, the muscles of the abdominal wall are strengthened at the same time that the intestinal functions are stimulated. These procedures are hence of value in enteroptosis and movable kidney.

Applied over the region of the liver the fan douche is of use in hyperemia of the liver and in congestion of the biliary passages. In gall-stones and cholecystitis the anodyn effect of hot compresses over the gall-bladder is well known. In gall-stones the daily application of a hot vapor douche, followed by a short cold fan douche, not only relieves pain, but favorably influences the disease itself.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS AT PARIS

THIS important congress, held early in October, attracted immense attention from the people in Paris as well as from the world at large, and several thousand were present on the opening day.

The congress was opened by the venerable Dr. Héraud, who is still vigorous at the age of eighty-six years. General Schjerning reported that in Germany there are at the present time 127 sanatoriums for tubercular patients. An interesting feature of the congress was the museum which, according to the *British Medical Journal*, presented fascinating models of various sanatoriums, showing also their grounds, groves, walks, meadows, hills, and vales, as well as the

buildings, and photographs showing patients and illustrating their life and the modes of treatment employed. "A novel and most striking feature consists of two rooms; one is furnished in the old-fashioned hotel way, with bed curtains, doubtful-looking eiderdown quilts, heavy wooden bedstead, dirty carpet, cloth curtains, and a very plentiful deposit of dust on everything. This is the dangerous room. Opposite is a model of a hygienic bedroom fitted up in the most modern way, showing not a speck of dust on the brightly varnished, lacquered, or polished surfaces. As a pendant to this is a model ward for two patients, showing wax figure patients and nurses, and all the necessary concomitants of an up-to-date ward." The work of such a congress as this is of the utmost importance, but something more than an international congress is

The Effect of Cold on Cell Life.

That cold is a depressant agent in its relation to objects endowed with life is well enough known. In all cold regions vegetable life slumbers during the winter months. Many species of animals also retire from activity and go into a dormant or hibernating state during the cold season. A phase of the question which has remained unsettled until recently is, To what extent is cold fatal to living things, and under what conditions? It has long been known that seeds may be exposed to the most extreme cold of a Northern winter, - 70° F. or more, without destroying their vitality, but recently it has even been found that extreme degrees of cold, -600° F., fully sustain vital phenomena. Grains and seeds which have been subject to this extreme cold show the usual signs of vital activity when restored to ordinary temperatures. Recent experiments which have been made by M. Becquerel with wheat, corn, peas, beans, and other seeds show that vitality was perfectly preserved even when the specimens were cooled in liquid air for more than five days, provided the moisture was removed before the cooling.

The Straight-Foot Position.

There has recently been considerable said respecting the proper position of the foot in standing and walking. In Holland the straight-foot position is very general. English-speaking people toe out in walking, but the English army has recently adopted the straight-foot position, and United States marines are now drilled to march and stand in the straight-foot position. Most practical trainers at the present time instruct runners to employ the straight-foot position, as this is the only position in which very great speed may be obtained. A flat-footed perneeded. Every community must be educated. Physicians, medical societies, learned philanthropic societies of all sorts, must take up this work against the great plague.

son toes out to a marked degreé. This position weakens the foot and tends to break it down, while the straight-foot position protects the foot, helps to maintain the body in an erect posture, and protects the muscles from fatigue.

Death from Headache Powders.

Many deaths are occurring nowadays from the use of the much-advertised headache powders which are presented under various names. In the case of a recent death of this sort which occurred from Orangeine Powders, the analysis showed the powders to consist almost entirely of acetanilid, a powerful heart poison.

Poisoning by Wood Alcohol.

Drs. Buller and Wood have contributed to the Journal of the American Medical Association an article giving an account of eighty-nine cases of blindness due to wood alcohol. Ten of these cases were due to the absorption of the fumes of alcohol. Two hundred and seventy-five cases of blindness of this sort have been reported, and one hundred and twenty-two—nearly half proved fatal.

Wood alcohol is sold at the present time under various names, of which the following are a few: —

> Columbian Spirits. Eagle Spirits. Colonial Spirits. Union Spirits. Deodorized Spirits.

Most liniments, extracts, essences, etc., contain more or less of this poisonous wood alcohol, and even some bitters and other proprietary medicines have been adulterated in this way. The use of wood alcohol in bath cabinets, in the form of liniments, or any sort of application to the skin, in cleaning woodwork, brass, etc., is highly dangerous. The poisonous symptoms do not always appear at once. They are often delayed for several days. Some persons are much more sensitive to this poison than others. A few persons seem to be immune.

The writers above named, who have made a careful investigation of this subject, state that "if ten persons drink, say, four ounces of Columbian spirits within three hours, all will have marked abdominal distress, and four will die, two of them becoming blind before death. Six will eventually recover, of whom two will be permanently blind. With still larger doses, the proportion of death and blindness will be greater."

Tuberculosis in Children.

Von Behring claims that children are much more susceptible to tubercular germs than adults, although the disease is less frequently manifested in an active stage in children than in older persons. Von Behring's view is that children very frequently become affected with tubercular germs by absorption through the alimentary canal from tuberculous milk. Because of the high resistance of the cells the germs are confined to small foci, usually the lymphatic glands, in which they retain their vitality until some advanced period of life when the resistance is diminished, when they spring into activity, and appear as pulmonary consumption, or some other form of well-defined tubercular disease.

Wiegert confirms the views of von Behring. These men have given this subject a most exhaustive study, and are very likely justified in their contention that tuberculosis may be more often traced to food than to air.

Von Behring has shown that when tubercular germs are injected into dogs or guinea-pigs the lungs become diseased just the same as when the germs are received by inhalation. His view, stated briefly, is that " consumption of the lungs is the end stage of an infection inherited in infancy." These are important facts which should be carefully considered. Any one who is at all acquainted with the scientific facts which have been developed in regard to milk and tubercular infection within the past few years would not think of eating milk, or of offering it to an infant, without first thoroughly sterilizing it by the application of heat. For sterilization purposes, milk should be heated for at least fifteen minutes to a temperature sufficient to cause a scum to form upon the surface.

The Deforming Influence of School Life.

That the prevailing conditions to which children and youth are subjected in attendance at school need to be reformed is clearly evidenced by an article on "'School' Lateral Curvature," recently read by Dr. Feiss, of Cleveland, before the teachers of physical education of the Cleveland public schools. We glean a few interesting and important facts from this valuable article.

Dr. Truslow, of New York, found that in 400 cases of scoliosis due to occupation, the following occupations were represented: School, 285; factory, 19; clerk, 13; domestic, 8; millinery and dressmaking, 8; messenger, 3; teacher, 2; no occupation, 59.

Dr. Scholder, of Lausanne, Switzerland, on examination of 814 school children found lateral curvature in nearly twenty-five per cent. The curvature was in the great majority of cases toward the left side.

The influence of the school is clearly shown by the fact that the longer the children have been in school, the greater the percentage of curvature, the percentage progressively increasing from 8.7 in the lowest grades to 31 per cent in the highest.

The chief cause of this physical deformity in school children is doubtless the great length of time spent in studying. The trunk muscles become badly relaxed and allow the skeleton to fall into an unnatural position.

Football Murders.

When a prize fighter kills his antagonist he is made to answer to a charge of manslaughter at least, which is certainly mild treatment in a country which makes dueling a crime. By the way, how can a just distinction be made between killing a man by means of a pistol or sword, and killing him with the fists? It's the killing that concerns the man, society, and the State. The method of the killing is certainly quite a secondary matter.

The brutality of modern football has reached such a point that even pugilists are crying out against it. Jeffries, the wellknown champion of the ring, declares that pugilism is moderation and child's play compared with football. A pugilist would never for a moment be permitted to beat his antagonist in the way in which one football eleven treats the other. The slugging, jamming, bruising methods of football are not permitted in boxing or pugilistic contests. In football, eleven stand up and fight eleven other men for all they are worth. They pound and beat them, choke, wrench and punch them, regardless of where they hit, and this purposely to maim and disable them, so as to put them out of the game. And all in the name of sport.

Three men have just died as the result of football rioting. Who is to be held responsible for their deaths? It is high time that all decent people took their stand against this brutal savagery which is misnamed "sport" so as to cover it with a thin gauze of respectability.

It is encouraging to note that the President has set his face strongly against these barbarities.

Marked Men.

In moving about among his fellows, the experienced physician can scarcely avoid making estimates, often almost unconsciously, of the outlook for life of those with whom he comes in contact. Often enough the physician recognizes among those he meets persons who are standing upon the very brink of physical collapse, though quite unconscious of the peril of their position. Often enough one meets upon the street boys and girls whose pinched faces and weazened forms show clearly enough that they have little or no constitutional vigor. De Quincy recognized the fact that multitudes are thus marked for premature death, and wrote as follows: —

"If you walk through a forest at certain seasons, you will see what is called a blaze of white paint upon certain élite of the trees marked out by the forester as ripe for the ax. Such a blaze, if the shadowy world could reveal its futurities, would be seen everywhere distributing its secret badges of cognizance amongst our youthful men and women. Of those that, in the expression of Pericles, constitute the vernal section of our population, what a multitudinous crowd would be seen to wear upon their foreheads the same sad ghastly blaze, or some equivalent symbol of dedication to an early grave. How appalling in its amount is this annual slaughter ! "

Six Hundred Years without a Doctor.

According to Pliny, Rome flourished for six hundred years without a doctor. It is maintained by some, however, that when making this statement Pliny was not aware that certain Greek physicians resided in Rome, at least during a part of the period named. But there is certainly no question that in the early days of its history, physicians were very scarce in Rome, and doubtless because there was little occasion for their services. With the advance of civilization, maladies have multiplied, and with the increase of disease there has been a proportionate increase of physicians. There are at the present time in the United States not less than 150,000 physicians, and the number is increasing at the rate of several thousand annually. Whether or not the world is better for this great multiplicity of medical men is a question upon which there may be a difference of opinion.

Sydenham on the Horseback Cure of Consumption.

Sydenham, one of the fathers of modern medicine, long ago advocated the open-air life as the best method of treating pulmonary tuberculosis, and insisted that the disease was curable, long before this view had come to be generally adopted by the medical profession. Said Sydenham, according to Locke: "I am sure that if any physician had a remedy for the cure of phthisis of equal force with this of riding, he might easily get what wealth he pleased. In a word, I have put very many upon this exercise in order to the cure of consumptions, and I can truly say I have missed the cure of very few; insomuch that I think how fatal soever this disease be above all others, and how common soever (for almost two-thirds that die of chronical diseases die of a phthisis), yet it is this way more certainly cured than most diseases of less moment; provided always that this traveling be long persisted in according to the age of the patient and length of the disease. . . . Women or very weak men that can. not ride on horseback may ride in a coach and yet attain the same end, as I have seen by often experience."

Healing Power.

Healing is creating. It requires the same Power to heal as to create. The healing of a sick man is no less a creative act than the making of a man. The transformation of a sick, infirm, disease-ridden human being into one abounding with life and strength, vigor, health, and joy, is one of the most mysterious and marvelous of miracles. The restoration of every sick man who recovers is evidence of a creative power present to repair and to heal.

The Natural-Food Idea in England.

Natural-food ideas are recently making rapid progress among the élite of Great Britain. Lady Henry Somerset has adhered to this diet for more than a year. Lady Paget is a strong advocate of natural food; and Lord Charles Beresford attributes his youthfulness in spirit and remarkable vigor to his adherence to a non-flesh dietary. George Bernard Shaw denounces flesh food in unstinted terms. He calls meat the "scorched corpse." The Earl of Buchan, Lady Winsor, Lady Herbert, Lady Hamilton, the Countess of Essex, and Mrs. C. Leigh Hunt are other prominent adherents to simple-diet principles.

The Ideal Diet.

Prof. W. O. Atwater, special agent of the United States government, in charge of the nutrition investigations in various experiment stations maintained by the United States Department of Agriculture, closes one of his most interesting and valuable reports — Farmers' Bulletin No. 142 — with the following words: —

"It should always be remembered that 'the ideal diet is that combination of foods which, while imposing the least burden on the body, supplies it with exactly sufficient material to meet its wants,' and that any disregard of such a standard must inevitably prevent the best development of our powers."

Vain Philosophy.

Socrates complained of the philosophy of his day, that it was wholly concerned with things which could not possibly yield any benefit to any one, and with problems for which no answer could be found. The same might be said of much of the philosophizing of the present day. Our educational systems need revising. Thousands of young men and women spend a considerable part of their time in school in poring over books which yield no profit to them other than the empty honors of scholarship, and in no way prepare them for useful activities in life.

The Vitality of Mosquitoes.

Dr. Barry reports, in American Medicine for September, 1905, some interesting observations, which show that the larvæ and pupæ of malaria-bearing mosquitoes bear desiccation remarkably well. These pupæ were placed in a glass jar, the bottom of which was covered with two inches of fine river sand nearly dry. They hatched out and became adult mosquitoes twenty-four hours after being placed in the jar. It is hence evident that it is not safe to empty vessels containing stagnant water filled with larvæ of mosquitoes without taking pains to destroy these pests.

The Influences of Light and Air on Tuberculosis.

M. Juillert, the eminent sanitarian of Paris, has been making careful study of the conditions under which tuberculosis most frequently occurs in Paris, and has observed that the disease is very much more frequent in the lower stories of tenement houses than in the upper stories. The upper stories are usually occupied by persons of a poorer class who have more numerous families.

Marie Davy has made an interesting study of the relation of tuberculosis to the number of doors and windows. The results are very interesting. They show very conclusively that those which have the most doors and windows are the freest from tuberculosis. For instance, in houses in which the number of doors and windows was three for each inhabitant, the number of deaths per thousand inhabitants was also three. When the number of doors and windows arose to four to each inhabitant, the mortality reached only about 1.3. In a community numbering one hundred and thirtynine thousand, in which the average number of doors and windows per inhabitant was 1.8, the mortality was 8.2 per thousand. In seven districts having an aggregate population of 1,200,000, with an average of 1.6 windows per inhabitant, the mortality per thousand was 6.1. In seven other districts having a population of 666,000, with an average of 2.8 windows per inhabitant, the mortality per thousand was 2.7, or less than half as many.

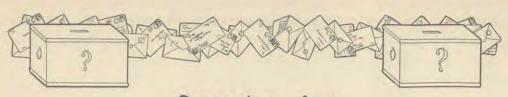
M. Juillert states that in eleven years

thirty-nine thousand houses out of the eighty thousand houses in Paris furnished over one hundred thousand deaths from tuberculosis, out of which 1,820 houses gave 11,500 deaths, and ten of these, having a total population of 967, gave in ten years 212 deaths. One of these houses, which had a very narrow court presenting a superficial surface of only about eight square yards, gave in seventeen years thirty-six deaths out of sixty inhabitants.

These figures show clearly enough the importance of light and air as a preventive means against that greatest of all foes of human life — tuberculosis.

In these days of scientific discovery we fear too exclusive attention is being paid to germs. Almost every human malady has been traced directly or indirectly to microorganisms. There is a tendency to overlook the great fundamental fact that germsare, after all, only the exciting cause of disease. The healthy organism is thoroughly able to defend itself against all comers in the shape of germs. Bad habitsopen the door to the germ enemies of life by producing conditions which favor infection and germ growth within the body. Wrong habits of eating and drinking, neglect of exercise and other matters essential to health, break down the body and leaveit an easy prey to scavenger and parasitic organisms, which are powerless to invadea healthy body.

THERE is a divine promise in every seed. If planted under right conditions and properly cared for, it will develop and bring forth other seed a hundredfold or a thousandfold. A rich reward is promised for every right act. An act is like a seed. If we sow a crop of right conduct, we shall reap a harvest of health,— physical, mental, and moral. The man who plants corn, reaps corn. The man who plants health, reaps health. The man who plants disease, reaps disease.



Question Box

10,285. Macerated Wheat – Constipation – Cascade Treatment – New Internal Bath. – A subscriber, Connecticut: "I. What do you think of the macerated wheat sent out from Kansas City, Mo., for constipation? 2. Is the tract called 'The Yeo Dyspepsia Treatment,' Sanatorium System, Battle Creek, Mich., published by the Goop HEALTH institution? 3. Is it well to use semia leaves for constipation? 4. What is your opinion of the 'New Internal Bath ' colon syringe?"

Ans.— I. We make no use of it, and do not recommend it. Formerly we employed measures of this sort in the treatment of constipation, but found that the remedy was not curative, but in the end rather aggravated the difficulty by increasing the dilatation of the colon through the excess of waste matter. Dilatation of the colon is unquestionably the foundation of the condition which causes constipation in many cases. In such cases, the use of raw wheat and other coarse foodstuffs must prove highly detrimental.

2. No, indeed. A multitude of quacks have established themselves at Battle Creek for the purpose of utilizing the reputation of the Battle Creek Sanitarium. None of these advertising fakirs are in any way connected with the Battle Creek Sanitarium or with Goop HEALTH.

3. No. In an emergency, senna or any other laxative might be used, but the habitual use of laxative drugs is highly detrimental. We do not use senna or recommend it.

4. Nothing better for emptying the colon has ever been invented than the simple ordinary bulb syringe or the fountain syringe.

10,286. Trouble in Swallowing Food – Neuralgia – Extreme Exhaustion. – Mrs. E. R. B., Michigan: "Am sixty years old, and have suffered for several years with constipation, heartburn, and distress in the stomach. At times can not swallow food without difficulty because of what seems to be a lump in the throat, which distresses me to swallow the first few mouthfuls. The last few years have had pains, seemingly neuralgia, in the flesh over the stomach. Pains affect the back and arms. Am weak and easily exhausted. Please prescribe." Ans.—It is quite possible you may be suffering from some grave disease of the stomach. Your case ought to be looked into very thoroughly at once. The difficulty with the stomach may be ulcer, or malignant disease, or simply irritation. It may be relief can be obtained by a fomentation over the stomach for fifteen or twenty minutes three or four times daily. There are other measures which may be usefully employed.

10,287. Saline Cathartic-Falling Hair-10,287. Saline Cathartic – Faling Hair – Mole – Defective Memory – Cholera Mor-bus – Lemon Juice – Inactive Liver – Cold Baths – Rheumatism. – C. H., Col-orado: "I. What is the 'saline cathartic' rec-ommended by Dr. Kate Lindsay in March Good HEALTH? 2. Please give the amount of salt to be used. 3. Please prescribe for fall-ing hair caused by dandruff, with itching and soreness of scale, and slight eruntions at times soreness of scalp, and slight eruptions at times. 4. Is salt injurious to the brain when applied to the scalp? 5. In the removal of a mole by means of nitric acid, how can I prevent a scar? 6. Would acetic acid prevent it? 7. Would you recommend a 'memory training' course? or what can I do to strengthen memory? 8. What should one do in a sudden case of cholera morbus when no physician is at hand? 9. Where could I get a pronouncing speller for a child taught at home? 10. Is lemon juice beneficial taken before breakfast? 11. Is it a perfect germicide? 12. Prescribe treatment for inactive liver. I use plenty of vegetables, apples, milk, and eggs; seldom touch meat. Have plenty of outdoor exercise. Use a little weak coffee once a day as a stimulant. 13. Would a cold morning bath be beneficial? 14. Should an elderly woman, suffering from rheumatism, take cold morning baths without an assistant? 15. Would the friction, rubbing, etc., be too violent exercise? 16. Would the addition of salt be beneficial? 17. Would salt glows be helpful? 18. Would a liniment composed of the following formula be injurious: pour I qt. turpentine over I oz. of sugar of lead, add I oz. nitric acid; stir four times, or until sugar of lead becomes doughy looking; then slowly, a drop at a time, add ½ oz. sulphuric acid, or enough to cause the liquid to boil gently a few moments?'

Ans .- 1. Seltzer, or Seidlitz powder.

2. One or two teaspoonfuls are usually sufficient.

3. A thorough shampoo for the scalp once or twice a week; daily rubbing with cold water, followed by the application of a solution consisting of twenty grains of resorcin and two drops of castor oil to the ounce of alcohol.

4. No.

5. It is impossible to prevent a scar after such an application. The X-ray is sometimes successful without scarring.

6. No.

7. A memory course is good as a means of developing the memory. The study itself is good gynnastics for the memory.

8. Stop eating, go to bed, drink one or two glasses of hot water every hour; take a hot enema for a free movement of the bowels, and, in the majority of cases, the disease will disappear in less than twenty-four hours.

9. At any bookstore.

IO. Yes.

II. Yes, but of course not in any degree of

dilution. Pure juice can be relied upon to destroy all dangerous germs.

12. Fomentation over the liver, followed by a heating compress, consisting of a towel wrung out of very cold water, covered first with mackintosh, then with flannel. Take the fomentation at night, then apply the heating compress, to be retained during the night. Stop the use of meat; use milk and eggs very sparingly. Discard coffee and other stimulants. Take a cold bath every morning by rubbing the skin thoroughly, until well reddened, with a towel wrung out of cold water. Keep the bowels regular, if necessary, by the use of a cool enema daily.

13. Yes.

14. An assistant will certainly be a great advantage to such a person.

15. Moderate exercise following the bath or in connection with it, is advantageous.

16. Yes.

17. Yes.

18. No.



Literary Notes

SEVERAL months ago, Dr. Albert B. Hale, of Chicago, member of the Pan-American Medical Congress, undertook, at the instance of **The Reader**, an examination into the problem of tuberculosis, and, particularly, the efficacy of its treatment by removal of the sufferer to some section of the Southwest. Dr. Hale's investigation, which was searching and thorough, has been completed, and the results of his observations will appear in two articles in *The Reader*, the first in the January number.

It was firmly believed by the Greeks as early as the sixth century B. C. that he who slept in the temple would be surely cured of any physical disorder. Dr. Hugo Magnus, in his new book, "Superstition in Medicine," says that a tablet found in the temple of Æsculapius at Epidaurus tells us that a blind man by the name of Hermon, a native of Thases, had recovered his sight by sleeping in the Epidaurean Temple of Æsculapius. However, it appears that this man Hermon had been a miserable wretch, for he disappeared without having expressed his thanks in hard cash. Naturally such ingratitude provoked the god, and summarily he blinded the thankless individual again. It required a second temple sleep before the god condescended to become helpful once more. But our tablet does not mention anything about the amount of the remuneration paid by our friend Hermon who had been twice cured of blindness, neither is this at all necessary. The miraculous tablet, even without stating the price, doubtless made sufficient impression upon the minds even of the most parsimonious of future patients.

Funk & Wagnalls Company, New York.

I know a lady who has been confined to her couch in a small room for years, and can see only the tops of trees from her restingplace, yet she is so cheerful and hopeful that people go to her with their troubles, and always go away comforted and encouraged.

"Oh, isn't the spring beautiful!" (or summer, autumn, or winter, as the case may be) is her exclamation to callers, even when her body is quivering with pain. Her eyes are always smiling. A light shines through them which was never seen on land or sea.

Will any one say that this woman, who has brought light and cheer to all who know her, is poor, or a failure, simply because she has been confined to that little room all these years? No; she is a greater success than many a rich woman. She has the wealth that is worth while,— the wealth that survives pain, sorrow, and disasters of all kinds,— that does not burn up,— which floods or droughts can not affect,— the inexhaustible wealth of a sunny, cheerful soul. — Success Magazine.

"ADDRESSES FOR YOUNG PEOPLE."

The new book for the youth, entitled "Addresses for Young People," by President C. C. Lewis, of Union College, is ready for delivery. The titles of the addresses are as follows: I. Christian Manliness: 2. Reason, Revelation, and Faith; 3. Manual Training in the Public Schools; 4. Ideals and Ambitions; 5. The Sure Foundation; 6. A Higher Standard of Christian Education; 7. Workmen Approved of God; 8. The Art of Questioning; 9. Acquaintance with God; to. Habit and Education; 11. Behold, He Cometh; 12. The True Sabbath; 13. The Keeping of the Heart. The book is handsomely and durably bound in dark blue cloth, with side and back titles in white. No more appropriate birthday or holiday present for a young man or woman could be procured.

Price, postpaid, \$1.00. Five copies for \$4.00, carriage prepaid. Liberal terms to agents. Address all orders and inquiries to Union College Press, College View, Nebr.

NOTICE

Professor Irving Fisher, of Yale University, desires us to print the following letter: --

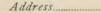
The undersigned is attempting to collect statistics bearing on the question of diet in relation to endurance. His studies are not made in the interest of any dietetic theory, but merely to obtain the facts as shown by the experience of individuals. It is hoped that all who see this, and have had experience with more than one system of diet, will signify their willingness to contribute that experience, whether it has been favorable or unfavorable to any particular theory, and even if they think their own experience of no value. Definite questions will be submitted to those who sign the enclosed statement and send it to

IRVING FISHER,

460 Prospect St., NEW HAVEN, CONN.

The undersigned is willing to state his personal experience as to working power under different dietaries, and will be glad to receive a letter from Mr. Fisher specifying the exact data required.

Name





In replying to advertisements please mention GOOD HEALTH.

PUBLISHERS' DEPARTMENT GOOD HEALTH prominent, the most impor we were reminded over an

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

ANNUAL BANQUET TENDERED THE INTERNATIONAL CHAUTAUQUA ALLI-ANCE, BY THE BATTLE CREEK SANI-TARIUM.

THERE gathered in Chicago recently a small company of thinking men to discuss the successes of the Chautauqua season of '05, and to confer together for plans and methods which should make the Chautauqua season of 'o6 still more successful. These men were just plain men; but if the big, wide, struggling world could have heard their discussions through the days of November 8 and 9, as they sat in convention together, this same discouraged world would have taken heart for another day. The clergy would have known, could it have listened, that it had a live, active partner in the field for the promulgation of the gospel; for, as the chairman asked these plain, thinking men to tell what had been the most successful effort of '05, and what should be the most prominent feature of 'o6, one after another, almost after the fashion of a Methodist class-meeting, held up the blessed Book, and without any especial pledge each to the other, and in the most natural fashion, promised increased vigilance along evangelistic lines for coming years.

One reported that instead of the lecture for the morning hour, he had substituted the service of an evangelist of note; and it would have done any Christian soul good to have heard his earnest, glad report of the conversions brought about by this dedication of the lecture hour to the preaching of the gospel.

Every Chautauqua represented had its Bible work. This seemed to be the most

52

prominent, the most important feature, and we were reminded over and over of their loyalty to that one of the three mottoes upon which Chautauqua was founded,— that motto which reads, "Let us keep our Heavenly Father in the midst."

Then the educators of the country, who so honestly would give to the eager youth who are debarred from education, something larger, more liberal, more generous if it were only possible, would find the way made possible by this same body of plain men. Among them there is one-there may be more, but this one whom we happen to know well, himself born in poverty, longing through his boyhood for an education that came not, stimulated to added effort by his mother's hope for him,- this same boy climbed the rugged road of knowledge through common school, night school, high school, first-grade certificate, third-grade certificate, school teacher, school inspector, professor, and to-day is superintending a Chautauqua that holds out inducements to every eager youth in the land. To this summer Chautauqua they come by the hundreds (twenty thousand on the ground one Sunday) to take the class work which is provided in almost profligate generosity through the days of this summer school out of doors.

Physical culture was not forgotten, athletics were not forgotten, amusements were not forgotten — amusements of a chaste, high, clean sort. Carefully discussed this department was, almost, we might say, prayerfully discussed, and yet there was no dearth of amusement in the planning for the season of 'o6.

At the close of the first day's arduous work this little company of world's benefactors gathered at the Baltimore Café, where tables spread with wholesome food were artistically arranged. Down the long tables large bouquets of meteor roses repeated themselves some half dozen times, and at each plate were roses for the ladies and carnations for the gentlemen. These, with fresh green ferns in profusion, completed the floral decoration of the tables. The following was the bill of fare, and our worthy guests partook with apparent relish: —

(Concinded on sage 54.)





AND THINING P

Our Graduates Earn \$5 to \$10 per Day the Year Round.

IF YOU ARE RECEIVING LESS, WE CAN DOUBLE YOUR EARNING POWER.



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NILES BRYANT, DIRECTOR

THE TUNE-A-PHONE IN OUR TABLE TO THE TUNE A-PHONE IN OUR STATES TO THE TUNE A-PHONE AND A THE A THE

Read what some of Our Graduates Say about it.

Say about 16. ''My best day's carning has been to tune four pianos at \$2 each."-(Rev.) C. D. Nickel-sen, Hood River, Oregon. ''I made \$16 hast week, and \$212 the lasi two months, huning and regulating pianos." -Joseph Gribler, Astoria, Oregon. '' I average \$9 a day."-Simpson Thomas, Aquebogue, N. Y.

I easily make an average of \$5 to \$6 a r."-John T. Hannam, Galt, Ont. day.

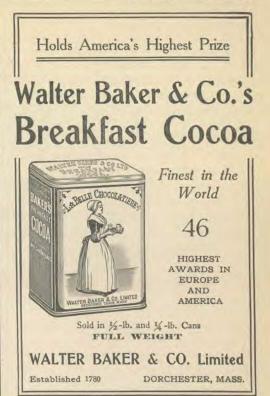
"I made \$100,00 fixing two old planos."--Mrs. S. A. Albertus, Los Angeles, Cal.

"I made \$31.50 the first two weeks, and \$5 to \$12 per day thereafter."-Carey F. Hall, Coffeyville, Kan.

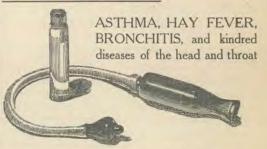
"I am earning good money since I bogan tuning, repairing, etc. Last week I took in \$27,50, and next week I am sure I can raise that."-Bay J. Maguan, Manistee, Mich.

" This profession, I find, is one that is surely not over-crowded, At a pince where there are several older timers, I get more work than I can easily dispose of, from which I realize from \$2.50 to \$3 per instrument."-J. W. Unser, Tiffin, Ohio. LET US MAKE YOU LIKEWISE PROSPEROUS THE NILES BRYANT SCHOOL OF PIANO TUNING 401 Music Hall, Battle Creek, Mich. Send TODAY for free illus-trated, descriptive booklet THE ACTION MODEL





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No-Coffee

At the close of the banquet were many expressions of generous appreciation, both from the guests to the Battle Creek Sanitarium for the feast, and from the management of the Battle Creek Sanitarium to the management of the Baltimore Café for the most excellent service.

The evening was most happily concluded by an entertainment of song and recital by Mrs. Fanette Sargent Haskell, Miss Mary Florence Stevens, and others, after which pleasant relaxation, our friends, the Chautauquans, returned to the arduous labor of finding for the Chautauqua plan larger and, if possible, better programs for 'o6,— rested in mind, and possibly refreshed and strengthened in body because of the evening's rest and pleasure.

CAROLYN GEISEL, M. D.

WITH its latest issue for 1906-'07, the

Physician's Visiting List (Lindsy and Blakiston) reaches the fifty-fifth year of its publication. Its completeness, compactness, and simplicity of arrangement, in which it is excelled by none on the market, ensure for it well-deserved popularity. In addition to the regular annual edition, a perpetual edition is published, without dates, which can be commenced at any time and used until full.

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

We also carry Children's Waists in White or Drab Batiste. Price 50c. Sizes 18 to 28. The size of a child's waist is the measurement at the waistline. To determine the size required, take the measure over the clothing, and deduct two inches.

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WHAT THE SIGNS OF THE TIMES WILL CONTAIN DURING 1906

DAYS OF UNCERTAINTY AND PERPLEXITY.

The past year has been in every department of life one of the most fruitful in earth's long history.

One of the bloodiest wars of modern times changed the map of Asia, opened the Hermit Kingdom, crushed its autonomy, struck the autocracy of Russia from the governments of earth, and completely upset all the calculations of all the nations of Europe.

Great movements are in progress in the political, social, and religious world, which will develop into no one knows what. A scientist recently declared that all scientists except mathematicians are in

a state of "mental chaos," and that scientific men are certain of nothing.

What is true of the scientific world is true of the religious world; men are at sea; the faith of thousands is tottering. In the language of a late statesman, "No one knows what a day may bring forth."

THE LESSONS OF HISTORY.

Said Patrick Henry, the old Revolutionary patriot, "The only lamp by which my feet are guided is the lamp of experience; I know no way of judging of the future but by the past.'

And the past has its lessons; its tremendous lessons, for the thoughtful and observant; lessons which history teaches; lessons which even the thoughtless and careless ought to learn, and so become thoughtful and careful; lessons which the bestial Belshazzar should have learned, according to the prophet, for he knew all the facts which taught the lesson, but he heeded them not. Dan. 5: 17-24.

It certainly behooves the statesmen and reformers of to-day to learn the lessons taught by history.

A BETTER TEACHER.

There is another Teacher; the Most High not only ruleth in the kingdoms of men, but He declares "the end from the beginning, and from ancient times things that are not yet done." Isa. 46:10.

Far transcending the light of experience and history, He has given us the "more sure word of prophecy," which is as a light "shining in a dark place, until the day dawn, and the day-star arise" in the hearts of God's children as they expectantly wait for the coming morning. The Signs of the Times for 1906 will deal with the great lessons of history

for these times.

The Signs of the Times for 1906 will present the great lessons of prophecy for this time.

The Signs of the Times for 1906 will present the great principles of divine truth which make for righteousness and usefulness here, and for an eternally righteous character hereafter.

It is not great men we have to present to our readers, that is, not great in the estimation of men, but great principles and great truths, which are more than men, and which if accepted will make men truly great in the sight of God. Let us tell you of some of the subjects with which the Signs of the Times

will be filled in the year to come: -

WITNESSES IN STONE.

There will be a series of articles on the testimony which archeology presents to the truthfulness of God's Word, testimonies written in brick and stone and buried for centuries until now, confirming the truths which have come down to us from the old Hebrew prophets.

WHAT IS TRUE LIBERTY?

Articles on religious liberty; what has been taught in the lessons of the past. and what is needed to-day.

TIME TABLES OF GOD.

Articles on two of the great prophetic books of the Bible, which outline the world's history, and present before us God's great time-tables of events in the world's onward rush to eternity. These articles will show the fulfilment of prophecy, and will reveal the only true view-point for which history should be





WHAT THE SIGNS OF THE TIMES WILL CONTAIN DURING 1906

studied. The worth of these articles will not rest upon the reputation of the writer or writers; they will so show the fulfilment of the prophecies of God that the articles themselves will be the self-evident testimony of their truthfulness.

A YEAR OF THE TEACHINGS OF JESUS.

Lessons from the life of Jesus covering the whole church year from His birth to His resurrection, illustrated by reproductions from the great masters.

THE MEANING AND FULNESS OF CHRISTIANITY.

There will be articles on the great system of Christianity, the law and the gospel, their relation and interrelation, what sin is, how it can be obliterated in the hearts of humanity, and how it will be swept from the world. Articles on practical Christianity and vital godliness, in the inner life, in the

home, in the church.

THE COMING REIGN OF CHRIST.

Articles which show that this world is rushing on toward its grand and glorious climax of all the ages, to the coming of the King of kings and Lord of Lords, who shall take to Himself His great power and reign. Lessons on the current events of to-day and their bearing on Bible and

prophecy

Articles on the work of Jesus Christ our Lord, in sacrifice, in teaching, in mediation, in judgment, in eternal atonement.

TRUE TEMPERANCE.

Articles on the great temperance question and its vital importance to the world; what true temperance means.

CORRUPTIONS OF THE CHRISTIAN FAITH.

Articles showing the corruptions of the Christian faith, what that faith is, how the corruptions came in until the Dark Ages was upon the world, and pure simple Christianity had well-nigh been lost. These articles will be fortified by the testimony of history.

THE NATURE, INFLUENCE, AND PROGRESS OF THE PAPACY.

One of the mightiest powers in the earth to-day is that of the Papacy. There are those who have thought either that the power of the papal domination had been destroyed by the Reformation, or that the Papacy itself had changed in nature since the Reformation. These articles will show that not only has the nature of the Papacy not changed, but that she is making progress toward a world domination which is wonderful in its rapidity and scope, and that in doing this she is fulfilling prophecy.

VOICES FROM THE MISSION FIELDS.

Do you want to know of the great mission fields by missionaries who are on the ground, and whose hearts are burdened for the field and for the souls in darkness there? There will be articles on China, on Japan, on Korea, on the great Dark Continent, north and south, on India,—all illustrated.

WHAT THE WORLD POWERS OF EUROPE ARE DOING.

Do you want to know what candid, Christian, keen observers see in the world movements among the world powers of Europe, rather than to depend upon the sensational news which the dailies give us? There will be monthly letters in the Signs from the great European news and political centers, London, Paris, Rome.

ARE YOU AMONG THE "ELECT"?

Have you ever been troubled over the doctrine of Election or Foreordina-tion? The right understanding of that glorious truth magnifies God's love and makes the Bible shine with new hope and promised blessing.

BIBLE READINGS.

Do you want to know from its own words what the Bible actually teaches? There will be from twenty to thirty Bible readings on its great important doc-trines, and faith, and hope, and conduct.





WHAT THE SIGNS OF THE TIMES WILL CONTAIN DURING 1906

OUR MONTHLY EXPERIENCE MEETING.

We will not forget the isolated, devoted, earnest Christians who are reading the Signs. There will be a monthly experience meeting for them.

HELP FOR THE MOTHERS.

We will not forget the mothers who are molding the men and women of the world, and whom God would have mold characters for eternity. There will be a monthly mothers' department, the design of which is to be practical help and encouragement to all mothers.

HOME INSTRUCTION.

There will be health talks, helpful hints on hygiene, fresh air, sunshine, proper food and clothing, instructive and helpful stories and incidents for the home circle.

TALKS TO YOUNG MEN AND WOMEN.

There will be short talks to young men and young women, original poems, and many articles on many subjects too numerous to mention.

There will be a full Question Corner of interest to our readers.

Many of these articles before named will be fully illustrated. There will be striking cartoons which will speak the truth.

SPECIAL NUMBERS.

Besides all these there will be Special numbers on the following subjects: -A Special number in the spring of the year on a subject which is threatening the very existence of present governments, and which is now a political power in every nation of the world — Socialism. In this number both sides of Socialism will be treated.

There will be a Resurrection Special, in which the meaning of the resurrection will be set forth.

A Fourth-of-July Special. What the day should mean. A Thanksgiving Special.

A Christmas Special.

OUR CONTRIBUTORS.

A. G. Daniells; Prof. W. W. Prescott; W. A. Spicer; J. A. L. Derby; G. W. Rine; A. T. Jones; L. A. Phippeny; C. P. Bollman; Frederick M. Rossiter, M. D.; W. S. Sadler, M. D.; David Paulson, M. D.; Prof. M. E. Olsen, M. A.; C. T. Everson; John Vuilleumier; "Abdiel;" Mrs. E. G. White; Mrs. S. N. Haskell; Mrs. L. D. Avery-Stuttle; missionaries J. L. Shaw, J. N. Anderson, F. W. Field, W. H. W. S. Hautt and other contributors caught able whom the Wakeham, W. S. Hyatt, and other contributors, equally able, whom we can not now name.

THE SIGNS OF THE TIMES

has a message to give to the world,-a clear, distinct message from the Word of God. It is a "present truth" message for this present time, possessing in itself the potency to save man from himself and his sinful environments.

In no uncertain tones is that message to be given. If the people are to pre-pare for battle, the trumpet must sound in no uncertain tones. Centuries ago God uttered in His Word His trumpet call. (Joel 2:1.) In His own proper time He is giving His message to the world again through the human instruments who are willing to be used of Him. Look over the foregoing again, dear reader; consider the scope of the paper.

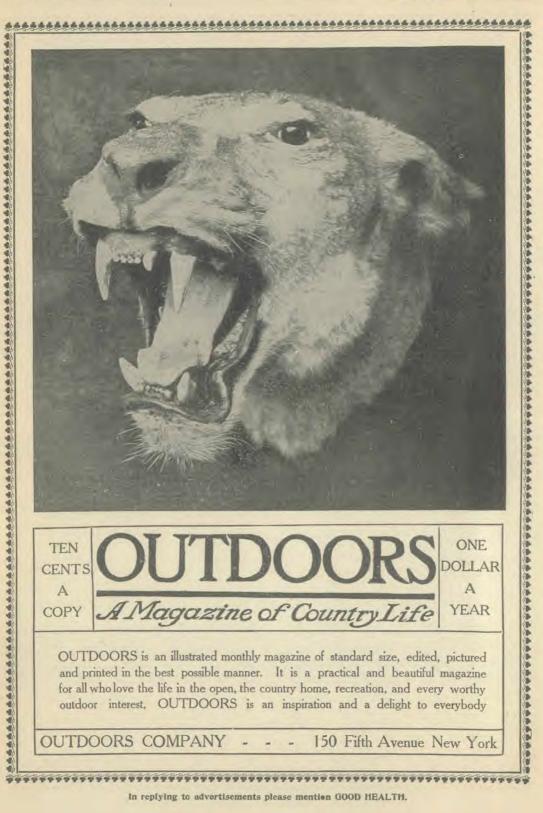
Do you know of another periodical in Christendom that will give you so much of the great and important things of this world, and the world to come?

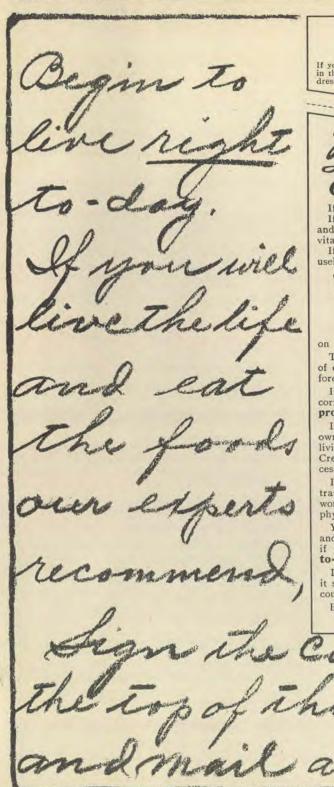
Yet all of the above we hope to present to our readers in the year 1906 in such a way that at the close of the year all who have read the paper will say that we have done more than we promised to do.

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5. The daily average number of guests at the Sanitarium during the months of July and August was 900.



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