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GOOD HEALTH



JANUARY, 1900.

- Modern Troglodytes.
- Attitudes of Children.
— Illustrated.
- Christian Science.
- Nine Thousand Miles without Meat.
- The "Snipe-Shooter's" Game.
- The Reformed Baby.
— Illustrated.
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- The Care of Growing Girls.
- Simplicity of Habits and Long Life.
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- "Pigarians."
- An Anatomical Prophecy.
- Too Much Civilized.

VOL. XXXV.

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

NO. 1.

S.C.W.B.

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NATURAL ATTITUDES.

GOOD HEALTH

A Journal of Hygiene.

VOL. XXXV.

JANUARY, 1900.

NO. 1.

MODERN TROGLODYTES.

BY J. H. KELLOGG, M. D.

STRABO, Herodotus, Aristotle, and other ancient writers tell of various tribes or races of human beings who dwelt in caves.

The writer has seen in Syria, along the shores of the Red Sea, and in other Eastern lands, hundreds of caves which were once inhabited by human beings. In the far West, among the rocky peaks of Arizona, he has climbed into the deserted homes of the cave-dwellers. Most of these dismal, smoke-begrimed places are now deserted by all inhabitants except owls, bats, lizards, and creeping things, which love darkness, and thrive amid the mold and fungi of these holes in the ground; but in the Caucasus and the Jordan valley there are still many cave-dwellers.

The ancient writers described the troglodyte as the most wretched of all human beings,—small of stature, a dwarf, ugly of feature, living on milk, blood, lizards, and creeping things, with a voice “like the screech of an owl” (Herodotus), without natural affection.

The ancient troglodyte has become extinct; only his bones remain to testify to his existence, and of his miserable proportions and general physical and mental inferiority. But a vast multitude of modern troglodytes have taken his place. They are to be found, not among the mountains of the far West or the chalky

hills of the Orient, but in the heart of the great centers of our so-called civilized countries.

There is a broad, brownstone front. It looks like an elegant place for a dwelling. Inside it is provided with all the appliances, conveniences, and luxurious furnishings demanded by our artificial life. But two things essential to vigorous and healthful life are lacking; viz., pure, unadulterated air, and bright, life-imparting sunshine. Heavy curtains shut out the light, and close-fitting doors and windows are an effective barricade against fresh air. Immured in these disease-breeding, though elegant and expensive, homes, thousands of men and women are daily falling victims to maladies which have no terrors for men and women living in the air and in the sun.

Once a year the well-to-do city dweller takes an outing, and comes back brown and hearty. Brain and brawn have laid in a store of energy from the life-breeding air and nerve-toning sunshine; but during all the rest of the year, the city troglodyte lives in the carefully cultivated darkness of his germ-infested city palace.

Multi-millions more of the modern species of troglodytes sleep in rookeries called tenement houses, veritable hotbeds of disease, in which by those most ingenious, life-destroying devices, sewers and “sani-

tary plumbing," the germs and gases emanating from the putrefying excreta of vast armies of human beings are conducted into the very heart of every domicile.

The rich and the poor alike in our modern cities are dwelling under conditions almost identical with those which produced the deformed and degenerate cave-dwellers of the olden time, and the result is the same. From one seventh to one fourth of them all die of that leprous malady, consumption. The rest die prematurely of a thousand other disorders born of darkness and dirt. Far more fortunate is the savage dweller in a tree top or in a hut of boughs.

This dwelling in darkness, and the hundred vicious habits which are the natural outgrowth of an unnatural life, are hurrying a once strong and hardy race down the hill of degeneracy to extinction. The old cave-dweller has gone to oblivion, and the modern troglodyte, the city-dweller, is rapidly following his ancient prototype.

What are the remedies? or is the case hopeless?

The modern tendency to troglodytism is so strong, the movement away from the sunshine and the pure air of the country to the shade and dust, the smoke, germs, and malodors of the city, is so rapidly increasing that it seems doubtful whether any countercurrent, strong enough to turn the tide, can be set in motion; but the remedies are plain enough if they could only be applied. Here are a few prescriptions for troglodytism:—

1. If you are so fortunate as to have a home among green fields and waving trees, don't be induced to exchange it for a cave or a grotto in town, even though the cave may be decorated and adorned, and have a large salary connected with it; it is only a "hole" in a wall, a hold of hateful germs and death-dealing monsters, known as consumption, dyspepsia, Bright's disease,

rheumatism, and a hundred others of the same kin. That town office, with its burnished walls, its leather-cushioned chairs, its elegant desks, its great iron safe full of securities and bonds, may look inviting at a distance, but in fact it is the tomb of health, the grave of liberty and mental peace, a prison cell, a slave's galley. Keep out of it if you can. To move from the country to the town is going from Jerusalem down to Jericho. There are robbers all along the road, and Jericho is a nest of thieves who steal not gold alone, but health of mind and body, contentment, morals, constitution. Don't go.

2. If you are living in a city cave, get out, if possible, to the free and healthful air of the woods. If you can not escape altogether, get away for half a day each week; for a month as often as you can. You may thus very greatly increase your power to endure cave air and shadow. Spend every moment possible out of doors. Tear down the close blinds and shutters, the opaque shades and curtains, and let the glorious sunshine of God into your home and your soul. Sunlight is heaven's best germ destroyer, and cures maladies which no medicine can reach.

3. Open up large holes for the entrance of pure air, and the outlet of impure air, half a square foot for each person in the house, old and young. Bring the fresh air into the halls, and remove it from individual rooms. Air should be warmed before it enters the house. Outlet shafts should be in inside walls, so that they may be heated, thus securing a draft.

4. Resolve not to live a troglodyte, and die a degenerate, a victim of parasitic maladies which claim as victims only the deteriorated man. Determine to make a good fight for life, for long life, for all the life possible, to live a hundred years or more, to do which means only to live naturally, simply, and righteously.



ATTITUDES OF CHILDREN.

BY ANNA CLIFF WHITE.

THE poetry of bodily repose and motion is constantly quoted as a thing of the past; not necessarily, of course, but rather because Dame Fashion has



forgotten the old rules of good sense and freedom which resulted in the graceful movements and perfect control of the body so characteristic of our Roman ancestors. No subject in connection with athletics, Delsarte, and physical culture, children's clubs, schools, and gen-

eral hygiene is so much emphasized as this lost art of correct and beautiful bodily movements.

Forty or fifty years ago children in school sat upon backless benches, swung their legs, straightened up, twisted around, bestrode their seats, and did as they generally pleased upon those benches. Then came an outcry from the public that children's backs were being weakened by this process, and that better provision must be made for supporting their young bodies while in the schoolroom.

To-day the child is thrust in between a desk altogether out of proportion to his size, and a seat which neither fits his back nor adds to his comfort, should his legs be too short to reach the floor or so long that he must needs curl and cramp them into the limited space at his disposal.

"But," says the indignant member of the school board, "do



you expect us to have a seat made to order for each child who attends school? Preposterous!"

Not at all, my dear sir. We expect no board to do either the impossible or the preposterous. We are simply expressing a passing wonder as to what advantage the new system has over the old beyond the matter of a desk upon which the child may lay his slate and into which he may pack his various belongings.

What intelligent and observant teacher in our schools to-day has not looked over her little kingdom at various times, and judging from the different attitudes of her subjects, has not wondered if some of them would not in the end be victims of weak stomachs, curvatures of all kinds, stooped shoulders, and hollow chests.

Notice that boy with one foot planted firmly on the floor and the other curled up somewhere back under his seat. His body is twisted and inclined forward and



his side presses heavily upon the hard edge of the desk. One arm is thrown carelessly across his lap, while the elbow of the other rests upon the desk. His hand supports his head, which is also thrown forward, bringing the shoulders out of their natural plane.

Drawn up before the teacher's desk is a class of little folks who, between the natural restless instincts of child life, the strain of listening to their companions' recitations and preparing their own, and the tired, nervous throb



of overworked childhood, are having a hard time. Look at their varied positions. Watch for a few minutes the changing and restless aspect of the pupils generally, and then wonder, if you can, why so many children dislike to be tied to school and study, and why so many find themselves in later years victims of physical deformities. Aptly here could be applied the old saying, "As the

twig is bent the tree's inclined." How many years of weary suffering might be saved if the children were only more carefully guarded in this respect.

It is not alone in the school that the child is forced into unnatural postures. Very often in the home a younger baby must needs be looked after while the mother is busy, and consequently the little nurse lugs and tugs and carries baby brother or sister of heavy weight and goodly proportions, to the detriment of her own spinal column. There is hardly a child in the world more to be pitied than this eldest girl—prematurely a mother in responsibility—always with one or two



children on her mind, in her arms, or hanging to her skirts. Better far to dress the children with fewer frills and furbelows and sacrifice some luxury in the home, and with the money thus saved pay a maid to carry and look after the children, than to have your oldest daugh-



ter a physical wreck with a crooked back and an unconquerable hatred for young children.

The little boy, too, in his eagerness to help mother, and be her "right hand man," is allowed to strain his muscles and hopelessly deform his pliable body by carrying water, splitting wood, shoveling snow, and generally bearing burdens far too heavy for his years.

From the time a child begins to walk he should be taught to carry himself erect, to sit, to stand, and to walk correctly, so that as he grows older these principles and the results of practicing them will be embodied in his spontaneous movements.

Not only should these things be taught, but they should also be constantly practiced in his presence by those who teach them. Children are born imitators. Parents are their natural teachers. As

father and mother do, so will the child. If father carries his head erect, his chest well up, and steps out with a firm, light tread, baby will surely imitate him, and will strut around with all the ambition of his three years aroused to walk like papa. If mother goes about the house with shoulders back, chest well to the front, hips back, and head properly poised, the little helper who trots after her will imbibe the very influence of her presence, and unconsciously assume the same attitudes and manner. How many times we tell children, "You walk exactly like your father," or "You carry yourself just like your mother." Why not systematically train this gift of mimicry along the lines of hygiene, grace, and freedom while the child is developing and growing? Why not set a personal example rather than carry out arbitrary rules? Children, when left to themselves, and not wrongly trained by either precept or example, are always natural. Nature is always graceful. It is only when a child is confined and restrained that he becomes awkward.

We plead for the children whom we love so dearly. If the little ones were allowed the generous swing of childish fun and freedom for the first ten

or twelve years of their lives, we would have fewer physically deformed people, and many would be spared in after life those



hours of intense agony and years of pain, the seeds of which were sown in early youth.

See to it that your child develops naturally and strongly along all physical lines, and that the foundations are well laid for a correct carriage and proper attitudes in

ordinary work and play, and you will find that at twenty-two there will be little need of precaution in this direction. If children are thus trained, we may expect that future generations will develop at least a modicum of that grace and beauty possessed by our first parents.



CHRISTIAN SCIENCE.

BY J. H. KELLOGG, M. D.

THERE is a great truth in Christian Science. The difficulty is, those who hold this doctrine, while recognizing the fundamental principle that God is all and in all, neglect another very important and practical truth; and that is, that God has given us our senses, our intelligence, our bodies; that he has established certain laws which relate to our well-being, and that it is only by recognizing and obeying these that we can expect to keep in the divine order and in harmony with the God who made us and who dwells within us.

Christian Scientists are not alone in assuring us that God is all and in all. The Bible also tells us this.

God is an ever-present consciousness and intelligence, and it is impossible for man to hide away from him. The fact that God dwells in man does not in any way absolve man from allegiance to the principles of physical righteousness. It does not relieve him from the obligation to obey the laws of his being.

The fact that God is everywhere, that he is omnipotent and all-wise, puts him under obligation to be perfect. I remember that when a boy I used often to be troubled with the idea that God was a great being who required everything of man, while he himself was not under obligation to conform to laws. I could believe in God as being perfect in might

and power, but I could not understand him as being possessed of infinite humility. That idea was a mystery until I read Isa. 43 : 24: "Thou hast made me to serve with thy sins." The prophet uses that language in expostulating with the children of Israel who had wandered away from the path of righteousness; it shows that God is so close to man, so infinitely bound up with him, that man can not get away from Him; he can not separate himself from God, and when he sins, God serves him. Every power that man can show in any movement of the body is nothing but a manifestation of the divine power of God that is in him, so that in this sense God and man are one; God is man's servant, and man is the master; man is given the opportunity of being Godlike by exercising free will and power, and if he uses that free will and power in harmony with God's will, he has health and happiness. But if he uses them against the divine order and against his own well-being, he has unhappiness, distress, and misery.

This is not punishment in the sense in which we understand the term; it is not an arbitrary infliction; it is the necessary result of doing wrong. When a man goes too near the edge of a precipice, and falls over it, and is destroyed, he suffers the result of his own act. So, if a man violates the laws of health, he suffers the inevitable consequences of his own sins. This is the way God deals with man. What he suffers in consequence of wrongdoing is the simple and necessary result of what he does. But God being in him, whatever he suffers, God suffers with him. In all his diseases He suffers with him.

Christian Scientists do not seem to recognize the fact that the human will is just as tangible and real as is the divine will; that the human body is a manifestation of God in the flesh; that man, in all his relations to his fellow men and to God, is

either keeping in the divine order and in harmony with God, or going out of the divine order and contrary to God.

Disease is simply a condition which results from going wrong, from being out of the divine order. In a certain sense, disease is not an evil, as the Christian Scientist claims, but a good.

Suppose we take a simple illustration of this idea. When a person gets a sliver in his finger, there is pain and swelling in that place; after a while the matter which forms around the sliver, lifts it out. This is nature's process of getting rid of the sliver; the pain is incidental to the effort of nature. If the least little speck of dust gets into your eye, how it smarts and burns; the tears flow, the eye becomes red, the lid closes, and you are tempted to think you would be a great deal better off if your eye did not smart when specks got into it. But as a matter of fact, how much better off would you be? Your eye would soon be full of specks and cinders, its transparency would disappear, and it would finally be of no service whatever. Pain, then, is a conservative process; it is a necessary and actual fact, by which the body is warned against evil.

Disease is a remedial process. The same power that is within us and that cures us is the power that makes us sick, and illness is the process by which we get well. Sickness and suffering are only incidental to the remedial process.

People do not get well in consequence of any sort of hocus-pocus, or magic. No one can effect a cure by hiding away in a corner and "fixing his mind upon your case," or by giving you an "absent treatment." This is a kind of magic unworthy of a Christian age, and there is no foundation for faith in it.

The power in which we must have faith if we would be well is the creative and curative power which exists in every living thing.

This healing power is not away off outside of us and within the reach of just one certain class of persons. The only true healing power in all the universe is God, the great intelligence and force that is behind everything, beneath everything, back of everything, in all existence. That power is in you, and if you are sick, it is because God is trying to do something for you that you can not do for yourself. If you are weary, it is because you need rest. If you are suffering pain, it is because you have been doing something that will destroy you if you persist in your course. Pain, weariness, disease, then, are our good friends. They are the agents by which God endeavors to lead us back into the right road.

The truth, "Whatsoever a man soweth, that shall he also reap," applies to physical no less than to spiritual sowings. Believe this, for there is nothing more certain. Sow to health, cultivate health, and health will spring up and grow in you. Cultivate the tree of health, and it will bear fruit, and you will find yourself improving physically year by year. Health may be cultivated upon the same principles that corn is cultivated. Make up your mind what sort of food will bring about health, and eat that food. Decide what is best to drink, and drink it. Find out what is the right exercise for you, or the right work, and do it. By thus sowing health, you will reap a rich harvest of health and happiness and peace.

LOVE'S BEST WISH.

BY FANNIE E. BOLTON.

WHAT would Love wish thee on this New Year's morn ?

Not wealth or power or fame or beauty's treasure
For comes a day when all these gifts are gone,
And then the heart's bereft of all their pleasure.
No; Love would wish thee better gifts than these,—
Gifts of delight the truly great inherit,—
The lowly heart that bids thee learn to please,
The tenderness that makes a loving spirit.

Love, sitting in her costly palace here,
Counts o'er her treasures on this New Year's morning,

And bids thee choose, and take without a fear
The precious things that make a soul's adorning.
For here is Wisdom that will crown thy brow,
And here is Peace to sandal thee for racing,
And immortelles to wear as white as snow,
And pearls of truth and gems of love for gracing.

Robe thee, beloved, in this costly splendor,
So freely given that men pass it, scorning;
Yet look, and see with eyes grown dim and tender
How priceless is this matchless soul-adorning.

Bathe thee, and let the unguent perfume's fragrance

Permeate all thy soul and breathe up sweetness,
And from my palace pass in royal radiance
As king or queen in robes of Love's completeness.

Think you men will not know your state, beloved ?
Or see your hidden robes of inner splendor ?

Ah, surely will their beauty be approvèd,
And the king's manners smile out rare and tender.
E'en as a flower is traced, though e'er so slowly,
By subtile breath that permeates the morning,
So men will know the spirit that is holy,
And wist of all the inner heart's adorning.

Think you these robes intangible, unreal ?

These gems devoid of value in the testing ?
Ah, wear them, try them. Let thy being feel
The hidden glory of their manifesting.
And thou shalt be as one in training tender
For courtly presentation and reception,
And with thy God thou'lt prize thy robes of splendor
As real and glorious beyond conception.

NINE THOUSAND MILES WITHOUT MEAT.

BY MRS. S. M. I. HENRY.

NOT that I had eaten flesh up to the time of departure, but since one of the live questions of the day is, "What shall a traveler, who must be hygienic or die, eat and drink?" and as I have just returned from a trip of more than nine thousand miles, over a territory extending from south to north, from east to west, over mountain and many a plain,—alkali at that,—including stoppages in all sorts of places, I have laid up an experience which may bring encouragement to some dyspeptic tourist, or perplexed house-keeper, who, because she lives in an out-of-the-way place, and can not obtain the dainty preparations that make health combinations easy, is tempted to give it all up, and go back to the old pork-and-beans ways of our fathers.

It was suggested that I write on "The Trials of a Hygienic Tourist," but since my trials have all been translated into triumphs, working out a far more and exceeding weight of earnest conviction that healthful living is possible under almost impossible circumstances, I have chosen to invite my readers to an optimistic view from an on-the-wing outlook.

First of all, before starting on a journey, it is well to do whatever one can to anticipate any emergency which may arise. As one would provide current coin for his purse, so let him to the extent of his ability prepare for his way-side lunches.

A small alcohol burner, with an aluminum or tin cup, will make it possible to have thoroughly cooked water anywhere, and also to steam a few figs, or prepare malted nuts and fruit-coco, or with nut butter and protose to make a delicious stew, which, with the addition of zwieback, will constitute a dish savory

and satisfying enough for even a beef eater.

Of course one must be willing to be satisfied with a few things, but those few things will be relished all the more for being few, as the journey proceeds.

A store of cracked nuts in a glass jar or tin can is a very convenient addition to the lunch basket, and on a long journey one can have the plenty of time that is requisite for their mastication.

If you are on a through train to some distant point, you can in the morning ask the porter of your Pullman or tourist car to bring you a quart of boiling water, a table, and to allow the curtains of your berth to hang after he has made it up. Thus shut in from observation you can prepare your little warm breakfast, and enjoy it to your heart's content. With one such warm meal you can be comfortable all the rest of the day with fruit and the cold and dry contents of your basket.

I have not once during this journey of five months found it necessary to seek any help from dining-car or restaurant supplies toward making out my menu for the day.

I am aware, however, that I have not yet touched the point where most traveling laborers find the greatest difficulty.

It has been more than once suggested to me that on the road one can be comparatively independent, but when one must be entertained for a week, and when he goes to the table of his hostess, the trials of the "health reformer" inevitably begin; and yet one may have conquest, real genuine triumph, even when a savory soup, followed by a great beef roast, oyster patties, and mince pie, is brought to the table; for one can take the crackers, the whole-wheat bread, the

fruit that nearly always accompanies such a dinner, and fill out the course with a dish of conversation flavored with such tact and gentle courtesy as shall make it possible to exhibit some of the samples which he "happens" to have in his lunch basket annex (his trunk, of course), and which will insure that from that time he will have at every meal something especially provided for him, even if the rest of the family still stay by the fleshpots.

At one place where I was entertained on a former trip, the first meal offered nothing for me but some stewed fruit; for the bread was warm, there were no crackers, and all the other food was so seasoned with things that, knowing what I do, I would not take into my stomach on any account, that I was left with no resource but almost total abstinence. I have learned, however, to be content even with abstinence so long as it is likely to be necessary in any place to which I may go. There are worse things than going without food for one or two or even more meals, especially if one's work makes a heavy demand on brain and nerve.

In this instance, as also in many others, the question was asked:—

"But what in the world do you eat?"

"I eat that which is good according to the Scripture," I replied.

"I should like to taste some of it," said my hostess, "for it is a long time since I have had anything good to eat."

"Would you, truly?" I asked. "Then if you will excuse me a moment, and have a pitcher of boiling water brought to the table, I will get a dinner for you and me that will make all the rest of the family wish to join us."

Everybody laughed, and several pleasantries were exchanged before I went to my room for supplies and also after my return, while I sat preparing malted nuts, almond cream with zwieback, and nuttolen sandwiches (for which I had found

boldness to ask a plate of cold bread), out of which, with a dessert of canned peaches and almond cream, we two, my hostess and I, made a dinner that she declared she enjoyed as she had not any meal in many a day. And I must add that I should have run the risk of going hungry after all the pains I had taken, because of the "samples" which I had to serve, only that I still had sufficient to go around.

The result of this little impromptu demonstration was that from that time I had free access to the kitchen, with the stimulus of constant questioning, for the preparation of the most dainty hygienic dishes which I could desire, with no lack of companionship in partaking of them, together with ample opportunity to "talk health" to an entire family of embryo invalids, as well as the satisfaction of having the family persuade the grocer to ask for the address of the food company from which I had supplied myself with the material for such delightful "things to eat."

But I am aware that I have not yet come to the real hard bedrock of offense as regards the food problem,— "What if you had not had access to that lunch basket annex? What if you could not possibly afford the nut preparations; and fruit should be impossible? What if you were left to the bare and rugged 'farm produce' for your supplies,— what then?"

As to the fruit, I believe that this important part of the menu need not be lacking. For myself, when I have been where it was not served on the table, I have bought it in the market for myself, have picked my first course from such foods on the table as I could use, and then gone to my room as soon as possible, and eaten my fruit for the finish.

Fruit can be obtained if one realizes the necessity for it sufficiently to make it of importance. Dried apricots can be made delicious without stewing. Wash

thoroughly (if you should be reduced to such a necessity, the paper bag in which you received them will serve for a wash-dish, provided you are careful and quick in your movements), put them in the glass fruit jar which you should always carry, cover with water, add sugar or not, according to your taste and hygienic convictions, and the apricots will be as tender and delicious as need be.

I have been a few times reduced to what seemed an extremity,—have come close enough to the border line of dietetic despair to know just how it might be with one who could not find a way out; but I have not only found a way out for myself, but have been able to see far enough beyond the limits of my own necessities to know that to one who has determined to be led neither by his stomach nor by

the sight of his eyes in the matter of food, but who will at all hazards of self-denial keep himself to those things that are at least wholesome, there is no insurmountable difficulty, at least in our own country, to hygienic living, even while on the wing.

While I have a few times been left to wonder in just what condition I should arrive at my journey's end if there should not be a change in my favor, yet the necessary changes have always come in time; and with just one day at home for rest, I am at my desk, in excellent condition for the work that has piled up about me; in fact, I should not hesitate to take on board the same little stock of "samples," and start to-morrow on another nine-thousand-mile jaunt if the call to do so were clear and definite enough to warrant the undertaking.

THE "SNIPE-SHOOTER'S" GAME.

BY DAVID PAULSON, M. D.

ALMOST every morning just at day-break in Chicago, when most people are not supposed to be giving any special attention to what is transpiring on the streets, the "snipe-shooters" are abroad. They are little fellows about the size of the average newsboy. A hand basket comprises their outfit. With keen eye they search in every crack and crevice of the mud and filth of the streets. What they seek is nothing more or less than dirty, muddy cigar stubs reeking with the filth of the streets and alive with germs.

One of the teachers in the public schools who has given a great deal of attention to this subject has seen the boys pick up tobacco quids as well as stubs. They all help to fill the basket, and the quids are only a little more vile than the stubs.

The managers of this industry are evidently in the home-finding business as

well, for forty-eight of these children, girls and boys ranging in age from five to fourteen years, were counted in one room measuring only sixteen feet square. In this room they eat and sleep. The task required of each is to hand over three pounds of stubs a day. If this amount is not secured, the child is whipped.

As to what is being done with the harvest brought in by these thousand children, I am indebted to the Rev. Wallace R. Struble, leader of the Willard Hall noon-day meetings, for this information:—

"The cigar stubs are 'treated' by cutting off the charred ends, repacking them in bales, and then distributing them to illicit manufacturers of cheap cigars, cigarettes, and snuff. Undoubtedly many thousand pounds of the stuff get back into the markets in the form of five-cent cigars, 'Turkish' or 'Egyptian' cigarettes, and snuff. This is a prolific source

of disease, since any thoughtful person will see at once that such stuff must swarm with disease germs of the most abhorrent sort. Many thousands of pounds of stubs are shipped to a conscienceless firm in an adjoining city, which treats them, and re-packs them in the form of smoking and chewing tobacco."

An ordinance is now before the city council to prohibit this nefarious busi-

ness, but undoubtedly the most rational and effective means of stopping it would be for every tobacco user to break himself of this vile habit. Every cigar is foul from center to circumference. The additional plastering over of Chicago dirt, mud, and human saliva that it receives only intensifies the subtle poison originally locked up in its harmless-looking body.

THE REFORMED BABY.

BY MARY HENRY ROSSITER.

I.

THE baby was crying at the top of his voice. It was not a loud voice, for he was only five days old, but there is no denying he did the best he could. The queer thing was that nobody seemed to pay any attention; the midnight darkness and quiet remained undisturbed.

True, the helpless little woman on the bed wept silently, and strained her eyes toward the corner where the small crib stood; and the young father in the next room woke up and wondered what under heaven was the matter with Son; and Grandma Calkins lay awake upstairs, longing to go down and take the little one in her arms. The nurse sat on the edge of her cot in the dark, and soliloquized impatiently: "Those people will just be the death of that poor little darling, with their new-fangled notions about child culture. The very idea of not taking up the baby when it cries! When on earth would you take it up, then? When it's fast asleep and snoring?" and her upper lip curled in an expression of scorn that was worthy of a better light.

But Sister Caroline got up, slipped on a wrapper, and sat down by the window "to meditate," since she could not sleep. Besides, she was interested to

know whether that foolish little Susie would have enough strength of character not to give in to that dear little embryo intelligence whose whole future perhaps depended on this night's lesson.

Meanwhile the baby continued to cry. From intermittent wailing the sound had risen to steady screams. The mother listened, herself ready to scream. She held her breath when the baby caught his, and cried half aloud, "O, I never can bear it, never, poor little baby."

Suddenly the door of the stairway opened softly, and grandma descended upon the crib, exclaiming: "There *must* be a pin sticking into him. I'm going to see,—grandma's own dear little precious."

At the same instant Mr. George Milton struck a match in the parlor, lighted a candle, and rushed through the portières, declaring, "It's a beastly shame to let the baby howl so, system or no system. You little rascal, what on earth ails you?" and he likewise descended upon the crib.

"Stop," commanded a voice from the dining room. "You mustn't touch him until he stops crying. You may ruin his entire career," and Miss Caroline en-

tered the room with a candle in one hand and her favorite volume on child culture in the other. She placed the candle upon the bureau, and opening the volume, read as follows: 'Never go near the baby while he is crying. When he has stopped entirely and has been quiet long enough to give assurance of this fact, approach him cheerfully with a smile and take him up leisurely, as a matter of course, with no agitation in face or manner. In this way the baby will learn very quickly what we all must, sooner or later, that nothing is to be gained in this world by crying.'

"That's all very well, theoretically," said her brother, "but it's a condition not a theory, that confronts us. Here it is midnight, and the baby's been yelling an hour at least, and no sign of a let up. *You* don't know what's the matter with him, and *I* don't know, and his grandmother does n't know. It seems to me we would better investigate before we push this thing too far. It is n't as if he were a thousand years old."

"He's been crying just fifteen minutes by the clock," said Caroline.

"Is that all?" exclaimed Mrs. Milton. "Anyway, he's hungry, and I want him."

"It is n't time for him to be hungry for half an hour yet," said Caroline, looking at the clock.

"But he threw up his last meal," put in the nurse, who had ventured in after the others. "I am sure he's wet, too."

"'Keep a baby warm and dry and full,'" said grandma, "'and he won't cry.' A famous physician said that, and I always found it true with my babies."

"There is n't the least authority for such a thing in Groebel," said Caroline.

"Just be patient a little. If you're only firm with the baby at the start, you'll never have any trouble afterward, and I am sure it's worth trying. It won't hurt him to cry a little, and when he really stops, you can make him 'warm and dry and full' to your heart's content. I'll go and get a hot water bag ready while the rest of you wait," and Miss Caroline departed.

"I'd like to go out and chop wood, myself," said George, as he and Mrs. Calkins sank down on the edge of Mrs. Milton's bed. Then he added grimly, "Bawl it out, Son, I hope it won't take you all night."

"There, I think he's going to stop,"



said the grandmother, suddenly starting forward.

But no, before she could reach the little bed, the screams began again louder than ever.

"O, he'll burst a blood vessel and kill himself," cried the mother, leaning forward on her elbow.

"Lie still, Susie," enjoined the husband. "Babies can't kill themselves by crying. It's nothing but a fit of temper. However, I'll take him up for you as soon as he gives me a chance. There, see, he's quieting down. I'll be all ready to

grab him as soon as my terror of his Aunt Caroline will permit."

"Poor little dear," said Mrs. Calkins, adjusting her spectacles nervously; "hear how his voice quivers. I am sure he's suffering. There, he's really stopped now," and she bent over the bed eagerly.

Just then a fresh wail arose from within, and she started back, falling against her son-in-law, who had likewise rushed forward.

"You were n't quite quick enough, mother. You ought to get him up before he has a chance to begin again. Now the next time he lets up, I'll be ready," and the young man stationed himself beside the baby's bed, while the grandmother stood near, almost trembling.

"What an awful temper," exclaimed Mr. Milton, adding in an undertone to Mrs. Calkins, "it will just be the death of Susie. You can see that she's all strung up. I'm going to get the baby out of there on any excuse, for she can't stand it. There, he's stopped at last. Here goes," and he pulled off the soft comforter lying across the crib, and in another moment would have had the little one in his arms had not his sister, entering at this instant, laid her hand upon his arm, saying calmly, "No, he hasn't stopped. He's simply holding his breath. That's a trick they all get. See there," as a long gasp and a pitiful sobbing followed the momentary pause.

"But, great heavens, woman, we can't stand around here all night, listening to a howling infant. Besides, we have got to think of the neighbors. Jones or Sheldon will be coming over here with a shotgun; or worse still, Mrs. Sheldon will be tapping at the back door with a dose of paregoric or some soothing syrup."

"The neighbors all know our plan for training Nathaniel Calkins," said Caroline loftily, "for I explained it carefully at the last Maternity Circle. So *they* won't

interfere. I'm more afraid of Susie here, or of Susie's husband. Susie'll give in to the baby, and you'll give in to her, and there'll be an end of discipline. And a great pity, too!"

For a few breaths the baby's crying had been more subdued and seemed to be taking a sleepy tone. But now his voice rose high again, and broke into a series of short, sharp expulsions. At this alarming sound, coupled with the mention of discipline, the mother, who had fallen back upon her pillow at the quiet crying, raised herself again, and exclaimed excitedly, "Well, I, for one, think it's beginning pretty young to discipline a baby five days old. You precious little darling, you've cried long enough. Mother, dear, give him to me. I'm sure he'd never cry like that for nothing."

Caroline threw up her arms in despair. The day was almost lost. The System would probably have been shattered forever if the baby had not at that moment stopped crying. He did not stop gradually, but broke off suddenly, apparently in the very middle of the loudest and longest scream he had yet uttered.

There was an astonished momentary silence. Then Caroline advanced upon the crib in a dignified manner, saying, "Now I will see if his feet are cold."

"More likely he's in a perfect sweat," said George.

"Little babies like that can't sweat," said the grandmother. "They don't begin to sweat until they are six weeks old."

"Can't sweat! Jiminy, if I'd 'a' known that I would n't have let him cry so long," said George. "Why, the poor little thing is as red as a beet."

"Babies a week old are n't usually blonde," said Caroline, sarcastically. "No," she continued, "his feet are n't cold; in fact, he's as hot as can be all over. I'm afraid to take him for fear he'll catch cold."

"But we must do something, now he's stopped crying," said grandma. "Let me hold him over my shoulder awhile."

"Give him a chromo," said his father. "He certainly deserves it after keeping us all awake half the night for no earthly reason."

"I think you would better give him to me," said his mother. "He's hungry."

"Oh, yes, it is time now," said Caroline.

"Of course," said grandma.

"Pig!" said George.

And they gave him to his mother.

II.

"Quick, quick! Mother! Caroline! O do hurry. Baby darling, what is the matter? O, how terrible!"

At these excited exclamations from Susie, mingled with screams of pain from the baby, Mrs. Calkins and Caroline rushed from the dining room where they were just sitting down to dinner, into the nursery.

Susie was holding the baby on her lap. "O mother," she said, "what can be the matter? Why, he stopped right in the midst of his supper and gave the most awful scream, and then a great lot of gas came up out of his mouth, and now just see him drawing up his little legs. O my precious little treasure. What shall mamma do for her sweet darling?" and she fell to kissing the baby frantically.

"Come, Susie, don't have a spasm," said Caroline. "It's nothing on earth but the colic, and the baby is hardly in a condition to appreciate kisses. He should be put to bed at once with a hot water bag, and let alone."

"Nothing but the colic! Put him to bed and leave him alone! Why, you heartless thing. You poor, little, abused baby. Mamma will never put you down in the world, never. Mother, dear, can't you think of something to do?"

"Of course I can, if I'm asked," said grandma. "Give the baby to me. I'll make him some catnip tea, bless his dear little heart, and hold him in my lap until it's ready."

"Catnip tea!" cried both the young women in one breath. "Mercy, mother,"

said Susie, "nobody gives babies catnip tea now. It's just as bad as poison."

"Well, it is n't," said the old lady. "You can do as you like, of course; but I brought up children before you were born, and gave every one of them catnip tea."

"What's all this rumpus?" cried the head of the family, coming in at this moment. "Are n't you folks ever coming to dinner? Every blamed thing will be stone cold."

"Dinner? when the baby is sick?" exclaimed Susie. "How can you think of such a thing?"

"Sick nothing. He can't be very sick," declared George, "when he can yell like that. Jones and I heard him halfway down the street. It's nothing but spunk. I thought you weren't going to hold him when he cries. I'd like to know what you call that. You're actually squeezing him."

"But he's sick, I tell you, George dear, and Caroline wants to put him to bed all alone, and mother wants to give him catnip tea, and I don't know what to do."

"Throw him in the well," suggested George, "or send for Dr. Green."

"Which would be equivalent," said Caroline. "It is absurd to give little babies opium and calomel and camphor. You must co-operate with nature, act in harmony with her, if you want the baby to grow and thrive. Don't you remember that passage I read you from Drayton, where he says that nature is all the time

trying to heal us, and that if we put ourselves in harmony with the great laws of the universe, we shall live above the level of disease?"

"For heaven's sake, Caroline, stop," implored Susie, "you drive me crazy. Why don't you do something instead of talking about great theories? You are n't even getting any hot water, to say nothing of showing a little sympathy for the poor baby. Here, mother, you take him, and I'll see if I can do something for him," and Susie hurried off to the kitchen.

"There's plenty of hot water, and the bag is hanging on the nail in the pantry," Caroline called after her.

"The catnip is done up in an old linen handkerchief in my cupboard," said grandma.

"And the well is right out by the back door, since you won't have the doctor," added George.

"So the baby has scored one on the family," he said, as he watched his mother-in-law rocking his child on her knees, and trotting him gently, "to bring up the gas," she said.

"He would be much better off lying still in bed," said Caroline. "This idea people seem to have that the worse a baby feels the more it must be tumbled about is a relic of the days when they gave the little ones pork rinds to suck, and dosed

them with paregoric for every ailment."

"It can't hurt the kid to be rocked by his grandmother," said Mr. Milton. "What I object to is his being jounced around and turned upside down and inside out by every visitor that comes along."

"But you can't possibly prevent that," said Mrs. Calkins.

"Yes, I can," said her son-in-law. "I'm going to have a sign printed, 'Touch not, taste not, handle not,' and

put up over his crib. Then when Aunt Susan and Cousin Maria and Grannie Edwards and all the old maids in the neighborhood come to see the son of the boy who was the terror of their childhood, they won't be spoiling

the effect of his Aunt Caroline's teaching."

"Don't be too sure about that," said Caroline. "Most people treat the idea of training a baby as something extremely humorous. They think it clever to outwit the mother and father if they can, and give the poor baby a chance."

"You dreadful creatures," cried Susie, returning with the hot water bag, "to stand there calmly discussing things when the poor baby is suffering so."

"What would you have us do?" said George. "We can't all tear around like mad, getting hot water bags, and acting generally like a young cow with her first calf on the other side of the fence."



"I don't, either, you mean thing," said Susie.

"We're the ones who are suffering," said George. "The dinner is worse spoiled than the baby, and I'm as hungry as a bear. We can't even 'discuss things' in peace, the young one howls so."

"He is n't howling at all," said Susie. "Just look at the poor little fellow. See that great big tear rolling down his cheek."

"I didn't know such young children ever shed tears," said Caroline.

"They do when they have the colic," said grandma.

Just then a new voice was heard: "Merciful goodness! what under the sun are you doing to that baby?" cried Mrs. Jones from next door, who stood aghast in the middle of the room, with a bottle of soothing syrup in one hand and a spoon in the other.

Susie stopped in the act of putting the hot water bag under the baby, who still lay on his stomach, across his grandmother's lap. Everybody stared.

"What have you given him?" demanded Mrs. Jones.

"Nothing yet," said Susie meekly.

"'Nothing yet!' Why it's a good half hour since Jones came home to dinner and said the baby was crying as if he had the colic. If I'd 'a' known that, I wouldn't have waited even to take up the victuals. I've brought some nice hot tea and some soothing syrup, so if one don't work, the other will. Here, give me the baby."

"Well, if you would n't give him catnip, you need n't give him any of that other stuff," said grandma, taking umbrage.

"He is not going to have any kind of herb tea so long as I am his aunt," said Caroline. "Give him to me, Susie. I'll put him to bed."

"No, I sha'n't," said Susie, suddenly. "I sha'n't give him to anybody, or let

anybody do a thing to him. I don't believe any of you know what to do. You all have pet theories you want to carry out, and you don't care a fig for the baby. I'm just going to hold him, and hug him and love him, and he'll get well in spite of you, so there," and Susie snatched her baby to her arms, sat down in her little rocking-chair, clasped the child close, and began to rock furiously and to sing in a high voice,—

"There'll be no sorrow there."

At this everybody laughed, even Mrs. Jones, and the baby, who, in the natural course of alimentary events, had got rid of his colic without foreign assistance, looked into his mother's face and cooed.

"My wife feels abused, you see, Mrs. Jones," said George, "because Caroline objects to her rocking the baby. It interferes with 'Our System' of child culture, you know. But Susie's got one on Caroline now, haven't you, dear? Say, give us those verses you were crying over the other day. She's read them to me three times and boohooed every time, so she must know them by heart now. Don't you, Susie?"

"Yes, I do," said Susie, "and mother thinks they are sweet, too," and she recited the following with pathetic little quavers in her voice, while she hugged the baby tighter and tighter, and rocked faster and faster:—

"You may tear away the rockers from the cradle
if you will,
And beckon to the sandman, with the baby lying
still;
But yet there's something lacking, and you listen
with a sigh,
For you seem to hear the echo of the mother's
lullaby.

"'But rocking spoils a baby,' the modern mothers
say;
'They're better off without it, if you just begin that
way.'
You can do without the cradle and the crooning if
you try,

But you can not spare the echo of your mother's lullaby.

"He's crying? Never mind it; 'twill make his lungs expand;

You'll have a model baby if you keep the upper hand."

Close all the doors upon him that you may not hear him cry,

But you can't shut out the echo of your mother's lullaby."

"Why, you silly little goose," said Caroline, as Susie broke down at the end, and sobbed hysterically. "Nobody ever said you could n't rock your baby. Only

it's better for him if you don't. And you have more time yourself for other things."

"But I don't want any more time," sobbed Susie. "I want to hold him in my arms and hug him, and he's growing so fast that pretty soon I sha'n't have any baby at all. He'll be a great big bo-oy."

This awful thought made Susie speechless, and as the colic had evidently disappeared for good, mother and son retired to the bedroom, for the baby had gone to sleep, and the rest of the family went to dinner.

III.

"Heavens and earth, woman, are you deaf?" cried Mrs. Gregory, bursting into the Milton cottage one day when Nathaniel Calkins was about three months old, but recoiling on the threshold as she

her feet, imploring, "Don't, don't, don't go near him,—there, you have done it now, in spite of everything."

Mrs. Gregory put down the baby in astonishment. Mrs. Milton fell back into her chair and broke into wild sobs, while Master Nathaniel at this surprising procedure paused an instant, and then settled down systematically to split the roof.

"Are you raving crazy?" demanded Mrs. Gregory. "What are you letting him cry for, anyway?"

"To amuse myself, you seem to think," said Susie.

"Well, it's perfectly awful, your goings on with that baby, from all accounts," said Mrs. Gregory. "Why, Mrs. Jones told my sister that he cried two hours straight one night when he was only three weeks old, and nobody lifted a fin-

ger to touch him."

"Yes, but he's never cried at night since," said Mrs. Milton, "and before that he cried all the time. It was hard, I'll admit, but that converted me to letting him alone when he cries. I don't mean when he first wakes up and is hungry or tired or something like that, but I mean when he has just been put down,



saw Mrs. Milton sitting quietly engaged in some work, while the baby was screaming lustily from the couch.

"No," answered Susie, in a constrained voice. Mrs. Gregory rushed across the room, crying, "You poor little darling, whatever is the matter?" and in a moment more would have had the child in her arms had not Mrs. Milton jumped to

or is cross or sick or sleepy, and you've done everything you possibly can for him."

"But it hurts such little babies to cry so hard," said Mrs. Gregory.

"Oh, I know it," said Susie with fervor, "and it hurts their mothers, too. I never could stand it if I did n't see how well it works. You would hardly believe it. I could n't at first. But the baby never has more than two or three crying spells over the same thing, and then he is just lovely afterward. Oh, I am learning lots about babies, thanks to my mother and Sister Caroline and baby himself. Mother and Caroline balance each other, and I sit in the middle.

"There, you see, he has stopped already. I did n't want you to go to him, for that only makes him all the worse. He knows a lot already, he does, mamma's own little sweetheart," and she took the baby's tiny hands, while he responded with that spasmodic and sporadic smile so dear to the heart of every young mother.

"Well, I must say that you have more courage than I would," said Mrs. Gregory. "It makes me just wild to hear a baby cry. I don't know what I should do if I had one of my own."

"Oh, but I have n't any courage at all by myself," said Susie. "But I have seen how it works, and it's nice to have a baby that goes to sleep by the clock and wakes up by the clock, and behaves just lovely all the time."

"As just now, for instance," suggested Mrs. Gregory.

Susie blushed and stammered. "Well, you see, that was one of the times,—" then her face brightened and she rushed to the door, saying, "Here they are now. Caroline, do hurry up and come and tell Mrs. Gregory all about Nathaniel's system."

"Which? his digestive system, his nervous system, his circulatory system, his

system of working his ma and his dad, or what?" laughed George.

"Oh, now, you horrid thing, you know what I mean," said Susie. "I mean Caroline's system for bringing him up. I was thinking just now of punishing him."

"Punishing him? you cruel mother," said her husband mockingly. "And him not three months old. And what were you going to do to him, — take him out to the barn and thrash him?"

"Oh, now, George, you know what I mean," expostulated Susie. "I want Caroline to tell Mrs. Gregory our plan for punishing him, or training him when he is naughty, so we won't have to whip him."

"As if such a little baby could be naughty," said Mrs. Gregory.

"Of course, he is n't, ever," said Susie, feeling ready to cry, "but he does have a will of his own, and Caroline thinks — but you tell her, Caroline. I can't make it sound straight."

"To say nothing of making it go straight," said her husband.

"It is just this," said Caroline. "Our plan is to teach the baby regular physical habits first. Incidentally, his moral nature will receive the proper bent. We never yield to his little tempers and whims, but try to teach him self-control and firmness by exercising them ourselves. We take him up and hold him and feed him when it is reasonable and the proper time, but under no circumstances do we do so just because he cries."

"Yes, you see," put in Susie, "I had just laid him down after holding him nearly half an hour, when Mrs. Gregory came in, and she thought I was cruel."

"That is n't so strange," said Caroline. "It seems to be human nature to pet and humor and spoil little babies. But when they are three or four years old, how many mothers slap and scold their children for exhibiting the very characteristics that were developed by the spoiling. It is kindness

to boys and girls not to be too yielding with babies. I think we should be very careful to see that we are not governed by our own tempers and caprices in disciplining our children."

"Our children 'is good," said George. "For my part I am firmly convinced that no parent has any business whipping a child without first preparing himself by soaking his feet in hot water for half an hour, with a cold compress on his head."

"How absurd you are," said his wife.

"Well," said Mrs. Gregory, "I've come to the conclusion that your baby deserves his name."

"His name?" echoed Susie. "Why, his name is Nathaniel Calkins Milton. There's no deserving about it."

"Oh, but he has another name. Have n't you heard it?" asked Mrs. Gregory.

"They call him 'Milton's Little Red Head' at the club," said George.

"Well, they need n't," said Susie. "His hair is n't red. It's just the loveliest brown."

"No," said Mrs. Gregory, "it is n't 'Red Head,' or 'Blue Eyes,' or 'Cherub,' but simply 'That Poor Little Reformed Baby.'"

"Well, they need n't be sorry for him," said Susie. "He's just the best kind of baby, and the happiest."

"But people are always sorry for a baby that is n't coddled," said Caroline, "and you may be sure that our baby is never known to cry, or show temper, or act naughty, but they tell it all over town with triumphant jubilation."

"Yes, indeed," said Mr. Milton, "the way of the reformer is almost as hard as that of the transgressor in this world. But they need n't waste all their sympathy on the babies. I think the daddies deserve a little."

THE PROMISE.

BY MRS. S. M. I. HENRY.

"We know that all things work together for good."

Rom. 8:28.

THE old year looks at me dumbly,
As one who is fain to say:
"I made you a promise, and broke it;
Forgive me, forgive, I pray;
For I should be heavy hearted
Unshriven to pass away."

I answer with eloquent smiling—
Contentment hath made me bold:
"Thy promise were best in the breaking;
Kept, 't were like hunger and cold.
Pass, and be quiet, for Heaven
Transmuted your iron to gold."

FORMS OF THE FULL BATH.¹

BY J. H. KELLOGG, M. D.

THE full bath is administered in an ordinary bath tub, which may be made of wood, copper, zinc, porcelain, enameled iron; or a bath tub may be improvised in a number of ways. Portable tubs, convenient for dwellings not provided with plumbing, may be easily constructed. The first requisite is a frame of wood resembling in shape the top of an ordinary bath tub. To this support rubber sheeting is attached in such a way that when the ends are placed on chairs or other proper supports, the sagging sheeting just touches the floor. Water may be conducted into the tub by means of a rubber hose attached to the water faucet, or it may be poured in. Well-oiled or painted ducking may be used in place of the rubber sheeting. In the absence of a tub especially constructed for the purpose, a very convenient one may be readily improvised by making a rectangular frame of wood, supporting the two ends, and securing a large piece of rubber cloth, mackintosh, or flexible oilcloth in such a way as to form a receptacle large enough to receive the bather. The impervious material may be tacked to the edge of the frame or secured by button-holes or tapes, the sagging bottom just touching the floor.

Perhaps, on the whole, the cheapest way, when it is necessary to improvise a tub, is to make one of ordinary lumber, —whitewood, basswood, or pine boards may be used for the purpose. The lumber should be an inch and a half thick. It should be planed smooth on both sides. The tub should be about six feet in length, two feet in width, and a foot and a half in

depth. The cracks may be calked with oakum. Such a tub can be made by a good carpenter in a few hours, and if kept well painted inside, may be used a long time.

The Cold Full Bath.

For persons enjoying fairly good health a dip into a tub full of cold water is an excellent morning bath. It creates an appetite, accelerates the circulation, arouses the nervous system, and produces decidedly exhilarating effects in those who become accustomed to its use. When employed for this purpose, the duration of the immersion should not be more than from three to fifteen seconds. The tub should be sufficiently full to allow complete and instantaneous submergence of the body, except the head. The bather should rub himself vigorously while in the bath, and should dry himself quickly with vigorous rubbing after the bath. He should then take moderately active exercise for fifteen or twenty minutes. The daily use of the cold full bath in the manner suggested is one of the most effective means of fortifying the system against disease.

The author does not recommend the practice of plunging into rivers and lakes in the winter through a hole in the ice, so highly lauded by certain writers and undertaken by many to their sorrow a quarter of a century ago. Such a measure is dangerous and quite unnecessarily heroic, as all the good effects obtainable from the cold bath may be secured by its judicious use in a more rational and convenient way.

That the cold bath may render valuable service in the treatment of fevers has been abundantly proved; and it is not necessary to appeal to modern statistics to find sufficient proof of its marvelous efficiency in

¹The material for this article was selected from Dr. Kellogg's forthcoming work, "Rational Hydrotherapy."

such cases. Currie describes an epidemic of typhus at the military prison located at Stapleton, England, in which a large number of French prisoners were confined. There were in all eight hundred and fifteen cases. All were treated by the cold affusion, with only forty-one deaths, a little less than five per cent, which for typhus fever is certainly an enviable record. The mortality was almost wholly confined to persons who were debilitated by age, dissipation, or exposure.

The cold full bath may be appropriately used in cases of obesity without marked cardiac degeneration, and in cases of slowed nutrition when the general strength is fair. It creates appetite and improves digestion in certain cases, but is so inferior to other hydric procedures for the same purpose that it is seldom used.

The cold bath should not be used for young children or for very aged persons. It should be avoided in febrile conditions due to acute inflammation of some internal organ, as in acute peritonitis, gastritis, enteritis, and other inflammations.

Surgeon Mc Gregor, formerly superintendent surgeon of the English army in Egypt, once had charge of the "Blues," a famous old regiment then located at Canterbury, when an epidemic of typhus fever, generally complicated with pneumonia, broke out. The disease developed so rapidly that in a short time one fifth of his regiment were on the sick list, and there were thirty-three cases of fever, with daily accessions to the number. At this juncture it occurred to Mc Gregor that the cold bath might be used as a preventive of the disease. Accordingly, to use his own words, "At my earnest recommendation, all the regiment out of the hospital were marched three times a day to the riverside, and every man was made to bathe. The good effects of this were speedy and manifest,

the number of new fever cases decreased daily, and those that did appear wore a milder aspect. Many, indeed, yielded to the common treatment. In some cases an emetic, in others the cold bath, at once cut short the disease. It was evident to all that after the general bathing of the regiment, the contagion stopped."

It is well known that intoxicated sailors are often suddenly sobered by falling into the sea. The excitant effect of the contact of the cold sea water with the temperature nerves of the skin reacts upon the brain and spinal cord with such intensity as to arouse to activity the alcohol-narcotized centers. The writer has long been familiar with this fact, and has made frequent use of it in overcoming acute effects of alcohol poisoning.

The Graduated Bath.

This bath is a form of the full bath especially adapted to the treatment of fevers. The method consists essentially in a full bath the temperature of which is gradually lowered. The patient enters the bath with the water at a temperature from nine to ten degrees below that of the body. The temperature of the bath is lowered, at the rate of two degrees a minute, to 77°, continuing at this point until shivering, and chattering of the teeth begin.

In fever cases this bath is sometimes administered every three hours. When a patient's temperature rises to 104° or above, it may be necessary for him to spend half of his time in the bath.

Frequent and often formidable objections to the cold bath are the nervous shock which it produces, the dread the patient experiences, the discomfort, the cyanosis which often gives a case a grave appearance, although the danger may not be what it seems. It must also be remembered that in persons whose hearts are organically diseased, and espe-

cially in case of persons whose arteries are weakened by arterio-sclerosis, the very cold bath can not be employed without great danger. The graduated bath is free from these objections, and is hence a most valuable hydrotherapeutic measure.

The special physiological effect of the graduated bath is to reduce the body temperature, which it accomplishes in a most efficient manner, though perhaps less rapidly than a cold friction bath. This form of bath may be used in such a way that no shock whatever is produced, so that it is much more agreeable than the cold bath to sensitive persons and those who dread cold applications.

The Tepid Bath.

The tepid bath is generally administered at a temperature ten or twelve degrees below that of the body. Care should be taken to have the water cover the shoulders, in order to prevent pulmonary congestion. The usual duration of this bath is about thirty minutes, but by the aid of general friction it may be continued for many hours.

Reiss treated several cases of typhoid fever with the continuous tepid bath at 88°. The patients were kept in the bath from eight to fifteen hours, or until the temperature fell to the normal, or nearly normal. The temperature usually began to rise again soon after the patient was removed from the bath. As soon as it reached 101° the application was repeated. In some instances the patient was obliged to spend almost his entire time in the bath in order to keep the temperature nearly at the normal point.

For a continuous bath of this kind it is necessary that the patient be made comfortable by suspension in a sheet, the ends of which are secured to the sides of the tub.

The tepid bath given for half an hour or an hour is to be preferred to the very

cold bath in pneumonia and in low stages of typhoid fever in which the patient has not had the advantages of the cold water treatment in the earlier periods of the malady.

During the tepid as well as the cold bath care should be taken to protect the head with cold water, and friction should be applied when there is the slightest tendency to chill.

The Hot Immersion Bath.

This is an ordinary full bath administered at a temperature of 98° to 104°. At temperatures above 104°, the bath is properly termed "very hot," but the effects of the full bath at temperatures ranging between 100° and 113° differ in degree only, not in kind. We will consider under this head the effect of the immersion bath at any temperature above that of the body.

The time of the hot bath varies from two or three minutes to fifteen minutes, according to the temperature and the case. It must never be very greatly prolonged, because baths at any temperature above that of the body cause a rapid accumulation of heat and rise of temperature. In the administration of the bath at a temperature considerably above that of the body the beginning temperature should be 100°, the temperature being gradually raised, by the addition of hot water, to the maximum desired. By this means the skin becomes gradually accustomed to the elevated temperature, and a much higher temperature will be tolerated than if the patient enters the bath at the maximum temperature. The cerebral excitation is also less.

Much useful information respecting the effects of the hot immersion has been gathered from a study of the bath in the public baths of Japan. During many years' residence in Japan, Professor Bältz had an excellent opportunity for a thor-

ough study of the effects of these baths, since in that country nearly everybody takes a hot bath almost daily. In Tokio alone there are given daily about 400,000 hot baths, the price being so low as to be within the means of the very poorest,—from one-half to one cent. Bältz himself has for many years taken a hot bath at least twice a week, and in summer after great exertion in mountain climbing often twice a day.

In Japan the bath is usually taken at 115° , sometimes hotter. Europeans living in Japan take the bath at 104° to 109.4° . The head is rubbed with hot water before going into the bath, whereby the blood vessels of the head are at once relaxed and anemia of the brain is prevented, when the surface vessels later become greatly dilated. The duration of the bath is from five to twenty minutes, according to the temperature. If the sensation of heat becomes very great, or strong palpitation of the heart is experienced, the bather leaves the bath immediately.

The first effect upon going into the hot bath is a goose-flesh contraction and blanching of the skin for a few seconds, then gradually a relaxation of the vessels of the skin follows, and reddening of the skin appears. The pulse is at first slow, gradually quickening. The respiration is only slightly influenced at the beginning. The temperature, measured under the tongue, shows a gradual rise to 104° and above. This rise is produced not only by the retention of heat but also through the direct absorption of heat. After leaving the bath the temperature generally continues to rise from $.6^{\circ}$ to 1° or more, and not until one or two hours later does it reach the normal.

On leaving the bath one feels relaxed, and profuse sweating occurs. Before leaving the bath the bather usually pours cold water over himself.

It is generally supposed that after a hot bath one very easily takes cold. Dr. Bältz claims, on the contrary, the very opposite,—that it is impossible to take cold. Taking cold occurs only after a tepid or warm bath, the temperature of which is the same as or lower than that of the body. The very hot bath produces a paralysis of the skin vessels which continues for some time and prevents the vessels from reacting to cold.

Dr. Swartz, for many years a medical missionary in Japan, testifies that the effect of the hot bath is decidedly stimulating, and that no depressing effects whatever follow its use. Some persons cool off the skin by means of the cold bath after coming from the bathing tanks, but many natives may be seen running through the streets quite nude, even in very cold weather, without having employed any cooling measure, and yet they do not take cold. This is probably due to the fact that the temperature of the skin and of the blood in the Japanese nature is at so high a point that ordinary or even extraordinary exposure does not suffice to produce a chill, either by lowering the temperature or by cooling the peripheral nerve filaments.

The hot immersion bath has proved itself a very valuable measure of treatment in cerebro-spinal meningitis. The temperature should be 103° or 104° , the duration from ten to fifteen minutes, to be repeated every three or four hours. The head should be protected by a compress saturated with ice water, or by cold irrigation, or by a cooling coil. If a cold compress is employed, it should be frequently renewed.

In chronic bronchitis, a very hot bath, from five to seven minutes in duration, accompanied by rubbing with the friction mitt, relieves congestion of the mucous membrane, and when the disease is complicated with asthma, generally affords

prompt relief from the distressing paroxysms. The patient should be carefully cooled off after the bath, and oil should be rubbed upon the skin.

The hot bath at from 102° to 106° may be very profitably employed in chronic rheumatism and obesity. The bath should be used daily or every other day for ten or fifteen minutes. Rubbing during the bath increases the beneficial effect in rheumatism, by aiding circulatory reaction. Massage of the joints may be practiced with great advantage during the hot bath. The hot bath should always be followed by a cold application, which, in cases of obesity, should be vigorous and prolonged.

The daily hot bath affords relief from the intolerable itching of jaundice, and aids the skin as well as the kidneys in ridding the system of the bile pigment with which the tissues are poisoned. Gastric and intestinal colic are quite promptly relieved by the bath at 110° for ten or fifteen minutes, but in cholera the cold friction bath succeeds better.

The relaxing effect of the hot bath is highly valuable as a palliative measure in case of gallstone or renal colic. The effects of the bath may be encouraged by gentle massage employed at the seat of pain in such a way as to aid the movement of the calculus through the proper channel.

The hot bath is an excellent means of preparing the skin and the system at large for a cold bath in cases in which such

preparation is necessary. The hot bath may be equally well employed in cases in which an overdose of cold water has been inadvertently applied. It is well to remember that heat is a perfect antidote for cold, while cold is an equally perfect antidote for excessive applications of heat, provided no structural change has taken place.

In delirium tremens a short hot bath followed by cold friction or a cold shower bath renders valuable service.

In the beginning of measles, scarlet fever, and other eruptive disorders, the hot bath often proves very beneficial by encouraging the development of the eruption.

In infantile convulsions the hot bath for from three to five minutes, followed by affusion consisting of a quart or two of water poured over the patient's head and spine, is a powerful life-saving agent. Immediately after the affusion the child should be wrapped in warm blankets so as to produce quick reaction. The very hot bath may also be used to great advantage in asphyxia in the newly born. The child should be dipped in hot water for fifteen or twenty seconds, then should be dashed over with cold water while artificial respiration is practiced.

The hot bath must be avoided in case of organic disease of the brain or spinal cord, in cases of cardiac weakness, cardiac hypertrophy, arterio-sclerosis, cerebral apoplexy, and usually in febrile disorders.

REFRAIN to-night,

And that shall lend a kind of easiness
To the next abstinence: the next more easy;
For use almost can change the stamp of nature,
And either curb the devil, or throw him out,
With wondrous potency.

— *Shakespeare.*

THE FOOT.

BY F. M. ROSSITER, M. D.

BEAUTIFUL feet and ankles have caused novelists to write hysterically, and poets to rave; neglect of the same has caused many a woman to moan upon a bed of sickness, and many a doctor to spend sleepless nights. In order to preserve a perfect physical as well as moral equilibrium as to the feet, it is necessary to have a thorough knowledge of our understanding.

Considered from an anatomical and mechanical standpoint, the foot is the embodiment of consummate creative genius. Here, as elsewhere in the human body, we see the signature of the Divine.

The pedal extremity is not without interest. It is the symmetrical association of compactness, strength, and grace. Many bones, ligaments, muscles, tendons, nerves, and blood vessels are crowded into a small compass, all acting in harmony, and all so thoroughly protected that none is injured when subjected to heavy weights, in addition to sustaining the weight of the body.

Long before man had need of, or constructed, an arch, the Creator placed one in the human foot. This arch is made up of seven tarsal and five metatarsal bones, so nicely joined and articulated that they form a strong curved structure extending from the heel to the ball of the great toe and of the little toe, and likewise from side to side. This arch is placed at right angles to the leg, a position peculiar to man, and its under surface is strengthened by a powerful ligament. This is slightly elastic, allowing the arch to yield to jars and shocks. This elasticity is imparted to the gait and is an important factor in making one a graceful and easy walker. In some this ligament is poorly developed, giving rise to the condition known as

“flat foot.” The higher the arch, the higher the instep, the better the walker. Those who possess a good arch are more graceful in walking, and step with more ease and less fatigue.

The feet are well supplied with blood, for the arteries are large and numerous, and as we use the feet probably more than any other part of the body, the muscular exertion has a tendency to keep the circulation active. However, the feet being farther removed from the heart than any other part, and the blood vessels being nearer the surface and less covered with fat, there is a natural tendency in cold weather for these parts to become chilled and cold. This emphasizes the necessity for keeping the lower extremities well clothed,—an urgent need, but one often overlooked by devotees of fashion.

Few realize the relations existing between the feet and all the vital processes. One of the secrets of health and happiness is a cool head and warm feet; in fact, it is difficult to be cool headed and have cold feet. It is difficult to study well and to remember well when the feet are cold and the head hot, the latter being a concomitant condition with cold feet.

Cold feet are a frequent cause of headache. In the baby they often produce an attack of colic; in the adult they interfere with digestion in various ways. On the other hand, dyspepsia is a frequent cause of cold feet. Neurasthenics nearly always suffer with this trouble. The common habit of “toasting” the feet over registers, on the hearth, in the oven, or of warming them by hot stones or bricks, is a prolific source of cold feet.

This condition always indicates some disturbance of the circulatory equilibrium. Women and girls are more likely to suffer

from cold feet than men, because their shoes are light, the soles are thin, the lower extremities poorly protected, and their life more sedentary.

When we reach the point where we care more for health and comfort than for appearances and the arbitrary demands of society, more of us will enjoy good health.

The shoe should always fit the foot comfortably, and be sufficiently large to permit free movement; on the contrary, it should never be too large. A shoe should never fit tightly across the foot on a line that corresponds to the ball of the great and the little toe. The pointed shoes common a few years ago produced permanent injury and deformity of the feet. In winter the sole of the shoe should be thick. During the cold season one of the best shoes to keep the feet warm is the felt shoe, which, although by no means appropriate for social functions, is exceedingly comfortable.

It is distressing to see people wearing low shoes with thin soles on a frosty sidewalk or in a light snow. Such footwear is a frequent source of colds, coughs, and more serious complications.

Not only should the bottom of the foot be protected, but the ankles should be well clothed. There is often almost a criminal neglect as to the proper clothing of the ankles and legs.

Those who are troubled with habitual cold feet may do a very great deal toward relieving this condition if they will put forth the effort. The alternating hot and cold spray to the feet is one of the most effectual treatments, and the relief and comfort following are surprising. Those who are not fortunate in having the apparatus for giving a spray, may accomplish the same results by changing the feet quickly from a tub of hot water to one of cold. This treatment is especially valuable for those advanced in years. It may be taken at bedtime, and may be repeated

with advantage on arising in the morning.

Any measure that will improve the circulation will have a tendency to prevent cold feet. Nothing is better than a cold plunge in the bath tub immediately upon getting up in the morning, or the cold morning sponge bath followed by vigorous friction.

The feet often get cold when one is riding in the street car or in a carriage, or when one is otherwise exposed to cold without opportunity for active exercise. An excellent way to get them warm in such a case is to exercise the toes in the shoe by alternate flexion and extension, or, in other words, by "wiggling" the toes. To do this thoroughly will occupy all the attention, and if kept up for ten minutes will induce perspiration. It is hard work.

Rubber materials, such as are found in rubbers and arctic overshoes, are poor conductors of heat, retaining it within the shoe, and keeping the cold out. Overshoes should be removed immediately upon entering the house. Rubber boots, as worn by many farmers, are unwholesome, keeping the feet in a constantly moist medium, so that the skin is always relaxed, inviting colds and catarrhal conditions.

Sweating of the feet and fetid feet are a constant source of annoyance to many. These conditions may be due to nervous or vasomotor disturbances, or to the nature of the footwear. In all such cases the feet should be washed with soap and hot water at least once a day, with the employment afterward of the hot and cold spray or foot bath. Perforated or cork soles avail but little. Dusting the feet with equal parts of starch and salicylic acid will check sweating, or the feet may be washed in a solution of tannic acid (a teaspoonful to a pint of water), or in a solution of potassium permanganate (six or eight grains to an ounce of water).

Corns are known and appreciated only by civilized people. These excrescences of culture are always caused by improper footwear. Corns will often disappear without treatment as soon as proper shoes are adopted. If they persist, they should be macerated in hot water or oil for half an hour, and then removed by cutting or scraping. They may then be painted over

with several coats of the following: Salicylic acid, thirty grains; extract of cannabis indica, five grains; collodian, one ounce.

Ingrowing nails are due to tight shoes. When the condition is firmly established, attended by inflammation and pus formation, the only effectual treatment is by surgery.

AN EXPERIENCE WITH NUTS AS FOOD.

BY EVORA BUCKNUM.

MY experience in the use, or possibly at first the abuse, of nuts began in my early childhood days, when our storeroom was bountifully supplied with hickory nuts, butternuts, and hazelnuts bought of the farmers round about, or of the children who used to go out into the country to gather them.

Occasionally, which was a great treat, my mother would take the horse and carriage, with plenty of bags, and spend a holiday with us in gathering these autumn treasures.

Of course we always ate them between meals, and evenings when our schoolmates came in for an hour or two, crisp and juicy apples accompanied them, for my father was a firm believer in the liberal use of fruits, and our cellar was as richly stored with barrels of the luscious spies, spitzemburghs, and seek-no-furtherers, with greenings for cooking, as the storeroom was with nuts.

In later years, when I was traveling and taking my meals often in railway stations, nuts, which I could get at the humblest grocery, and crack with a stone on the railroad ties, were nearly always on my bill of fare, and no other part of it was quite so satisfying.

But my real practical experience with nuts as food began in the fall of 1891. At that time, through some English

friends, I heard of parties in London who were agitating the subject of an exclusive fruit-and-nut diet. Being anxious to know if one's strength could be maintained for hard labor on such a diet, I resolved to try the experiment on myself.

For a year previously to this, I had been living on one meal a day, because of the inability to digest two; so I continued the same with fruits and nuts. After a year and a half of the "experiment," I had no difficulty in digesting two meals.

When I began with the new diet, I determined to try it for a week, thinking that if I then felt no perceptible loss of strength, I would continue it for a month. But I had not gone through the week before I experienced a marked change. The dull, heavy feeling had gone from my head, and, though forty years old, I felt the buoyancy of youth. Consequently, I continued for the month, and the result was so satisfactory that I have continued it, with very few digressions or variations, for eight years, with a constant increase of strength and endurance, and clearness of mind. To be sure, I have had some ups and downs, as one who has abused his digestive apparatus constantly for thirty years is bound to have. But when I was down, I let my stomach rest from all food for a time, then took up again the perfect diet.

That this may well be called a perfect diet one who considers the matter will see. The nuts provide the proteids (the strength-giving elements) in much larger proportion than do flesh foods, and also the fats (in emulsion instead of the indigestible free oils of butter and other animal fats), while the fruits supply the sugar, the acids, and the bulk. Both nuts and fruits contain salts in abundance.

"But," I hear some one say, "I think we need some starch." Yes, we do; and we get it, digested, in the sugar of the fruits, all ready for assimilation,—a wonderful saving of labor to the weak stomachs of this generation. Cocoanuts and chestnuts are not classed with other nuts, for their composition is quite different. They have a small proportion of proteids, being largely composed of starch. The chestnut may be boiled or roasted and used for carbonaceous food, but, with many experiments, I have never found any way of cooking the cocoanut that did not to some degree increase its indigestibility.

In the early months of my experiment, when my stomach was in an extremely sensitive condition, I noticed some irritation from the free use of those nuts, such as the English walnut, the hickory nut, and the butternut, that have the thin, brown skin over the meat, which is not easily removed, and I found the explanation of that in the fact that there is a large proportion of tannin in this covering. The Brazil nut proved one of the best for a steady diet, and later I learned that the filbert was nearly its equal, though not so rich in oil. The covering of these nuts does not seem to have so much of the astringent element.

The almond stands at the head, we may say, of nuts, but the scarcity of the crop in different parts of the world for the last two years has made the price so high as to place it beyond the reach of many.

While the covering of the almond is rough in texture and strong with tannin, it is easily removed. Then, if the meat is dried slowly in an oven that is just warm, and colored, by a slight increase of heat, to a delicate cream color, it is crisp and sweet and easily digested. But if from lack of care it is allowed to assume too deep a color, an irritating, poisonous acid is developed.

While the peanut, or goober pea, or monkey nut, as it is variously called in different localities, is not a true nut but a legume, and is so classed by leading authorities on foods, its composition is almost identical with that of the sweet almond, being a little richer in proteids, although not containing quite so much oil, and is one of the most important of nut foods both from its price and the variety of ways in which it can be used.

The raw meats can be stewed, made into butter and soups, and used for shortening, baked like beans, made into roasts, and used in an almost endless number of ways. Some years ago the German army began to use them. Professor Dabney has experimented extensively with them, as have many other scientists. I have known several cases of insomnia of long standing to be cured by the use of peanut butter.

There is the same objection to the use of roasted peanuts as to almonds roasted brown, but it is possible that a person with good strong digestion can occasionally take a meal of carefully roasted peanuts without much apparent harm.

On my fruit-and-nut diet I seldom feel thirst, while if I transgress a little and eat some vegetables, I suffer exceedingly from it. I find, also, that I do not require so much sleep as when living on another diet.

To those who have been erroneously taught that they must avoid the use of

nuts because of their indigestibility, I would say that with my exceedingly weak stomach, I have almost never experienced any trouble from indigestion after eating them (and I have never covered up their delightful flavors with salt, either, not being credulous enough to believe the fable of the drunken doctor and the woman who died)—not nearly so much as from oatmeal or potatoes. I am satisfied that except in extremely abnormal conditions, nuts can be used in the proper quantity, at the proper time, and in the proper way; that is, *at* our meals, not *between* them, at the *beginning* of the meal, instead of as a dessert, and *masticated thoroughly*.

People often say to me, when I tell them what my diet is, "That is pretty good living." It truly is, but I will tell you that for weeks and months after I began it, I would eat a good hearty meal, then wish I could have something to eat. Why?—Because of the absence of bread made from grains. The lifelong habit of eating that kind of bread makes it seem as if we had had nothing to eat when we first begin to discard it and to take fruits in its place. So if any of the readers of this article think of trying the experiment, remember that there will be some self-denial connected with it. But in my case it has been richly rewarded. Think of the pleasure of cracking your dinner compared with roasting or broiling it, and of the absence of greasy dishes and pans to wash.

How wonderfully nature has provided against the danger of eating too fast or of overeating, by a diet of nuts the meats of which have to be picked out. Their firm flesh necessitates thorough mastication, thus strengthening the teeth, besides affording one the enjoyment of retaining

their sweet flavors longer in the mouth.

One of the greatest difficulties I encountered in trying to help people out of the mire of perverted appetite, was that there was nothing to take the place of milk, cream, and butter, either in taste or nutritive value. This was a serious drawback, and I tried "many inventions," but none were thoroughly satisfactory. So my heart was greatly rejoiced when I heard of the nut butter originated at the Battle Creek Sanitarium, which could also be diluted to the consistency of cream and milk; and now, since so many other wonderful products have been developed from the same source, those who are not yet ready to go to what might be called the extreme in natural foods, can, in nut butter, nuttolene, protose, bromose, etc., have cream for their coffee and porridge, and milk to drink or to use in cooking.

They can enjoy their steaks, roasts, salmis, ragouts, sweetbreads, croquettes, timbales, salads, and desserts without the laest fear of tuberculosis or other accompaniments of animal foods.

In some cities, nut luncheons, where nut sandwiches, nut salads, nut cream for the coffee, nut cakes, and nut candies are served, have become quite the fad.

Some of the leading people of the land are giving, to distinguished guests, dinners composed largely of these foods and entirely without flesh meats.

This personal experience is given from a sincere desire to help others into a better way, and I trust that the time is not far distant when with many more the nut pick will take the place of the fork, and the sweet and toothsome "fruit of the tree yielding seed" regain the place which has been usurped by the bloody, putrefying morsels of the bodies of dead animals.

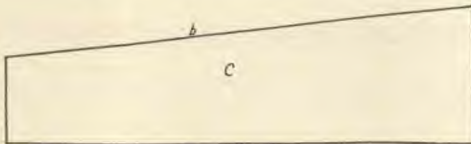
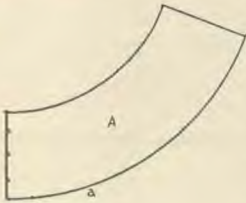
A DETAIL OF WINTER UNDERWEAR.

BY ANNE E. TABOR.

THERE is a great variety of opinions as to the proper underwear for women, and these opinions have found expression in almost as great a variety of garments. Many women dislike to displace their old-fashioned dainty muslin underclothes by the severely plain and unornamental garments that are so common to-day. But in winter something different from the thin cotton, silk, or linen drawers is really indispensable to warmth and comfort.

The change from summer underclothing to warm winter dress is often deferred far too long for the very reason that women dread the close-fitting tights, or the loose and badly adjusted bloomers that have proved so unsatisfactory in the past. The umbrella drawers shown in our illustration combine the advantages of both tights and bloomers, while avoiding their disadvantages. They are warm, but not tight. They allow perfect freedom of movement, yet are not baggy.

Almost every woman who becomes accustomed to wearing them would not think of changing to any other style, since



they are both convenient and comfortable, and dainty and feminine in appearance.

These drawers fit the limbs to the top of the stockings, being practically a continuation of the stockings. The full ruffle takes the place of extra skirts, not more



than one long one being required when these drawers are worn.

The material used in making the umbrella drawers for winter wear should be soft flannel or other woolen fabric. The circular yoke is buttoned to the waist. The deep fold in the body of the garment, front and back, closes in the limbs perfectly. The ruffle can be made of any desired fullness, and may be longer than represented in the illustration, although the knee length is the most satisfactory.

If desired, a short skirt can be attached to the same set of buttons, while the longer skirt is fastened to the upper row.

With a union suit next to the skin, then a freedom waist, and umbrella drawers, long hose attached to the freedom waist, and one short and one long skirt, a woman is warmly and suitably dressed so far as underclothing is concerned.

The three small diagrams accompany-

ing this article, marked A, B, and C, are given in order to show how umbrella drawers are constructed. A represents the circular yoke; B, the body of the drawers; C, the ruffle; a, a, join yoke and body of drawers at top; b, b, join ruffle and body of drawers,—one half of the garment. The notches show where the seams should be in the body of the drawers, while the notches on A indicate the back of the yoke.

THE CARE OF GROWING GIRLS.

BY KATE LINDSAY, M. D.

STANDING by the bedside of a child mother, who, sad to say, was not a wife, another mother said, "O, how I wish I could be certain that I could bring up my three little daughters so as to save them from such a fate as this." Many other mothers' hearts are burdened in the same way, and too many other mothers, alas, are closing their eyes to the dangers which threaten the young maidens who are leaving the gentle rippling waters of the brook of maidenhood, to enter the broader, more turbulent river of mature life.

As it is the character of the streamlets that makes the river dark or clear, so it is the influence of heredity, infancy, childhood, and youth which determines the nature of womanhood. Whatever of truth, love, purity, honesty, steadfastness, reverence, and all other good qualities was stamped upon the germ of human existence by the authors of its being, will be manifest in the maturity of the individual life, and contribute its part to form a righteous or stable character, with impulses and passions well under the control of the will, and subject to the moral nature. On the contrary, should the stamp of vice, unruléd passion, and ungoverned impulse be graven on the plastic embryo of

human life, it will be fixed there for all time, either to make the battle for good so much the harder, or to make life a sad failure, and existence a bane instead of a blessing.

After heredity the next most potent influence in moulding the after life, either for good or evil, success or failure, is early education. What the baby girl eats, how she is clothed and handled from the first time she feels the impress of human hands,—all these things are so many influences forming her body physically and her moral and mental nature as well. If she is badly fed, left to suffer from unclean, badly fitting garments, or is badly handled, receiving too much care, being tossed and turned about by an irritable nurse or mother, until tired and nervous, her plastic nature more or less suffers constant wounds and bruises. The nurse or mother may not be aware that through contact with the little one's body her angry passions and lack of self-control are mingling with the infant's developing character and becoming a permanent part of its education. A short time ago the writer saw an angry mother take up her baby, a few months old, and although her resentment and anger were not against the helpless child, yet the angry scowling face bending over

it made it shrink away from her clasp-
ing arms, and scream with terror. A moment
before it had been a merry, laughing baby.

The food poisons formed in the stom-
ach, and the irritation from chafing due to
dirt and overheating, all excite undevel-
oped nerve centers to premature activity,
and the passions begin to crave indulgence
before the moral nature is strong enough
to keep them properly checked and re-
strained. The little girl may be precocious,
and accounted bright for her years, but at
the same time she is merely a bundle of
egotism, self-consciousness, and prema-
turely developed impulses. The words
used in the child's hearing even before it
can talk, the incidents of the daily life
around her, whether they be pure and
wholesome, or the reverse, are all weaving
themselves into the web of her life and are
to determine her future conduct. Statis-
tics from disreputable houses, as well as
from the history of the inmates of rescue
homes and reformatories, all tell the same
story,— that most girls fall while in their
teens, or even before that time; that few
go astray after twenty years of age. Many
little girls are familiar with vice before
they are twelve years old, and these are
not always children of outcast parentage.
It is at the time when mother and nurse
have the moulding of the character, when
the little girl is educated by what she
hears, sees, eats, and drinks, that the
marring of character is begun. The sub-
sequent "fall," as it is called, is only
the full-blossomed development of that
education toward impurity which began
with the dawn of the young life.

Many things are taught children which
have to be unlearned in adult life. Little
girls are taught overfamiliarity with men
by being permitted, and often urged, to
allow themselves to be kissed and handled
by them in their early years. But when
the pinafores are put off and replaced
by long skirts, girls are reproved for per-

mitting the same liberties. The writer's
cheeks have often burned with indigna-
tion when some thoughtless mother has
compelled her little bashful six- or eight-
year-old girl to submit to the kisses and
caresses of a tobacco-steeped, whisky-
soaked, rough-bearded man. This is an
outrage from which children of both sexes
should be protected by both civil law and
social custom. The press, it is to be
hoped, will help to educate the masses by
spreading the medical opinions of eminent
physicians in relation to the danger of
contracting contagious disease in this way.

Lastly comes the duty of the parents to
protect and at the same time to educate
their children, both sons and daughters,
in relation to their own bodies and bodily
functions. The parent owes it to the in-
experience of his child to take good care of
that delicate intricate machine, the body,
while it is in his complete charge, as well
as to educate the child how to take care of
and make the best of his own body when
he reaches maturity and must accept the
charge of directing his own life.

It is often true that the most anxious
burden young women have is for the souls
of young men. Mothers have a part to
act in this matter, for many have brought
up their daughters with the idea that to
reclaim young men is their principal mis-
sion in life, and so firmly is this idea im-
pressed upon them that they are not
interested at all in steady youths, or in any
man unless he has some dreadful past
record of vice or crime. This morbid
sentiment leads them to shower bouquets
on red-handed murderers, assassins, and
criminals of all sorts. Nothing can be
more out of place, and more likely to lead
to the ruin of young women and girls
than association with such wily villains,
who can take these unformed, sentimental
maiden minds, and fill them with such
perverted ideas of right and wrong as will
destroy all perception of the difference

between vice and virtue. Parents, especially mothers, should find a more healthful interest for their daughters, and should direct their growing minds and sentiments into channels which will develop the moral nature and tend to check the over-ripening of the merely sentimental and emotional. It may not be so pleasant for Sweet Sixteen to go into the home of the widow next door, and wash the dirty children, comb their hair, scrub the floor, and cook some delicate, healthful dish for the sick mother, as to carry flowers to some polished villain in a prison cell awaiting his trial, who can make eloquent speeches, and pay her delicate compliments; but it will be a vastly more Christian work, and one that will not foster perverted sentiment, but will cultivate the hands and the head and make them useful members, capable partners in the good work of true Christian charity. The young girl may not feel so much like the heroine of a novel, but she will feel much more like a practical Christian. It is just as important that young women have right ideas of how to do good as of how to avoid evil. It is just as important that they learn into what channels of good as well as of evil their youth and inexperience may lead them.

Another danger arises from the desire of every growing mind to understand all about the mysteries of human life. The question of man's whence, what, and whither begins very early to perplex the mind of the young. The child is a mystery to itself, and is eager in the pursuit of information on the subject of how it came

to exist, what it exists for, and whither it is bound. When it comes with these all-important questions to its parents, or when the little girl comes to her mother with the question of her own or her baby sister's entrance into the world, happy is the mother who can feel free and has the tact and good judgment to tell the little one the truth, and nothing but the truth, and who can take the time and pains to prepare to meet just such questions with righteous answers. Mothers who are in earnest about saving their daughters should not wait until they are almost grown up before throwing around them the safeguards of an educated, intelligent regard for purity, but should remember that purity may begin to be cultivated or overthrown in the days of early infancy, that cleanliness and health of the body and freedom from all abnormal excitement mean soundness of mind and morals, that what the woman makes of her womanhood, depends upon two factors,—heredity and education.

Education, when rightly applied, may do much to counteract bad heredity, but when the education is faulty, it may do much to destroy even the influence of a good inheritance. With both there must be a good sound Christian conversion, not merely an experience of good feeling, but a genuine turning about which reaches and changes the whole character, leads to a clear perception of life's work and duties, and sanctifies the whole individual. Then he may be saved from evil doing in this life and have the promise of that which is to come.

GOD made the country and man made the town,
 What wonder, then, that health and virtue, gifts
 That can alone make sweet the bitter draught
 That life holds out to all, should most abound
 And least be threatened in the fields and groves.

— Cowper.

TABLE TALK.

More doctors, it is claimed, are kept busy in Australia than in any other country on the planet; at the same time Australia consumes more animal food than any other country.

Vegetarianism is the bedrock of the science of political economy, so decided the National Vegetarian Congress in London last September. One speaker asserted that if people ate whole-meal bread they would virtually make two blades of grass grow where only one grew before. Another showed how by adopting vegetarianism a man might marry and live well on a shilling a day. Mr. Wright demonstrated that vitality and vigor could be maintained upon sixpence a day. Professor Mayor, president of the Vegetarian Society, testified that when he was doing the heaviest literary work he ever engaged in he lived upon twopence a day.

“Habits of temperance or intemperance,” says Dr. Mary Wood-Allen, in “Baby’s Firsts,” “may be inculcated in the baby by the plan pursued in its feeding. The food, if given irregularly, is of necessity given intemperately, and the child is thus taught to eat for the gratification of the sense of taste, which is of itself the foundation of intemperance. If the child is fed every time it cries, or to still pain, the lesson taught is to try to forget present discomfort by putting something into its mouth. It will not be surprising if a child thus taught follows out the teaching in maturity, and attempts to quiet sorrow, to drown care, to deaden pain, by putting something into its mouth, learning after a time that alcohol has a charm that temporarily annihilates all grief. We thus come to see that the regular habit of feeding infants has in it

a moral quality, and is worth our serious consideration.”

An outbreak of food poisoning, as the result of eating “chitterlings,” or the prepared entrails of the pig, is reported in the *British Medical Journal*. About fifty people were suddenly made very sick with abdominal pain, vomiting, purging, muscular cramps and pains, chills and fever. It is interesting to notice how carefully these “chitterlings,” that caused so much suffering, were prepared. To quote from a London weekly:—

“After the intestines had been removed they were turned inside out for the purpose of more efficient cleansing, and were then thoroughly washed in a tub and again in a stream of water from the tap until quite clean. They were then placed in a large tub of clean water, changed twice a day, but without the addition of any preservative. Finally they were scalded and re-washed, and then boiled for three hours. After this they were placed in a tub of clean, cold water, through which a stream of water from the tap was allowed to run all night. Next morning they were taken out, allowed to drain on a clean board, and when free from excess of moisture, were divided into two portions, one portion being conveyed by rail to Nuneaton, a distance of some fifteen miles. They were all sold the same evening, except one and one-half pounds, which was sold next morning. The weather at the time was exceptionally cold for the time of the year.

“Most of the food purchased on the first day was eaten the same evening between 6 and 10 P. M. The premises where the pigs were killed, and all the appliances used, were reported by the

sanitary inspector to be clean and exceptionally well kept."

It would seem from this account that it is exceedingly difficult to make wholesome food from the intestines of the pig.

Discordant noises are detrimental to health. Thus has declared the London Society for the Suppression of Street Nuisances. "The first annual report of this society," says the *British Medical Journal*, "suggests that india-rubber tires should be adapted to many light vehicles, especially mail carts and milk carts, and that rubber rings should be compulsorily placed on the floors of milk carts, to prevent the rattling of cans; that newspaper boys should desist from shouting, and instead thereof should exhibit 'contents sheets,' or that newspapers should be sold from *kiosks* on the pavements, as in Paris. In fact, street noises should be made the subject of reasonable regulations, and the people who make noises should be taught to be orderly and systematic."

The "Figaro," a popular journal of Paris, has been carrying on a crusade against the drink evil. This is especially significant in a country so given to wine drinking as France. The following summary from an editorial in the *Figaro* was translated for the *Literary Digest*:—

"In epidemics the excessive use of alcohol is almost identical with a death warrant. Of one hundred hard drinkers attacked by the cholera, ninety-one die; of moderate drinkers, only nineteen. A wounded man who has poisoned his blood with alcohol is always in greater danger than an abstainer. According to English statistics, abstainers live, on an average, fourteen years longer than drinkers. Fourteen years is worth thinking about.

"The worst is that the drunkard punishes his children for his own crimes. In-

sanity, idiocy, moral depravity, hysteria, epilepsy, are only too frequently the lot of the offspring of a drunken father."

An eminent educator, Charles Wesley Emerson, contributing to a symposium in the *Pilgrim*, on the subject of education, expresses this opinion: "My experience and close observation during many years have confirmed me in the belief that the brain does its best work on a diet consisting of a sufficient quantity and variety of vegetables, grains, fruits, and milk, exclusive of meat."

Cooking as a fine art was lately discussed by Mrs. M. D. Mc Kee, in the *Pilgrim*. Among other pertinent remarks the writer says: "That intemperance means more than immoderate drinking, has not always occurred to us, but we learn in our modern cooking-school that we can be intemperate in eating as well. Kate Field's *Washington* some time since contained a terse comment on the cause of the death of a noted chief-justice, to which the doctors gave a very high sounding technical name. Miss Field said, 'In my humble opinion, he died of dinners.' As a race, we are in error on three important things regarding diet: Our food is not prepared with sufficient intelligent thought and skill; we often eat too much; and we frequently eat too hastily."

One of the laundry trade journals, says the *Scientific American*, recently noticed a new antiseptic intended to sterilize clothes when being laundered, thereby preventing contagion. A formaldehyde solution is solidified, and this is used by laundrymen.

"Vegetarianism," says a distinguished Englishman, "is the proclamation of the doctrine of vitality. If we desire to be

filled with vitality, it is necessary to be fed with that which has the potentialities of life,—all of which we can gather from nature.”

The native liquor of the Chinese is distilled from the yeasty liquor resulting from rice boiled under pressure for many days.

The plague is not decreasing in India, says Dr. James J. Walsh, in the *Independent*. On the contrary, it is worse than ever, and sanitary experts and bacteriologists in India are beginning to doubt if they ever will be able to get rid of it until it consumes all the susceptible material, when it will die out of itself. This situation is not strange when we consider the huddled way in which the natives live. A trustworthy authority states that London with its population of more than four million has about thirty-six thousand people to the square mile. In the thirteen wards of Calcutta there are only four with a population below this figure; the remainder have from forty-six thousand to one hundred and forty-four thousand inhabitants to the square mile, three wards actually containing more than one hundred thousand people to the square mile. One case is quoted where two hundred and fifty persons were living in a space that should accommodate only fifty.

“Utilized first by Adam, recognized and recommended by all the illustrious followers of Esculapius to the present day; even used by the Great Physician, Jesus Christ, who commanded the leper to go bathe in the river Jordan and be made whole,”—thus characterizes A. C. Haven, M. D., in the *Journal of the American Medical Association*, the plain and simple remedy, water. He says further: “Sometimes I think if it were given its chemical

name of protoxide of hydrogen, it would rise in the estimation of the profession.”

An association has been formed in Cleveland, Ohio, for the purpose of establishing baths and swimming pools for the use of children.

Domestic animals furnish evidence that colds are infectious, declares *Omega*. Cats seem to be specially susceptible. Probably they often bring home from their nocturnal rambles those mysterious catarrhal attacks which so rapidly run through the house. It is an old saying, “The cat is sneezing; we shall all have colds.” Sheep, too, are liable; a whole flock may show that curious eruption around the lips which we know only too well as one of the most unpleasant accompaniments of a bad cold in the head.

That the children’s teeth in Her Majesty’s dominion are suffering more at the present time than was formerly the case is shown in a recent English work. The cause is said to be found in the deficient and artificial feeding of infants. This causes abnormal development of the jaws, which is the source of nasal abnormalities; and the arched jaw, which is coming to be so common, is produced within the first twelve months of infant life by abnormal feeding. The early decay of the teeth is one of the symptoms of want of care of the infant.

“Smoking rooms are a common feature of English women’s clubs,” reports a well-known Chicago woman who recently returned from England. “I went into the Pioneer Club,” she said, “a beautiful building in Grafton Street, elegantly furnished, perfectly equipped. They took me into their smoking room, a beautiful

room. About twenty-five women were lounging about on divans, smoking cigarettes. I've been in a great many American women's clubs, but I never saw a thing like that. They asked me to have a cigarette. I declined."

Rigorous temperatures, so far from being made more tolerable by drinking alcohol, are in reality rendered much more severe, whether extremes of heat or of cold, declares Professor Lombroso, the distinguished Italian. He says that in the Polar regions, as well as in the Indies, sailors and soldiers, thinking to gain greater power to resist fatigue, really aggravate their condition by drinking alcoholic liquors. In cholera epidemics occasional drinkers are attacked far more severely than abstainers. The mortality among abstainers is only 19.9 per cent; among drinkers, 91 per cent.

The king of Italy, according to an English journal, is a vegetarian, and lives entirely on vegetables and fruits. The doctors have also forbidden him to drink coffee, so his beverage is claret, well diluted with water. The king never feels

so well as when his fare is bread, potatoes, and oranges, although peaches are his favorite food. The queen has made repeated attempts to become a vegetarian, but so far has given up in despair.

The wholesale butchery of frogs in the swamps of the Belgium border is reported by the *Wochenschrift*, published in Holland. The frogs are killed by being summarily cut through the middle of their bodies. The hind part is thrown by the skillful cutter to another man, who skins it, strings it up, and packs it in ice for exportation. The front portions, consisting of the head, chest, and forelegs, are thrown into a careless heap, and as the animals are very tenacious of life, they live for six or seven hours, during which any observer may see the slimy mass of frogs moving about, opening their mouths without being able to utter a sound. It is a horrible spectacle for any one with the milk of human kindness running through his veins, and must be demoralizing to the village children. If only the consumers of this delicacy could be transplanted to the spot of slaughter for one hour!

GROWING OLD AND KEEPING YOUNG.

TO keep the commandments" is the first and most important way to ward off the infirmities of a premature old age, asserts the Rev. Theodore L. Cuyler, D. D., in the *Evangelist*. The distinguished clergyman goes on to say:—

"Our Creator has written certain laws on our mortal bodies, laws as irrevocable as those written on the stone tables of Sinai—laws for the breach of which Jesus Christ has made no atonement. To squander vital resources by violating these laws, or even by neglecting them, is an

unpardonable sin. There are suicides in Christian churches—yes, in some Christian pulpits! Rigid care as to a digestible diet does not mean fussiness. It means a clear head, clean blood, and a chance for longevity. Stimulants are dangerous just in proportion as they become indispensable. Hard brain work, heavy eating, and little or no physical exercise are a short road to a minister's grave. That famous patriarch of the New England pulpit, Dr. Nathaniel Emmons, who was vigorous at ninety-four, used to say, 'I

always get up from the table a little hungry.' The all-comprehensive rule of diet is very simple—whatever harms more than it helps, let alone. Willful dyspepsia is an abomination to the Lord.

“A second essential to a healthy longevity is the repair of our resources by sound and sufficient sleep. Insomnia is worse than any of the plagues of Egypt; it kills a man or woman by inches. How much sleep is absolutely necessary to bodily vigor must be left to nature. She will tell you if you don't fool with her. ‘Burning the midnight oil’ commonly means burning out your life before your time. Morning is the time for work; one hour before noon is worth five after sunset. When a man who has as much strain on his brain and on his nervous sensibilities as most ministers have, goes to his bedroom, he should school himself to the habit of dismissing all thought about outside matters. If he has difficulty in doing this, he should pray for divine help to do it. This suggestion is as applicable to hard-worked business men and to care-laden wives and housekeepers as it is to ministers or to brain workers in any profession. That wonderful physical and mental phenomenon, Mr. Gladstone, once told me that he had made it a rule to lock every affair of state and every other worry outside his bedroom door. To this excellent rule he attributed his sound sleep, and to his refreshing sleep he largely attributed his vigorous longevity. Paddy's rule is a good one, ‘When you slape, pay attention to it.’ Personally, I may remark that it is to a full quota of slumber at night and a brief nap after a noon meal that I mainly owe fifty-three years of steady ministerial work without a single Sunday on a sick-bed.

“To keep young, every man or woman

should endeavor to graduate his labors according to his age. After threescore and ten, lighten the loads. It is overwork that wears out life, just as it is the driving of a horse after he is tired that hurts him and shortens his days. But while excess of labor is injurious to the old, an entire cessation of labor may be still worse. A workless life is apt to be a worthless life. If a minister lays off the burdens of the pastorate, let him keep his tools sharp by a ministry-at-large with tongue and pen. When a merchant or a tradesman retires from business for himself, let him serve the public, or aid Christ's cause by enlisting in enterprises of philanthropy.

“A sore temptation to the aged is a tendency to querulousness and pessimism. Losses are unduly magnified, and gains are not rightly appreciated. While we cherish and cling to many of the things that are old, and are all the better for having been well tested, let us not seek to put our eyes in the back of our heads, and live only in the past. Keep step with the times; keep in sympathy with young hearts; keep in touch with every new-born enterprise of charity, and in line with the marchings of God's providence. A ten-minutes' chat or play with a grandchild may freshen you more than an hour spent with an old companion or over an old book.

“Above all, keep your hearts in the love of God, and walk in the sunshine of Christ's countenance. Our ‘Indian summer’ ought to be the most golden period of a life consecrated to Him who bought us with his precious blood.

“‘Eye hath not seen, tongue hath not told,
And ear hath not heard it sung
How buoyant and fresh—though it seem to grow
old—
Is the heart forever young.’”

THE DEADLY BROOM.

THE old-fashioned way of cleaning house is being attacked on all sides by writers on hygiene. Max Girdansky, M. D., in the *New York Medical Journal*, charges the broom with force and fire. He says in part:—

“I wish to call your attention to one agent whose gruesome power in this direction [spreading tuberculosis] is greater than that of all other agents combined. I mean the broom. The foot is an easy, thoughtless affair. The broom is applied with a great deal of attention, intention, and vigor. The footstep has its habitual narrow path, and seldom roams out of it. The broom scorns negligence, and pries eagerly into each forgotten corner. The aimless footstep is put down carelessly, and may be insufficient to break up the crust formed by the pathological sputum. The action of the wind is weak, uncertain, and frequently tempered by the inhibitory influence of the shower. But when the dutiful housewife comes out in the morning with her scepter of power—her broom—to do the house cleaning, cleanliness becomes the watchword, and thoroughness the motto, of the hour. She enters upon the field with energy worthy of a better purpose. With her broom she rubs and scrapes, and scratches and scratches, and rubs and scrapes again, until all noxious matter has been loosened, pulverized, and gathered out of its hiding place. She whips, and grates, and brushes until the room is filled with a cloud of dust; not an inch of floor is left undisturbed, not a corner unswept.

“After an hour of such work she has cleaned her room, and gathered the dirt out of the house. But the dirt that she has actually cleaned out of the house is of the more innocent variety,—pieces of fruit, pieces of bread and meat, large or moist particles of sand, and wear and

tear of clothes and furniture, pieces of paper, etc. The really noxious variety, the dried sputa, contents of the nasal and rectal cavities, all waste products of man or animal, skin shed by convalescents from scarlet and similar fevers,—these have been broken up into the finest particles, thoroughly pulverized, and again and again flogged violently into the air, to be inhaled by this very industrious house-cleaner, by her children, and the members of her household. The clouds of dust her broom has raised are so thick that she feels the necessity of protecting her hair and covering her clothes and furniture, but she does not give a thought to her lungs. Perhaps she is not aware of having any.

“The cleaning of the carpet, the mat, and the hall rugs comes next. These are thoroughly shaken, hung out from the windows, from the lines, occasionally waved in the street or upon the roof; dusted, shaken, and beaten until they are rid of all their dirt; until all this has been converted into fine dust flogged into the air, in which it is kept perpetually floating until it reaches its permanent destination—the bronchial mucous membrane of the passer-by.

“Thus the process of sweeping, although apparently accomplishing its purpose, in reality serves as the most effectual means of spreading tuberculosis, the scourge of the age.

“But the sweeping is not the function of the housewife or servant only. The finest particles of wear and tear of the household have been thrown out into the street, the dust entering many a bronchial tube, but a part of it has settled upon the furniture, walls, and ceiling of the house; there, however, not to remain for a very long period, for the dusting hour will arrive—all will be stirred up, all dust

will be disseminated, and all bacilli set floating again, until as many of them as possible will safely settle in some trachea, bronchus, bronchiole, or pulmonary vesicle. In the afternoon or on the next day this process is repeated.

“That part of the dirt that has been removed to the street, and that part of the dust that has been allowed to escape through the opened windows, has entered into the domain of another knight of the broom — the janitor. He exhibits, if any thing, certainly not less zeal than the housewife. The house dirt and dust that has mingled with the particular dirt of the

pavement; viz., the expectoration of the passer-by and the excretions of domestic animals, is again rubbed and brushed and puffed into the air; then, again, the bacilli are offered an easy chance to enter the lungs of the speeding breadwinner or school-going innocent.

* * * * *

“If sixty per cent of all men die of pulmonary tuberculosis (Biggs); if the main, almost the only, cause of pulmonary tuberculosis is bacilli-laden dust, and the broom by far the main cause for such dust,—the broom is evidently responsible for more deaths than the sword ever was.”

SIMPLICITY OF HABITS AND LONG LIFE.

PYTHAGORAS, who so pathetically inculcated abstinence from animal food, and so strictly enjoined upon his disciples frugality and self-government, according to an anonymous writer of his life, lived a century.

The philosopher Gorgias, who declared he had never eaten or done anything for the mere gratification of appetite, lived a hundred and seven years.

Hippocrates, the father of physic, lived more than a hundred years.

Sophocles, the tragedian, at ninety years of age produced one of the most elaborate compositions of the dramatic kind that human genius ever perfected, and lived to be nearly a hundred.

Xenophon, who wrote so much in praise of temperance and virtue, lived beyond ninety. Plato, his contemporary, reached his eighty-first year. Diogenes, the cynic, died at about ninety; Zenocrates, at eighty-four.

Zeno, the father of the Stoic philosophy, attained his ninety-eighth year, and his immediate successor and disciple, Cleanthes, his ninety-ninth. Pindar, who begins his poems declaring water to be

the best thing in nature, lived almost through a century.

Agesilaus, whose character is so beautifully portrayed by Xenophon, led armies at eighty, established Nectanabis in his kingdom, and at eighty-four, on his return from Egypt, finished a life of singular glory.

Cicero, in his treatise on old age, introduces Cato the censor, in his eighty-fourth year, haranguing the people, and assisting the senate, the people, his clients, and his friends by his counsels.

It is surprising to what a great age the Eastern Christians, who retreated from the persecutions into the deserts of Egypt and Arabia, lived in health and on very little food. St. Anthony lived to a hundred and five years on mere bread and water, adding only a few herbs at last. James, the hermit, died at one hundred and four. Arsenius, the tutor of the Emperor Arcadius, lived a hundred and twenty years, sixty-five in the world and fifty-five in the desert. St. Epiphanius lived to be a hundred and fifteen; St. Jerome to about a hundred; Simeon Stylites to a hundred and nine; Romualdus to a hundred and twenty.

A quaint and enthusiastic writer of the eighteenth century relates the following: "George Broadbent, of Doncross, in Saddleworth, Lancashire, lived to the age of ninety-eight years. He had abstained during almost his whole life from animal food, from an opinion of its pernicious effects upon the human constitution, which opinion he inherited from his father. He lived chiefly on milk, keeping his own cow, and cultivated his own roots and vegetables. Apples, pears, plums, etc., were his luxuries. He was very partial to bread made of the flour of beans, and ate garlic very frequently. He always found himself strong and vigorous, and a stranger to disease. At the age of ninety he mowed his grass, made it into hay, and carried it home on his back, to the distance of a quarter of a mile. His usual hour of rising was four in the morning. He wrought at the business of woolen-cloth making to the time

of his death, which took place in the year 1753."

Many more instances might easily be produced where regularity of life, tranquillity of mind, and simplicity of diet have furnished long scenes of happiness, and blessed the late evening of life with unimpaired vigor both of body and mind. But such instances of longevity are very rarely to be found in courts and cities. "Courts have ever been the sepulchers of temperance and virtue, and great cities the graves of the human species. In the middle stations of life, where men have lived rationally,—in the humble cottage, whose inhabitants are compelled to be abstemious—in hermitages and monasteries, where the anchoret mortifies his desires, and imposes abstinence upon himself from religious considerations,—in these sequestered scenes we are to search for those who reach the ultimate boundaries of this life's short pilgrimage."

Interesting Chinese Customs.

In the extreme north of China, in very cold weather, says a writer in the *Forum*, there is found in the residences of the well-to-do and in inns a divan of masonry, varying in size, beneath which is the fireplace. On this divan the household sleeps, and the fire is used for cooking. For pillows, hollow square frames of rattan or bamboo are used, frequently just a block of wood.

The Chinese are not fond of bathing, and seldom wash the entire body. To wipe the face and neck with a cloth that has been wrung out of hot water is considered quite enough in the way of ablutions.

The writer explains the origin of the queue. The early Chinese allowed the hair to grow all over the head. They did not cut it, but wore it bound upon the top

of the head, secured by one or more long bodkins. In 1627, however, the Manchus issued an order that all Chinese under them should adopt their style of coiffure as a sign of allegiance, on penalty of death. The fashion thus begun by compulsion is now followed from choice.

As no man can safely undertake to shave the top of his own head, a barber is required daily. Those who can not afford to have one come to the house go into the street and sit on the box of the peripatetic barber to have face and head shaved, ears cleaned, eyes swabbed out (the chief cause of the prevalence of ophthalmia), and queue braided.

Whiskers are seldom worn, except by some of the mandarins of high rank, even by the very few who can raise them. A mustache is not considered proper for a man under forty.

The prevailing opinion that the Chinese are gross eaters is erroneous. They have usually but two meals a day—breakfast about nine, and dinner about three. The proportion of animal food consumed by them is probably smaller than among other nations in the same latitude. Pork, after rice, is the leading food. The writer remarks that the kittens and puppies intended for the table are fed upon grains and clean food, so that if the nature of this food is considered, it is far more wholesome than is the unclean hog. To assert, however, that cats and dogs form a staple article of food, is pure fiction. Rats and mice are not commonly sold as food, but as medicine. They are too hard to catch to be cheap, even for the latter purpose.

Snuff is laid on the thumb nail with a tiny spoon, and then inhaled.

The end of an elaborate dinner is announced by a bowl of plain boiled rice and a cup of tea, as if the host would say, in self-depreciation, "I have tried to provide an entertainment worthy of you, but I feel that I have failed; and lest you should leave my table hungry, I bid that you will satisfy yourselves with this staple."

Malaria and the Mosquito.

So much is being said and written in these days about the mosquito as an agent in carrying malaria, that the following quotation from a correspondent of the *British Medical Journal* is of special interest:—

"The best time for destroying mosquitoes is the winter, when they are in least numbers in the water, and when new generations do not appear. It is always possible to destroy mosquitoes in houses, and this may be done with greatest effect in the winter, when the insects take refuge in houses. Better knowledge of their habits, that is, of the place and time of

breeding, will render their destruction easier. Even in the most favorable cases, when drainage shall have done all that is possible, this will not be so easy as many believe. Nevertheless, after the treasure spent by nations and private individuals for preserving the vine from oïdium, permospora, and the phylloxera, it is to be hoped that something will be done to protect man from the malarial mosquito.

"Professor Grassi, of the University of Rome, recently obtained from the Italian Railway Company leave to use two rooms in a cottage situated near Maccarèse, a place well known as malarial, on the line between Rome and Civita Vecchia. The windows of two rooms were covered with perforated zinc, and for eight days Professor Grassi left Rome every evening at 5:30, accompanied by a family living outside the Porta San Giovanni, consisting of father, mother, and five children varying from one to nine years of age, for the above rooms, where they passed the night. The windows of the rooms were left open, but the entrance of mosquitoes was prevented by the perforated zinc. Professor Grassi took care that none of the members of the family left the rooms between sunset and sunrise. At about 8 A. M. every morning he and the family returned to Rome.

"The experiment was completely successful, inasmuch as twelve days after Grassi and the family had returned permanently to Rome not one of them had been attacked with malaria, while during the same time several persons sleeping only one hundred meters away from the cottage and not protected in the same manner, were taken ill with the disease.

"Professor Grassi and his subjects, having slept with open windows, naturally breathed the night air of this intensely malarial spot, and they drank the water found there. It may therefore, he says, be deduced that their immunity was due

solely to the fact that having protected the windows with perforated zinc those species of mosquitoes which produce malaria could not penetrate through the zinc into the rooms."

The Future of Health.

"Each generation is weaker and wiser than its fathers," is the burden of a paper in the *Forum*. The writer shows that social progress and physical degeneration go hand in hand. Along with advancement in medical science, better clothing and housing, and unprecedented improvements in hygiene, science, and sanitary methods, has come a weakening of the power to resist disease.

That the young wear glasses, no longer excites remark. A natural set of teeth remaining perfect until its owner has reached the prime of life has become extremely rare. A toothless race is not a distant possibility.

Changed modes of warfare cause the able bodied to be selected for danger, while the weaker remain at home. The effect of social activities and peaceful pursuits, as well as military customs, is that the race is being continued in greater proportion by the less perfect than by the more perfect physical representatives. Even the influence of philanthropy in protecting and caring for the feeble and defective tends toward the deterioration of the race. The writer says: "The death rate has been much reduced in all civilized lands during this century, and particularly in the last half of it. But we are at the point now where the immediate benefits are at a maximum. The evil results, only beginning to appear, must grow at an increasing rate, if counteracting forces are not set in motion." He concludes, "We may confidently predict that the more intelligent sympathy of the future will demand that misery be not

merely alleviated, but that it be no longer transmitted as a curse to posterity."

A Portable Solitude.

An ingenious suggestion, says *Harper's Bazar*, is made in that curious production called "Flim Flams." "The hero of this work was tender eared. He found no end to all those kinds of small noises which play on the finely organized ears of a literary man like the storms on an Æolian harp. His unsteady brain was long the unhappy victim of his eyes and ears. At length he divulged that he had made an important discovery. 'Solitude,' said he, 'has long been the catchword through all ages of literary men. Why should they be without a portable solitude? I have actually contrived such a thing, which will serve in all times and places.' He exultingly held up something, which, having clapped upon his head, the latter disappeared. 'Here is solitude.' It was a long, triple-quilted cap, which came down an inch over his eyes, and quite covered his ears, in which parts it was stuffed with great care. Furnished with this, the inventor claimed that a man need not travel three hundred miles in quest of solitude, but could find it at once, even in the heart of noisy London."

Commenting upon this discovery, the *Union Signal* says:—

"We do not know that the cap was ever patented, but we do know that we need a more magic extinguisher than it could ever be. We need to hush more than the noises of London, New York, Chicago. We need the stillness of spirit that can gather up the disturbances of environment and lose them in the depths of its own peace.

"It is possible to put one's self into the confusion or irritation of surroundings so that our nerves die daily and

hourly. It is also possible to be right amid those same surroundings, and be conscious only of the great, beautiful calm *within*. Is thy spirit at peace? Does God rule thy purpose? Does his Spirit abide in thine heart? Then turn thy attention away from the things that irritate, and listen to the music that righteousness is making in thine own soul. 'Be still, and know that I am God.' Go into the sacred, secret inner room of thine own spirit, where naught can come save by thy permission, and *there* shalt thou find the solitude that will give thee power to think and work."

Hygienic Blackboards.

A writer in *Health*, discussing the dangers that lurk in the schoolroom, speaks in particular of abuses of the eyes. He says of blackboards:—

"They should be placed opposite windows—never between—and should be of a dark, lusterless color, kept scrupulously clean, and not made gray with chalk. Lessons placed upon the boards for pupils to copy are injurious to the eyes, by reason of the rapid change of focus required from the distant board to the paper on the desk, hence these should be avoided. For sanitary reasons, the use of slates should be abolished. When blackboards are used for object lessons, they should be placed at a distance of not less than fifteen or, better, twenty feet from the nearest pupil; for beyond this distance the rays of light from the object to be looked at are brought to a focus upon the retina, and produce a clear image with the minimum effort or strain of the accommodation on the part of the normal (emmetropic) eye; and it would be best to divide the class into such a number of pupils as can be placed directly in front of separate boards. All work placed upon the blackboards must have a certain minimum, that

the area of each letter may correspond to the square of a visual angle of five minutes (one twelfth of a degree), so that the letters should be distinctly read by the pupil at the greatest distance from the blackboard—say, at forty feet, letters should approximate one inch square; at twenty feet, one-half inch square."

Immolation.

"The Child's Proper Development" is the subject of a prize article in the *Cosmopolitan*, by a father who prefers to remain incognito, but who can not conceal a rare and strong personality. In developing his theory of "immolation," forgetting self and living wholly "for the young shoots," he gives the following:—

"Some time ago I was trying to convince one of the boys that it was not quite right to peg away at the little birds with a sling shot, giving him the usual talk about killing the mother and leaving the poor little birdies alone in this cruel, cold world, et cetera. A while after, I overheard a discussion between that boy and one of his brothers. They were trying to establish wherein was the difference 'twixt murder by a sling shot and a just execution by the gun route—for the birds. Not being able to help them out with that problem, I simply put the guns away. The sling shots followed. Example is most contagious. Now we go for long walks in the woods, and observe how birds and things *live*, instead of killing every live thing we see."

How He Learned.

A mother I know had need one evening to pass between the light and her little son. With sweet, grave courtesy she said, "Will you excuse me, dear, if I pass between you and the light?" He looked up and said, "What made you

ask me that, mama?" And she answered, "Because, dear, it would be rude to do it without speaking. I would not think of not speaking if it had been Mr. F. [the minister], and surely I would not be ruder to my own dear boy."

The boy thought a moment, and then said, "Mama, what ought I to say back?" His mama replied, "What do you think would be nice?" He studied over it a while, for he was such a wee lad-die, and then said, "Would it be nice to say, 'Sure, you can?'" This was mama's time to say, "That would be nice, but how would you like to say, just as Mr. F. would, 'Certainly?'" It means the same thing, you know."

That little lad, now a young man in college, is remarked for his never-failing courtesy. A friend said of him the other day, "It's second nature to W. to be polite," and the mother smiled as she thanked God in her heart for the grace that had helped her to be unfailingly courteous to her boy.—*Christian Work.*

Cabinet Councils at 3 A. M.

Mrs. Henry Clarence Paget, in an article in the *Cornhill* for September, gives a curious account of the early-rising habits of the imperial court of China. 'In spite,' Mrs. Paget writes, 'of the reluctant awakening of China, what has been the custom still remains so, and at 2 A. M. every morning the Halls of Audience are opened, and at 3 A. M. the cabinet councils are held. What minister's ideas would not be congealed if called upon to assemble at such an unearthly hour, with the thermometer many degrees below zero? Even the court entertainments take place at 8 A. M., and at 10 A. M. the work of the emperor's day is over. Anything more uncomfortable can hardly be imagined; but from the emperor down to his lowest subject, who is ground down

and obliged to subsist on fare which would mean starvation to most races, the Chinese are supremely satisfied with themselves, and they see no reason for any change.'

Dangerous Drinks.

The Philadelphia *News* is authority for the following: "A bartender plaintively bewailed the necessity of having to rub congealed drops of sticky beer off the bar. 'But if I let them remain,' said he, in a tone of one seeking compassion, 'they rot the wood.'

"'They rot the wood, do they?' fiercely repeated a beer bibber. 'Then what in the name of common sense does beer do to my stomach?'

"Replied the manipulator of drinks: 'It is beyond me to tell. Let me show you something.' He placed a piece of raw meat on the counter, and dropped upon it a small measure of an imported ginger ale. In five minutes the meat had parted into little pieces, as if hacked by a dull knife."

Specific Criminality.

"According to Marambat," says the *New Voice*, "of three thousand convicts examined by him, seventy-eight per cent were drunkards; seventy-nine per cent of these were vagabonds and beggars; fifty per cent of the assassins and fifty-seven per cent of the incendiaries were drunkards. Marro found that the drunkards stood in the first rank of highway robbers, eighty-two per cent; Vetault found among forty alcoholic criminals that there were fifteen homicides, eight thieves, five swindlers, six assaulters (on women), four assaulters (wounding), and two vagrants."

Imbibing Wisdom.

The man with a fad, who was talkative, as such men generally are, had been dis-

coursing to his friend, says the *New York World*, on the influence of food upon character.

"Tell me," said he, in summing up, "tell me what a man eats, and I will tell you what he is."

His friend, although fatigued, was evidently interested.

"There is only one question I wish to ask you," he said.

"Ask it," replied the discourser, magnanimously, with an air that said very clearly, "Give me a hard one while you are at it, and I'll show you how smart I am."

"It is this," replied the fatigued friend. "How much sage tea would you have to drink to make a wise man of yourself?"

No answer being promptly forthcoming, the conference broke up.—*Youth's Companion*.

Mistake of Brain Workers.

"Wherein do brain workers err in their eating and drinking, and so break down?" inquires *Health*, and our English contemporary answers: "In that they habitually and almost exclusively use stimulant, instead of simply nutrient, foods and drinks. Of all the foods they eat which are open to criticism, and in our judgment to thorough condemnation, there are two which they use as staples, which should be, at best, only seldom, if ever, used. One of these is flesh meats, such as beef, mutton, and pork, with the flesh of other animals. The other is food made from superfine wheat flour. These are, with nearly all the brain workers in this country, staple foods.

"It is astonishing to see what quantities of white flour are eaten by our thinking people, supplemented in a majority of cases by drinks that have in them very little nutriment, with more or less of stimulating properties. Who eats both meat and white bread and drinks beer, or

wine, or tea, or coffee, relies on these as staples; whatever else he eats he regards rather as relishes than as substantials, and unfortunately for him, these have in them constituent elements only in a very small quantity whereby his brain and sympathetic nervous system can be replenished.

"The man who falls down from dizziness, or receives a shock which paralyzes him, or finds his memory failing him, or his stomach incompetent to digest food, or his bowels inactive, or his liver congested, or his bronchial tubes inflamed, or his health giving way in general, is suffering from starvation of nerves. He works on an insufficient supply of food, out of which his nervous system can not be built up as against the wear and tear to which he subjects it. A man's brain can be worn away under mental and spiritual taxing work as truly as his muscles can give way under constant heavy drafts made upon them. Many a man goes about our streets to his daily labor so tired that he hardly knows how to work unless under immediate stimulation."

Drawn or Undrawn Poultry ?

An agricultural weekly, in a current number, gives the following information, which could hardly increase one's zest for turkey and chicken, drawn or undrawn :—

"The poultry and game shipped to market, that placed on sale, and even that kept in cold storage, are usually undrawn. Why this custom of handling and selling poultry and game 'undrawn' prevails, seems to find an explanation in the fact that the public are willing to pay higher prices for them thus furnished. The belief entertained by some that the flesh keeps longer when fowls are left undrawn is not supported by facts. Experiments which we have personally conducted, demonstrate that under precisely the same conditions of temperature and humidity, drawn fowls will keep from

two to three days longer than those not drawn.

“The presence of undigested food and of the excrementitious substances in animals which have been killed, most certainly favors tainting of the flesh and general decomposition. The viscera are the first part to show putrescence, and allowing these to remain in the body can not do otherwise than favor infection of the flesh with bacteria and ptomaines, even if osmosis does not actually carry putrid juices to contiguous tissues. Hunters know the value of drawing birds as soon as possible after they have been shot, in order to keep them sweet and fresh, and to prevent their having a strong intestinal flavor.

“That the opening of the body of an animal and exposing the internal surfaces to the air may have some influence of itself in hastening putrefaction is admitted, but when the process of ‘drawing’ is properly conducted, this secondary objection to its immediate performance may be entirely set aside. Absolute cleanliness should be maintained throughout the operation, and if the entrails are torn, and their contents allowed to come in contact with the flesh of the animal, its interior should be at once washed out with clean cold water, and afterward with a solution of common salt, and the carcass hung up until thoroughly dry.”

Food Inspection in Philadelphia.

The subject of food adulteration was brought to the attention of the July grand jury at Philadelphia, which made a special presentment on the subject, saying that “the adulteration of food is a matter of such vital importance to every member of the community that the strongest measures should be taken to prevent and punish the crime.” Special attention was called to the fact that it is

not always the retailer who is at fault, but that very frequently the adulteration is made by the wholesaler or manufacturer. The Pennsylvania law prohibits the use of borax, boracic acid, salicylate of sodium, and salicylic acid as preservatives in any article of food, and this provision of the adulteration act is relied upon in many instances to secure convictions, these preservatives being frequently used by milk dealers. The Pennsylvania oleomargarine law is also quite severe, the retail dealer being held responsible even if he himself bought oleomargarine in the belief that it was butter.—*Medical Record.*

Quarantine against Consumptives.

There is a movement on foot to exclude consumptives from California and other Western States. The State Board of Health of California is considering the propriety of quarantining the State against human beings and domestic animals having tuberculosis. This action has opened to wide discussion the question of the right of a State to bottle up for its own citizens its air and sunshine.

Colorado is thought to be planning a quarantine, and it is believed that the movement will develop an interstate system of laws in the West prohibiting consumptives from entering or leaving the confines of the State.

At the same time physicians say that the practice of recommending climatic changes for consumptives is not so prevalent as it was some years ago, and that for this reason, in view of modern theories of the disease, the Western States have little to fear from the utmost generosity on their part in permitting sufferers from other States to breathe where they can breathe with least pain, and to spend their dying years where they can cling longest to life.

EDITORIAL.

THE RATIONAL TREATMENT OF CONSUMPTION.

IN the first place let it be understood that consumption, in many cases at least, is curable if taken in its earliest stages; but if it is allowed to advance until a considerable portion of the lungs has been destroyed, or if through carelessness or inattention to the necessary conditions for recovery, the individual brings upon himself repeated relapses, the disease will rapidly pass into the incurable stage. For a person with a fairly good constitution, who by some temporary enfeeblement of his body has lost his resisting power to such a degree that the germs have obtained a foothold, there is a good prospect for a permanent cure of the disease, provided it is taken in hand at once, and vigorous measures are employed.

The essentials of the rational treatment of consumption are, first, out-of-door life in all seasons and all weathers, with the proper protection and precautions, of course, to avoid chilling. To render such a life convenient and easy, a change of climate is sometimes necessary, but it is by no means wise in the majority of cases of consumption to remove to a warm climate. That cold air is best has been abundantly proved at Davos and by numerous European authorities, as well as by the intelligent observation and experience of physicians in the Rocky Mountain region of the United States. The more sunshine a region affords, the better is it adapted to consumptives, for the reason that sunshine rapidly kills tubercular bacilli when they are exposed to its direct rays, and for the more important reason that sunlight is one of the most powerful of all natural tonics, stimulating vital resistance, developing bodily vigor, and compelling expansion of the lungs, thus strengthening the injured portion of the lungs, aiding in the separation of the diseased and healthy portions, and in the healing of the parts by cicatrization. A person going to such an ele-

vated region must first exercise the greatest caution not to overdo. In the majority of cases it is best for the patient to sit nearly the whole time for two or three weeks, until he acquires the ability to breathe easily without getting out of breath. Shortness of breath always indicates congestion, and in this disease congestion is always to be avoided, as it is a precursor of hemorrhage.

Diet is a matter of extreme importance. Consumptives are generally thin. They have lost the power to accumulate fat, and the primary cause of this is usually a loss of the ability to digest fat-making elements. The diet for a consumptive should always contain an abundance of these elements prepared in such a way as to be readily digestible. Nuts, nut preparations, and farinaceous foods that have undergone preliminary digestion by heat and the action of diastasic ferments, are especially appropriate. Zwieback, browned rice, and such specially prepared foods as granose, granola, granuts, and crystal wheat are easily assimilable cereal preparations, and may be used with profit as fat producers. Buttermilk and kumyss are also valuable, and may be freely used. Eggs lightly cooked may be used when fever is not present to any considerable extent. Sweet fruits and fruit juices are notably valuable, not only for their special nutrient properties, but because they act as correctives of the digestive organs, regulating the bowels, cleansing the stomach, and aiding the kidneys in the elimination of the poisons which give rise to fever, night sweats, and other distressing symptoms.

Aside from exercise, climatic advantages, diet, and the cultivation of good health habits generally, there is little more that can be done in the treatment of consumption except to build up the constitution and to increase the vital resistance of the patient. This can be accomplished to a marvelous degree, and

in many cases that seem utterly hopeless, by the aid of the varied resources of hydrotherapy.

Auburg, an eminent Swedish physician, has treated many hundreds of cases in the last twenty years by the aid of cold water alone, and with most wonderful results. The cold water treatment is much advocated in Europe at the present time, and is winning many friends. The method of Auburg is, in the writer's opinion, somewhat unnecessarily severe and to a degree hazardous. All its merits, without its dangers and inconveniences, the writer believes to be included in the outline given below. It may be remarked that the principal object aimed at is to train the patient steadily to the employment of water at a lower and lower temperature, as this is the best known means of awakening and developing the resistance of the tissues. The writer has for many years made use of the measures outlined in this article for the treatment of consumptives, as well as invalids of various other classes, and in not a few instances with extraordinary success.

The indications for hyriatic treatment are the need for (1) improvement of the appetite and digestion; (2) the improvement of assimilation and the increase of bodily energy; (3) increased activity of the skin and kidneys; (4) lessening and removing fever, preventing night sweats, lessening cough, checking the drain through expectoration; (5) increased activity of the respiratory muscles and mobility of the chest; (6) strengthening the heart action; (7) removing pulmonary congestion and combating the tendency to hemorrhage; (8) sustaining the nerve centers.

That these various indications can be better met by hydrotherapy than by any other remedy or combination of remedies has been clearly demonstrated not only by the observations and experiments of Auburg, but by the clinical observations of scores of other physicians. The method of Auburg consisted in sponging the patient with ice water, especially the neck, back, face, and chest, both morning and evening; later, pouring ice water over the head, neck, back, face, and chest from a watering pot; and still later immersing the whole body, with the exception

of the head, in water at 45° to 54°. He claimed that in his experience night sweats disappeared as the result of this treatment; in a few days the appetite increased, and there was a rapid gain in body weight.

The following is the writer's method of graduating the applications of water in hydrotherapy, and adapting them to the various conditions of the patient. The general method is divided into four stages, or grades. The treatment begins with No. 1, which is continued until the patient bears the treatment well, and reacts readily to water of the lowest temperature. The second grade is then introduced and graduated in the same way, then the third, and finally the fourth.

1. Dry friction to the whole surface of the body, followed by friction of the chest with the hand dipped in water at 60°, the temperature being gradually lowered to 32° in successive applications in the course of two weeks. After the wet rubbing, use dry rubbing until the surface is red and warm, then apply a stimulating compress of roller-bandage. Apply the heating compress at night only; the dry and wet friction of the chest in the morning before rising and before going to bed at night. When night sweats are present, apply very hot sponging of the whole surface at bedtime.

2. Cold friction with the wet friction mitt to the whole surface, with water at 60° to 32°, followed by the heating compress when fever or cough is present. Employ dry friction night and morning. Use the chest compress at night, especially if the cough is very irritable; if the temperature is elevated both night and day, change the compress as often as it becomes dry.

3. The wet-sheet rub at 60° in the morning when the patient is warm from the bed. If the patient's temperature is subnormal, warm him at 10 or 11 o'clock by heating the skin by means of the sun bath or the electric-light bath, duration from three to five minutes, or by the vapor bath for five or six minutes, or just sufficient to heat the skin. The patient should stand with the feet in water at a temperature of 104°, and the whole chest should be rubbed with the dry hand until red, then with ice water until

strong reaction is produced, just before the application of the wet sheet. The length of the wet-sheet rub should be thirty or forty seconds; later, the duration may be extended to two minutes. The patient should be rubbed thoroughly dry after the application. If not strong, he should be wrapped in woolen blankets, and put to bed until reaction is complete. When more vigor is required, the reaction may be encouraged by exercise.

4. The Scotch douche to the legs until well reddened, followed by the rain douche at 70° to 60°, for thirty seconds, followed by vigorous rubbing. In persons who are quite robust this procedure may be preceded by a chest pack combined with a leg pack contin-

ued to the third or heating stage, but not until perspiration is induced.

In all stages of the disease free water drinking should be encouraged. Use very hot sponging for night sweats. The sipping of very hot water relieves cough, especially when there is little expectoration. The cold bag over the stomach for half an hour before meals will encourage the appetite. The heating abdominal compress should be worn at night when the bowels are inactive, and dry friction should be applied upon first waking in the morning, when the temperature is subnormal. When the bowels are loose, apply the compress at 50°, cover with flannel, and change every forty minutes.

“PIGARIANS.”

VEGETARIANS are sometimes pointed out, less frequently now than formerly, as being just a little “short” intellectually, and many people who are not personally acquainted with those who abstain from the use of flesh expect to find the typical vegetarian a pale-faced, weazened-looking individual, wearing his hair long, and parting his name, as well as his hair, in the middle, signing himself “J. Jonathan Jones, V. E.” (vegetable eater).

Those who ridicule vegetarianism and vegetarians evidently do so without an intelligent view of the thing which they make the butt of their scoffing. Vegetarianism is not a fad or a fancy; it is in no sense a dietetic novelty. The Bible is authority for the statement that the first men were vegetarians. Adam was particularly instructed that his proper diet consisted of fruits, grains, and nuts, while the lower animals were given herbs for meat; and if Noah was given permission to eat flesh in connection with a like permit to eat grass if he chose (“every moving thing that liveth shall be meat for you; *even as the green herb have I given you all things*”), the extension of Noah's bill of fare was evidently not to supply him with a sustenance better adapted to his needs, or likely to prolong his life, for of the fruit and grain and nut eaters who lived before the flood, the

lives of two men, Adam and Methuselah, sufficed to reach from the creation to the great submergence, which afforded an opportunity for peopling the earth with a race of Noahites. But the new race proved decidedly inferior to the Adamite race, or antediluvians, for within a few hundred years the actual length of life was shortened to a little more than a century, and human longevity has been growing briefer ever since, until at the present time the average man steps into his coffin as soon as his head and brain have reached full development, at forty years, and before he has had opportunity to make use of his fully developed powers.

A vegetarian is simply one who chooses to select his diet from the original bill of fare that God gave to Adam, which, as is readily conceived, consisted of the choicest products of the earth,—luscious fruits, nourishing grains, and nuts, the very quintessence of nutrient material. If a man chooses to subsist upon these choice, refined, delicious products rather than to add the creeping things, which were never intended to be eaten, and the herbage, designed for animals with multiple stomachs, which Noah was given permission to swallow but never commanded to eat, why should he be held up to ridicule?

From the standpoint of common sense,

whose bill of fare is most worthy of approval—that of the man who prefers to eat his corn, wheat, and other comestibles just as they come from the hand of the Creator, bread from heaven direct; or that of the man who first feeds these sweet, pure, heaven-born foods to a scavenger, a wallowing hog, and after he has rolled them around in the mud for six months or more, then brutally kills the hog; and in gnawing his bones only gets back a small fragment of the original food, perhaps one twentieth, and that in a deteriorated and polluted form? The high esteem in which the pig, the polluter of so much good food, is held,—a purveyor of foods to human stomachs, one might say a caterer to human palates, for the roast pig brings to the table all the miscellaneous filth that he has collected and mingled with the wholesome corn that he has swallowed,—is, to say the least, an anomalous fact, a veritable psychological puzzle. Why should man, the highest of all the animal creation, select swine,—grunting, squealing, wallowing, offal-eating swine, to be his chief gastronomic pet?

The late Dr. Oliver Wendell Holmes made a special study of the relation of diet to physique and character, and he declared that he could pick out a pig eater, at least one who was especially devoted to the use of swine's flesh, by his bristly hair and greasy skin. Bronson Alcott, the Concord philosopher, the friend of Emerson and Thoreau, both of whom, by the way, were vegetarians, was fond of asserting in his public lectures that people who ate swine's flesh became "piggified." It is not to be supposed that the philosopher imagined that a man who eats pig necessarily becomes piggish in a moral sense, although it seems difficult to match the selfishness which leads man to turn away from the gustatory delights of wholesome fruits, nuts, and grains, and slay and eat a poor hog, depriving him of the life which he enjoys, narrow and restricted as his opportunities are, merely for the sake of giving his own palate a momentary tickle as the carcass of the pig slips down in fragments.

Aristotle tells us of a race of dwarfs who

inhabited the region of the Upper Nile, and who fed entirely upon the flesh of animals, living during the pasture season exclusively upon blood and milk mingled together, and who applied the word "parent" to the cattle upon which they subsisted rather than to their immediate ancestors, whom they ruthlessly slaughtered as soon as they became too old to be of service in caring for their "parents," the cattle. We are made of what we eat; hence the practice of these savages in calling their cattle their "parents" was not, after all, so inappropriate as might at first seem. Indeed, if a boy or a man who has been brought up on "hog meat," as they call it out West, is not largely composed of swine's flesh, then certainly there can be no truth in that old German proverb so long accepted as a sound philosophical and physiological fact, "As a man eateth, so is he."

We are inclined to think that the old philosopher was right. Vegetable food, when eaten by a beast, becomes animalized. The process of animalization is not one of elevation in the scale of nutrient value, for the foods which grow upon trees and herbs and are fed by the winds of heaven, wet by the rain and dew, distilled, pure, pellucid, from the clouds, kissed and blessed by the glorious sunshine, stand highest in the scale of food substances.

The animal is a machine constructed for using food, not for producing it. When one eats a beast, he simply overtakes the animal in the act of consuming food which he has gathered up and swallowed, the larger portion of which is already used up, having passed off, in the form of waste substances, through the kidneys, liver, skin, and lungs, while a small portion remains mingled with, and polluted by, the dead and poisonous products which result from the activities of animal life.

The vegetable purifies the air and the soil; the animal pollutes both the air and the soil. Its body is a factory of poisons. A dead sea lion which has been lying for half a month under the hot sun of an Arctic summer is a stinking corpse, nothing more or less. When the Eskimo has transferred to his own stomach the putrefying walrus, it is a stinking

corpse still, though out of sight, or rather has changed its form from walrus into Eskimo. What is true of the Eskimo is equally true of the city parson and the dead sheep, dead hen, fragment of dead cow, or the remains of any other beast. It can not be doubted that we assimilate more or less the character of what we eat.

If a man is to be ridiculed because he is a vegetarian and lives upon a pure, sweet, wholesome diet, what is to be said of him who constructs his body out of the cadavers of scavengers. Would it seem harsh to call an enthusiastic lover of ham sandwiches,

pork pies, and fried sausage a "pigarian"? If so, will some one rise and explain why the term "pigarian" is not just as appropriate for such an individual as the term "vegetarian" for one who discards flesh? The man who is willing to swallow a pig whole, outside and insides, feet, ears, and snout, ought not to be ashamed to be called after its name.

We do not believe in calling names or bandying epithets, but "pigarian" really seems too good, too appropriate, and too euphonious to let go without at least taking a look at it.

AN ANATOMICAL PROPHECY.

MR. FRANK TREVES, the great English surgeon, has evidently had an arrest of thought respecting the rapid strides civilized man is making in degeneracy and decay. Mr. Treves evidently does not wish to play the rôle of a sensationalist, but he suggests in a very ingenious and at the same time dignified manner the idea that man has departed far away from his normal state and normal habits. He intimates that while the body of man has made no essential change since its appearance upon earth, which is clearly proved by a study of the most ancient skeletons discovered, on the other hand, man's habits have undergone great changes. This is especially true respecting his dietetic habits. He accordingly raises the question whether the human digestive organs have kept up with the man. He remarks:—

"It is a question, indeed, if our stomach and intestines are—to use a common expression—quite up to date, or are quite adapted to the enlightened individuals they serve.

"Without multiplying examples of apparent experiment and adaptation, one might be permitted to speculate as to the future form of the digestive canal of man. . . . It may be surmised that the coming man will be quite edentulous [toothless], that he will have a less enigmatical liver and no gall-bladder, and that his intestine will be considerably shortened. Extreme refinement in

the selection of food materials and an exquisite cultivation of what is termed 'a palate' may lead to an elongation of the esophagus, and to the development of taste organs its entire length. In the place of the present stomach it is probable that the toothless man will develop a gizzard. A gizzard would appear to be a labor-saving organ which is to be depended upon, and which is little liable to get out of order. A gizzard would probably be a great comfort to the overworked man of business and to the seeker after pleasure who spends much of his life in continental hotels."

Mr. Treves's suggestion that the modern man needs a gizzard to digest his hotel dinner is one of the most frank and explicit expressions of faith in human needs which has recently been brought to our notice. A capacious and able-bodied gizzard might be able to deal with the refractory affairs which appear upon the ordinary hotel or boarding-house table, such as anchovies, spiced pickles, pickled olives, mince pie, roast pork, Welsh rarebit. With the demands made upon his digestive apparatus, man needs to cope not only with the gizzard of an ostrich but the fourteen-compartment stomach of a woodchuck. By the aid of such a powerful combination of digestive mechanism, the modern man might have some chance to maintain good digestion; but since he is not so richly endowed with gastronomic capacity, it would

be well for him to adopt a dietary more consistent with the structure of his alimentary canal. A description of such a diet is found in the first chapter of Genesis, in which the Creator outlined for Adam his proper bill of fare.

A return to nature is the most crying need

of the world at the present time. The human race as a whole, and particularly the civilized part of it, is a prodigal son, a wanderer from the path of physical rectitude. Vast multitudes of human beings are feeding upon husks, while the pigs are getting the best of it—the corn.

TOO MUCH CIVILIZED.

WE have fixed our minds so intently on civilizing and training and educating that we have lost sight of the man himself. We have become so enamored of accomplishments that we waste and consume and destroy the man by the processes by means of which we undertake to refine and culture him. "Civilized to death" might be appropriately written upon a million marble monuments in our public cemeteries.

"Sicklied o'er with the pale cast of thought," and yellowed o'er with the biliousness born of mince pies, fried sausages, Saratoga chips, and sundry hot pungent ragouts, entrées, and dyspepsia-breeding salads, hot sauces and desserts, are the two dominant complexion types among the adult population of civilized lands, especially in our cities. A business man in one of the large cities of the West, in placing his wife in the writer's hands for professional care, some years ago, remarked, "Doctor, you will see at once what is the matter with my wife. She is simply a product of modern civilization." So she was, an utterly morbid product, to borrow a medical phrase; one might almost say a wasted product, for her education had been purely of a decorative character. The purpose of her trainers had been to make her ornamental rather than useful. The arts of music, painting, and elocution had done all they could for her intellectually, while her dress-makers had done their best to bring her body to the deformed and hideous model of the fashion plate. At the early age of twenty-five, the poor woman was a complete wreck in mind and body. Her stomach and bowels were from four to six inches below their normal position; the right kidney had fallen away from its anchorage, and was floating

about in a desultory manner; the colon was doubled over upon itself, and things were generally jumbled and tangled in her abdominal cavity. In consequence, the brain and spinal cord were in a state of chronic exhaustion, the heart was disturbed, the liver, the kidneys, and other vital organs were seriously out of order, and all the bodily functions in a state of vital chaos.

After an examination, the husband asked, "Well, Doctor, what is your diagnosis?" The only reply that seemed appropriate was, "Total depravity." The poor woman ought to have been born again, into another world, where such a thing as civilization is unknown—where there is a chance for a normal, healthy life.

In every civilized country there are millions of such unfortunate creatures, men and boys, as well as girls and women, though the latter suffer most, perhaps; and the number is multiplying at a tremendous rate. If nothing stops the downward career of the human family in its mad race after culture and civilization, the last man alive will sometime erect a pitiable monument, and write upon it in behalf of himself and the multitudes who have died before him, an epitaph to be read by the new race, born out of the ashes of the old, or transplanted from some other planet:—

"The last survivor of the genus man
Beside this tombstone lies; he madly ran
A downhill race to gain what most he prized,—
The empty honor to be civilized.

"Weazened and dwarfed, deformed and sinking
fast,
He weakened on and reached the goal at last,
A feeble meed of self-applause; he sighed,
Then turned his face to mother earth, and died."

To Prevent Taking Cold at Night.

Hundreds of thousands of people, babies particularly, take cold at night, and no one can discover the cause of the cold. Many a night one goes to bed feeling well, but wakes in the morning with a sore throat or even pneumonia or pleurisy.

The cause of this is the unequal distribution of the clothing, and the consequent unequal protection of the body during the night. The shoulders, arms, chest, and throat, which are most susceptible to cold, are most likely to become exposed. When one goes to bed, the room is warm, but during the night it cools off, and one's shoulders are in danger of becoming chilled. When one wakes up in the night feeling chilly or cold, and tucks the bedclothes down around his shoulders, the feeling of relief is instantaneous. A chill is a dangerous thing, for it means a threatened congestion of the lungs.

Many children throw off the bedclothes during sleep, in spite of every precaution. In order, then, to keep them from taking cold at night their shoulders and arms should be well protected independently of the bed-clothing.

In our own household we have tried several experiments. It was suggested to use the old Chinese method of rings and pins in the side of the bed, the blankets being brought up over them and fastened. But it was not long before we discovered that the little ones would not tolerate this sort of imprisonment; they would creep out at the top, notwithstanding the utmost care to fasten them in. We found that the only effective plan was to have them wear jackets so made as to cover the arms, shoulders, and chest. The lower part of the body is not so likely to become exposed, so a warm jacket made of thick, porous wool will protect one perfectly, and obviate the necessity for so much bed-clothing.

A Great Waste of Energy.

This is what we are inclined to say with reference to such a performance as that of the young fellow who a short time ago nearly killed himself in an effort to demonstrate his

ability to ride the bicycle a mile in less than a minute. It is a fine thing to be able to ride a bicycle with that rapidity, but how much better if in addition to so much leg-ability this young man had had enough good sense and ambition to invest some of his pent-up energy in pulling up jimson weeds, which grow in abundance on the vacant lots in Brooklyn and suburban places, in hoeing corn, threshing beans, or some other really useful employment.

The energy wasted in so-called "sports," in athletics, and in various other ways, if rightly directed, would lift every poor family in the country from want to comfort, would furnish every widow with a home, and every child with bread and an education. Besides, the expenditure of so great an amount of energy in so short a time can not be made without injury to the performer. The activity in which one engages while employed in actual useful work, is, by its very moderation, conducive to the well-being of the individual as well as to that of others.

Beefsteak and Cancer.

It has long been known that tuberculosis is frequently communicated to human beings by the use of meats, especially beef and mutton. Sheep and cattle are extremely subject to this disease—much more so than the horse or the goat. The latter animal was formerly supposed to be quite free from tuberculosis, but more recent studies of the subject have shown that even the goat and the donkey have sometimes succumbed to this malady.

It has also been known for many years that the presence of tapeworm in the human body is, in at least nine cases out of ten, as pointed out by the late Professor Leidy, of Philadelphia, due to the use of beef. Mr. Jasper More, a member of the British Parliament, having had his attention called to the increase of cancer among cattle in England, has made a thorough investigation of this matter, and has discovered that cancer affecting the lips and throat is very common among cows and oxen in various parts of England, and he brings forward this fact as

an explanation of the rapid increase of cancer in certain portions of England and Wales.

This subject is one which ought to receive most earnest attention in this country as well as in England. The inside of the mouth is seldom examined, hence cancer might exist in the throat of an animal without its being discovered by the inspectors. The use of the flesh of a cancer-infected animal, unless very thoroughly cooked, would be likely to give rise to the development of this incurable malady in susceptible persons.

Attempts have been made to trace the origin of cancer to the use of vegetable foods of various sorts, but wholly without success.

We must find the seat of this parasitic disease in the same source from which nearly all other human parasitic maladies originate; viz., the use of the flesh of diseased animals. The human race is paying a terrible penalty for the inhumanity of the ruthless butchery of animals and their consumption as food.

Dr. Hemmeter, the eminent professor of disorders of the stomach, in the Johns Hopkins University, calls attention to the confirmation of the observations made by other eminent clinicians,—that cancer of the stomach is increasing at an extremely rapid rate. Is it not time to begin to think about discarding the cow, the pig, and other forms of food so liable to disease, in exchange for the fruits, grains, and nuts which nature provides in pristine purity?

The Care of the Teeth.

The teeth are most essential to mouth digestion. The state of the teeth may be regarded in general as an index of the condition of the body as a whole. Defective teeth mean a decayed body. Decay of the teeth is nothing more or less than ulceration, and is more to be deplored than ulceration of other parts. It is due to the presence of microbes in the mouth. A coated tongue and a slimy mouth will sooner or later be followed by unsound teeth. It shows that the resistance of the mouth against germs is lost, so that it is not able to defend itself. The teeth ulcerate for the same reason that

small ulcers form on the inner surface of the lips and cheeks. The retention of food about the teeth and the neglect to cleanse them after eating encourage the growth of germs in the mouth and decay of the teeth.

The use of dry food, whereby plenty of work is given to the teeth and by which their surfaces are, so to speak, scoured by contact with it, is in the highest degree essential to the maintenance of sound teeth.

Premature decay of the teeth is one of the indications of decay of the race. It is rare in these days to find a person twenty years of age who has the complete number of sound teeth in his mouth. Not infrequently school children are found with their temporary teeth in a state of advanced decay. This all means constitutional decay, and calls for improvement of the general health by every possible means.

The teeth should be thoroughly cleaned the first thing on rising in the morning, before going to bed at night, and after each meal. The essentials are a soft tooth-brush—brushes which cause the gums to bleed should never be used—and pure soft water. A few drops of the essence of cinnamon may be added to the water with advantage, and it is likewise well to dip the brush in a little precipitated chalk at least two or three times a week. Soaps and dentifrices containing soap should not be used on the teeth. The inner as well as the outer surfaces should have attention. Care should be taken to remove all particles from between the teeth, as it is at these points that decay begins. As false teeth retain the food, these should also be cleansed several times a day. For the health of the mouth, the false teeth should be removed at night, placing them, after washing, in a small basin of water. They should not be replaced in the morning until the mouth has been thoroughly rinsed in cold water. Sound teeth should never be sacrificed, and, so far as possible, missing teeth should be supplied by bridge work and other measures so as to avoid the wearing of a plate whenever possible, as plates undoubtedly encourage the breeding of germs by furnishing hiding places for multitudes of these organisms.

ANSWERS TO CORRESPONDENTS.

Biliousness.—C. A. C., Illinois, asks a remedy for frequent attacks of biliousness.

Ans.—Biliousness is usually due to dilatation of the stomach. Use an exclusive fruit diet for two or three days, followed with fruit only for breakfast or supper, or both, with the ordinary wholesome food for dinner. Fruit is of great use in these cases. Milk, butter, eggs, cream, and coarse vegetables should be avoided. The diet should consist of fruits and grains, with a moderate quantity of nuts or nut products. Fomentations over the stomach at night, followed by a wet girdle to be worn during the night, are highly beneficial.

Cold Meals—Ice Cream—Fruit Diet—Cycling—Exercise.—G. W. H., Illinois: "1. Is it detrimental to eat cold meals? 2. Is ice cream injurious? 3. With a fruit diet should anything warm be taken? 4. Are nine hours too long an interval between breakfast and dinner? 5. Does cycling furnish proper exercise? 6. For one employed at desk work, would you advise gymnasium work in addition to outdoor exercise?"

Ans.—1. No, not unless the temperature is very low. Cold food is, on the whole, more natural and more wholesome than hot food.

2. Most certainly. No one ever takes ice cream as food; ice cream is eaten merely for the pleasure afforded by this unnatural preparation. The chilling of the stomach and the temporary suspension of digestive work often give rise to fermentation and decomposition, sometimes with most distressing effects.

3. There is no harm in taking a little hot fruit-coco, hot fruit juice, or hot lemonade.

4. No; this interval is very commonly prescribed by leading French physicians in cases of slow digestion. If the patient becomes faint, a small quantity of fresh or stewed fruit may be taken without special injury.

5. Yes, if the exercise is properly taken.

6. Yes, so as to afford an opportunity to engage in special corrective exercises for the purpose of combating the deforming effects of desk work.

Legumes—Doughnuts—Cottolene—Sugar—Potatoes—Feather Pillow—Hair—Shoes—Vegetarian Restaurants.—B. B. S., Michigan: "1. Should legumes be parboiled, and why? 2. What can be substituted for lard in making doughnuts? 3. Is cottolene a pure vegetable preparation, and wholesome? 4. What will take the place of pork in baking beans? 5. Is any

or all of the sugar on the market pure as a food? 6. What is the physiological effect of the material used to blue sugar? 7. If the starch of grains requires such long cooking, how can potatoes be said to be done in half an hour? 8. What effect does the use of a feather pillow have upon the nervous system and on general health? 9. Is the quantity of hair on a woman's head detrimental to her health? 10. Are shoes with heels less healthful than spring-heeled shoes? 11. What causes the characteristic yellow complexion of vegetarians? 12. Are there vegetarian restaurants in Ann Arbor and Ypsilanti?"

Ans.—1. The chief reason for parboiling legumes is to remove, to some extent, the strong characteristic flavor. The nutritive value is not necessarily improved.

2. It is better to dispense with doughnuts. Lying, profanity, and other moral evils require no substitutes.

3. We understand that cottolene contains animal fat.

4. Nuts or nut preparations, such as protose and nuttolene.

5. Cane sugar, in the writer's opinion, is not a wholesome food.

6. It is slightly poisonous, but the amount is so exceedingly small that its effect is probably not noticeable.

7. Potatoes, like grains, require long cooking. The starch of the potato is somewhat more easily digested than that of grains.

8. Overheating at the base of the brain, and general exhaustion resulting.

9. It doubtless is in some cases, especially neurasthenics, and in persons suffering from cerebral congestion.

10. Yes.

11. There is no such thing; the questioner has been misinformed, or his observation has been limited to vegetarians whose complexions have been ruined by dyspepsia before adopting a proper diet.

12. No.

Night Sweats.—G. W. F., Connecticut, asks: "1. What is the cause of night sweats in a girl of nine? She is losing flesh. Her physician says it is induced by a scrofulous tendency. Her tonsils are badly swollen and her nose is very sore inside. What will cure her? 2. Does shortness of breath on going upstairs indicate heart disease? 3. Would a course at the Battle Creek Sanitarium benefit such a person? 4. What should be the diet for catarrh of the stomach?"

Ans.—1. It would be impossible to make an exact diagnosis in this case. Tuberculosis is very

rare in so young a child, yet she may have in some way become infected with this dread disease. The child should be placed at once under skillful care at a sanitarium.

2. The symptom is an anomalous one, and should lead to an examination of the heart at once.

3. Such a person ought to be benefited by a course of rational health training at any scientific institution like the one at Battle Creek.

4. A farinaceous dietary, with sweet fruits either fresh or stewed, will be found preferable until the local irritation is overcome. The diet may then be somewhat extended, but meats, fish, oysters, and all kinds of flesh food, as well as cheese, should be avoided.

Stomach Trouble.—J. H. H., Kansas: "I am very irritable and depressed, with but little appetite, and belch up my food; I sleep eight hours a night, but still am sleepy. I try to live healthfully. What is the matter?"

Ans.—You are suffering from nervous dyspepsia, and should visit a sanitarium for thorough treatment. An institution is located near you, at College View, a suburb of Lincoln, Neb.

Pillsbury's Vitos — Superfluous Hair — Sleep — Colds.—Mrs. L. W. B., Iowa: "1. Is Pillsbury's Vitos healthful? 2. What will permanently remove superfluous hair? 3. What causes a young person who has plenty of sleep to fall asleep when sitting still for a few minutes or when reading? 4. What will cure it? 5. What causes a child four years old to have a cold continually, mostly in the right nostril?"

Ans.—1. No, but it is as healthful as other raw grain preparations. The only objection is that it is not thoroughly cooked when prepared according to directions.

2. The destruction of the roots by means of electricity.

3. Indigestion is a common cause. Impaired general health is another cause.

4. The daily cool morning bath, the neutral bath, and the full bath at 92° to 95°, two or three times a week, would be beneficial.

5. Chronic irritation of the nose, possibly an ulcer. A good specialist should be consulted.

Underwear.—J. B., Kansas, asks what is the best material for underwear.

Ans.—Loosely woven linen.

Dr. Sophie Lepper's Opinion of Various Foods.—C. M. M., New York, asks our idea of the views of the English specialist on foods.

Ans.—Most of the ideas advanced by this food specialist are highly nonsensical. There is no scientific foundation for such assertions as the following: "Prunes should be avoided by those who suffer from the liver. Oranges are not good if the liver is out of order. Dried figs are bad for the liver. All stone fruits are injurious for those suffering from the liver. Raisins are stimulating." A Burmese boy who had written an exceptionally good composition replied to the inquiry of his teacher whether he had prepared it himself without assistance, "Yes, I pulled it out of my own stomach." The whims and fancies relating to food expressed by this writer must have had a similar origin.

Grains — Nuts.—A subscriber in California asks: "1. Is rolled wheat sufficiently cooked when simply well browned? 2. Also rolled oats? 3. Is cornstarch boiled but a few minutes, sufficiently cooked to thicken fruit juice? 4. If not, what can be used instead? 5. What becomes of the germs of milk when the latter is made into cottage cheese? 6. How can walnuts be prepared to keep for future use? The kind here (soft shell) becomes rancid when kept in the shell."

Ans.—1. Yes.

2. Yes.

3. It is not completely cooked, but can be digested by persons with vigorous stomachs.

4. Boil the cornstarch a longer time.

5. Most of them are killed by lactic acid; cottage cheese, however, is not much safer than ordinary milk, unless the milk has been boiled long enough to sterilize it during the process of making.

6. If kept dry and cold they ought not to become rancid for several months.

Debility.—M. A. B., Rhode Island, is eighty years old, and has suffered greatly from general debility, having had much pain in her legs. Is this due to a lack of phosphorus in her bones?

Ans.—No; pains in the legs are not caused in this way. The cause is very likely malnutrition of some sort.

Nuts — Lisle Thread vs. Linen Underwear.—M. V., Minnesota: "1. Are almonds and filberts wholesome when roasted just enough to cause the skins to fall off easily, and eaten dry with whole-wheat bread? 2. Which is better—Lisle thread or linen underwear? 3. Lisle or cotton? 4. Which do you recommend in the absence of linen mesh, and which in preference to light wool?"

Ans.—1. Most excellent.

2. Woven linen underwear.

3. Cotton.

4. Cotton, as canton flannel.

Borax vs. Soap — Water Drinking.—E. D. B., Pennsylvania: "1. Is there any reason for using borax instead of soap for bathing purposes? 2. Is it well for one troubled with dropsy to drink much water?"

Ans.—1. No.

2. Yes. The drinking should be in large quantities,—two or three pints,—and twice a day only, morning and night.

Sore Eyes.—Mrs. A. B. H., Florida, asks why a child of two should have matter in the corner of its eye every morning, and would be thankful for a remedy.

Ans.—An inflammatory process of some sort is present, and an oculist should be consulted.

Round Shoulders — Sties.—M. A. O., Tennessee, asks: "1. Would you advise the use of a shoulder brace to correct round shoulders in a boy of eighteen? 2. What treatment will remove sties?"

Ans.—1. The boy needs gymnastic training instead of shoulder straps.

2. The presence of sties generally indicates the necessity of glasses. Consult an oculist at once.

Eggs — Cornet Playing — Maltine and Cascara.—C. T. A., Florida: "1. Are fresh eggs ever infected by disease germs? 2. Is blowing on a cornet healthful exercise? 3. Do 'Malt and Cascara' or 'Maltine and Cascara' contain any harmful ingredients?"

Ans.—1. Yes.

2. Yes.

3. Malt, or maltine, is a food. Cascara is a drug. No drug can be used habitually without injury.

Oily Skin — Shaving.—J. M. G., Massachusetts, writes: "1. What causes an oily skin? 2. Is it a sign of ill health? 3. Is it injurious to shave every day, or at least five times a week?"

Ans.—1. Excessive activity of the oil glands of the skin.

2. It is an indication of irritation or an overactive state of the skin.

3. No.

Listerine.—Mrs. E. V. K., Illinois, says that a dentist told her that a little saliva in a glass tube filled with listerine would in a few days contain millions of germs. She would like to know on what grounds GOOD HEALTH advertises listerine as a germ destroyer.

Ans.—Listerine is a good germ destroyer. We have made the experiment referred to, and found that the germs were all destroyed.

Salt Rheum.—Mrs. E. G. H., British Columbia, wishes to know what to do for salt rheum.

Ans.—Salt rheum is a germ disease due to loss of resistance by the tissues, the result of dilatation of the stomach. The disorder of the stomach must be cured before any permanent improvement can be secured in the skin malady. A diet of fruits, grains, and nuts, especially the free use of fruits, and the avoidance of meats, milk, and all animal products, will often effect a cure in a short time. The general health should be built up in every possible way. When the surface is very irritable, zinc ointment may be applied.

Swollen Leg — Impediment in Speech.—C. M. S., Colorado: "Two years ago I had typhoid fever, and after recovery my left leg swelled between the ankle and the knee, the swelling never disappearing. The limb is worse through the day than at night, and cramps a great deal. It is weaker in summer than in winter. 1. What home treatment would you recommend? 2. Should I wear an elastic stocking? 3. Would electricity properly applied be beneficial? 4. A baby four years old has never talked; its health is generally poor. Would a course at the Battle Creek Sanitarium help him? 5. Can a thickened tongue be the cause? 6. Is an operation necessary?"

Ans.—1. A hot and cold spray to the legs, followed by the heating compress to be worn during the night. This is applied by wrapping the legs with a linen towel wrung out of cold water, then covering all with flannel in such a way as to exclude the air entirely and to keep the part thoroughly warm.

2. It would be well to wear an elastic stocking during the daytime.

3. Probably not.

4. He can probably be benefited by faithfully carrying out suitable directions at home.

5. Possibly it might be the cause. An examination would determine.

6. It is scarcely probable that an operation would be of any service in the case.

Diet for Baby — Cough — Nut Preparations for Shortening — Fruits — Beans and Peas — Dysentery — Castor Oil and Paregoric.—Mrs. A. G. K., Maine: "1. What is the best diet for a baby between one and two years of age? 2. Is mashed potato with cream good for such a child? 3. At what age is it safe to begin to feed children fruit? 4. What is the best remedy for a cough caused by taking cold? 5. Which of the nut preparations can be used as shortening? 6. If beans and peas are so nutritious, why do they cause flatulence? 7. What will check dysentery in a small child? 8. Do you advise the use of castor oil or paregoric?"

Ans.—1. Granose, zwieback, nuttolene, bro-mose, malted nuts, browned rice, crystal wheat, granola, fresh and stewed fruits.

2. It is not the best food.

3. Fresh and thoroughly ripe fruit may be given at any age the child expresses a craving for it.

4. A warm bath at night, followed by a chest pack, and if there is irritation of the throat, a pack to the throat also. For the method of applying the chest pack see editorial article in the December number entitled "Handy Home Remedies."

5. Nut butter, nut meal, and nuttolene. For samples address Sanitas Nut Food Co., Battle Creek, Mich.

6. Because the skins are indigestible, and remain long in the stomach, causing fermentation by particles of food adhering to them.

7. The neutral bath at 92° to 95°, for fifteen minutes every two or three hours, the cold abdominal compress, and small ice-water enemas.

8. No.

Vegetarianism in the Arctic Regions — Oatmeal — Ice Cream — Cold Bath.—E. H. N., Massachusetts: "1. Can one subsist on a purely vegetarian diet in the Arctic regions? 2. Does oatmeal warm the blood? 3. Is ice cream injurious to the stomach? 4. Is the daily cold bath liable to cause rheumatism?"

Ans.—1. Yes, but he would have to take his rations with him. The only sensible thing for the Eskimo to do is to move south, where he can get something fit to eat. He is a belated man. When the climate of the earth changed, the tropical animals and the men inhabiting the region now called the North Pole, for the most part, moved south. The Eskimo remained there permanently. It would have been much more sensible for him to come south with his brethren instead of remaining behind, killing a polar bear, getting into its skin, and undertaking to subsist by gnawing the flesh from its bones. As a consequence of their miserable bill of fare the Eskimos have become dwarfed and deteriorated, and are rapidly dying off.

2. No.

3. Yes, most decidedly so.

4. Certainly not, if a good reaction occurs after the bath.

Fruit Diet — Stomach Tube.—M. S. H., Iowa: "1. Why should I grow thin on a fruit-and-grain diet? 2. Why do bromose tablets have a quieting effect upon a nervous person? 3. My food seems to remain unchanged for four or five hours, but does not ferment. Would a stomach tube help me?"

Ans.—1. Such a diet does not contain a sufficient amount of fat; nuts should be added.

2. Doubtless because the nerves are supplied with the food they require.

3. The stomach tube is not necessary. Kneading movements applied over the stomach, with hot and cold applications, ought to be sufficient. Take an abundance of out-of-door exercise, and wear the abdominal bandage.

Question of Animal Life.—L. J. H., Illinois: "1. Can a vegetarian consistently wear shoes made from the hides of a slaughtered animal? 2. What can be substituted for them? 3. Do not all vegetables, roots, etc., possess life? 4. Is it not as wrong to kill insects, mice, etc., as the larger animals? 5. If we allow all animals to live, shall we not some day be overrun by them?"

Ans.—1. The animal may have died of itself. Certainly no animal would of itself kill another animal to obtain its skin for shoes except in a case of dire necessity.

2. Felt shoes are now made and considerably used in America in the cold season of the year. Wooden shoes are used in Germany, France, and Scandinavian countries, and shoes have been constructed of paper. The great majority of men and women who wear foot gear, taking the whole world together, are not at all dependent upon leather.

3. Yes.

4. Pythagoras, the great Grecian philosopher, remarked on this point, "Kill noxious creatures which 't is sin to save,—the only just prerogative we have."

5. The same question might be applied to men, Shall we not be overrun by some men,—Chinese, Japanese, Indians, or others, unless we take the precaution to kill them off? If we are likely to be overrun by sheep and cattle, provided we do not eat them, shall we not likewise be under the necessity of eating horses and dogs so as not to be overrun by them? Nature will take care of these creatures, and they will be produced only in such quantities as sustenance is provided for them.

Stone in the Bladder — Pneumonia.—

J. B. W., Massachusetts: "1. What can be done for a man of forty who has been bedridden for twenty years with stone in the bladder? While in bed he suffers no pain. He makes toy furniture for a living. Would you advise distilled water for him to drink? That which he now uses is hard, and comes from a limestone bed. 2. What is the cause and cure for pneumonia?"

Ans.—1. The stone should be removed. Distilled water would certainly be beneficial to him, but there is no prospect that it will remove the stone.

2. See article in the December number on "The Treatment of Pneumonia and Pleurisy."

LITERARY NOTICES.

THE ever-welcome **Atlantic Monthly** will present a still greater variety of interesting contributions during 1900. W. J. Stillman will tell the story of his eventful and checkered life, the first installment of which will describe the peculiar environment of a New England boyhood, and will appear in the January number. Under the heads, "The White Man and the Negro," "The Race Problem and Education," "Politics in the South," Walter H. Page, who has been through most of the Southern States in the service of the *Atlantic Monthly*, will give the public the benefit of his conclusions. Zitkala-Sa, a young Indian girl of the Yankton Sioux Tribe of Dakota Indians, who has been educated in the East, will, in her own words, recount her life experiences. Lynde Hart will discuss his impressions of Michigan and Utah. Travelers will be interested in the series of articles on the Yosemite Valley, by Mr. John Muir. Among the contributors of fiction we note the names of Henry James, Kate Douglas Wiggin, Mary Tracy Earle, Eliza Orne White, Elizabeth Knapp, Sarah Orne Jewett, and many others. The Contributors' Club will be a regular feature of future numbers. "The African Slave Trade in the Fifties," and "The Life and Work of Huxley," are subjects to be handled by John Fiske. Letters from England, France, and Germany will inform readers of the doings of countries across the water. And this is but a little of the feast of good things for the coming year. \$4 a year. Houghton, Mifflin & Co., 4 Park St., Boston, Mass.

The eleventh annual book number of the **Outlook** appears under the date of December 2. The *Outlook* was, it is believed, the first publication to issue a special number not far from the holiday season, giving a careful survey of the literature of the season and of the months immediately preceding. This year it carries out that general purpose by printing a group of special articles, profusely illustrated. Of these articles, that called "In the Field of Fiction" is editorial in character, has portraits of many recently prominent novelists, and talks in a familiar and interesting way about fifteen recent works of fiction of the highest class; the article called "Biography and History" is written by Mr. Alfred Hodder; the third, "Books and Art," by Mr. James McArthur, deals with the important art books and illustrated books of the last few months. Besides these articles, a readable and suitable feature is that by Mr. Ernest D. North, called, "A Group of Young Illustrators."

It tells of the advance in book and magazine illustration of the last few years, and describes the personality and achievements of six or eight of the young men and women who have been doing notable work in this direction lately. The portraits and reproduced pictures in this article aid its design, and illustrate it in a unique way. Other illustrated articles, having relation also to literature, are Mr. Hamilton W. Mabie's "Weimar and Goethe," suggested by the recent celebration of the one hundred and fiftieth anniversary of Goethe's birth, fully illustrated by photographs of places in Weimar closely connected with the Goethe memories; an unsigned paper called "Reminiscences of Thoreau," by one who was an intimate personal friend of the Thoreau family and spent much time at the Thoreau home during the life of Henry Thoreau; and "A Visit to Maurus Joki," by E. A. Steiner, with photographs furnished by Joki himself, expressly for this article. Besides these articles there are to be found a short story, a short sermon, an illustrated article called "A Duke, a Castle, and an English County" (describing the conditions of life on the estate of the Duke of Northumberland at Alnwick), and the usual paragraphic history of the week, editorials, and other departments. \$3 a year. The Outlook Company, New York.

The Christmas number of **Werner's Magazine** contains a number of features not only valuable to its particular class of readers, but interesting and instructive to the general reading public. While continuing to be indispensable to the artist who works in any part of the field of expression,—the elocutionist, the reader, the dramatist, the singer, the entertainer, the physical culturist, the teacher in general,—the publishers aim to make the magazine of such general value and attraction to cultured people that it will be a welcome guest to every home in the land. Some of the interesting papers in this holiday issue are, "The Christ of the Modern Idealist," by C. H. A. Bjerregaard; "The Rev. Newell Dwight Hillis," by R. M. Wallace; "How to See the Play," by Charles Barnard; "The Every-Day Voice," by E. V. Sheridan; a "Greek Mirth Drill," prepared by Isabel Goodhue, and illustrated with eighteen half-tone photographs from life poses; "Leland Powers at the Brooklyn Institute," by R. M. Wallace, and a Christmas cantata by Stanley Schell. \$2 a year. The Edgar S. Werner Publishing and Supply Company, 43 East 19th St., New York.

Theodore Roosevelt's *Cromwell*, which begins in the January *Scribner's*, is to be most abundantly illustrated. A corps of artists has been working in England for many months preparing the original drawings for this series. Among them are Vohn, Peixetto, Lucas, Shepperson, Frank Craig, and McCarter. The best collections of Cromwelliana have been put at the disposal of the representatives of *Scribner's Magazine*.

Self Culture for December offers a variety of topics. The leader, "A Unique London Chapel," is fully illustrated. Elizabeth T. Nash writes about "Yuletide Customs," and William E. Webster answers the question, "What Is Our Jewellery?" Anna Erwin discusses "The Proposed Tunnel to Ireland;" following this, C. W. Tooke depicts "Colonial Life in New England." "The Centennial of the Death of General George Washington" is the caption of an illustrated paper by W. Dudley Mabry. Mary Virden Shutt, in another illustrated article, speaks of "Our Spanish-American Fellow Citizens." Amelia Wofford describes in an entertaining way the home life of "The Brontë Sisters." The most absorbing question of the day, "The Conflict in South Africa," is historically treated by G. Mercer Adam. Other illustrated articles are "Greenwich, Its Kings, Queens, and Heroes;" "The Manatee;" "An Envoy's Wife on Japan." "Nubia of Saracenesco" is the first installment of a story translated from the German of Richard Voss by Hettie E. Miller. Besides these there are the regular editorial and literary departments. \$1 a year. Published by the Werner Company, Akron, Ohio.

In his article on "Africa: Present and Future," in the December *Forum*, Mr. O. P. Austin shows the rapid development the many nations are making in what has been generally recognized as the Dark Continent. The author carefully considers the value of the vast tracts of territory that are in the possession of the eight European nations, and points out, after a painstaking survey of the continent, the commanding importance of what the British own. England holds not only a vast chain of territory on the eastern coast, but also 80,000 square miles on the western; and she possesses an area larger than that of the entire United States. Mr. Austin also tells of the wonderful advances that are being made in the way of railways and telegraph lines, depicting that in the near future one may ride by rail from Cape Town to Cairo. With two million Europeans scattered over this vast area, acquainting themselves with its natural conditions

and requirements, with the steamer, the railroad, the telegraph, and the telephone carrying light and knowledge and civilization to its darkest corners, Africa can not long remain unknown or unknowing.

There is a holiday air about the December issue of *Table Talk*. The home makers who want the latest ideas to make bright the closing days of the old year will find in the article entitled the "Great Festival of Christmas" much that will interest them, and also in the department devoted to games, entertainments, etc. An article of especial value to all up-to-date housekeepers is entitled, "Etiquette of Serving a Table," by Mrs. Burton Kingsland, of New York. *Table Talk* is just what every woman wants every day. It teaches exhaustively the art of good cooking, of wise and economical living. Our readers can obtain a free sample copy of this magazine by sending their name and address to Table Talk Publishing Co., Philadelphia, Pa.

Current Literature is a compendium of all that is best in recent books, magazines, and papers. Its different departments include literary thought and opinion, education, gossip of authors, religion, music, miniature essays on life, sociology, eating and drinking, pen pictures of travel, animal life, applied science, contemporary celebrities, book list, and a number of pages of poetry. The only illustration in which *Current Literature* indulges is a frontispiece. The December number gives the Zolnay bust of Edgar Allan Poe. The Current Literature Pub. Co., 55 Liberty St., New York. \$3.00 a year.

Pamphlets Received.

"Parenthood," by Alice B. Stockham, M. D., author of "Tokology," "Karezza," etc. Alice B. Stockham & Co., publishers, Chicago, Ill.

"Five Hundred and Fifty Surgical Operations without Alcohol," by Chas. Gilbert Davis, M. D., Chicago, Ill. Reprinted from the *Western Chemical Recorder*.

"Concerning Colorado," by Samuel Fisk, A. M., M. D., Denver, Colo. Reprinted from the *Medical News*.

"Hydrochloric Acid: Simple Method of Administering," "Carcinoma of the Duodenum," "The Diagnostic Value of Abdominal Palpation in Diseases of the Intestines," by Charles D. Aaron, M. D., Detroit, Mich.

"The Tuberculosis Crusade and its Problems," "Traction Plasters for Temporarily Contracting an Afflicted Lung, in Lieu of the Murphy Operation," by Charles Denison, A. M., M. D., Denver, Colo.

PUBLISHERS' DEPARTMENT.

AT the present time we have active agents for GOOD HEALTH in all parts of the United States, from whom we have received some very encouraging and interesting reports, which show that the magazine is becoming more valuable to its readers than ever before. We also note a marked increase in the number of hygienic restaurants and other sanitary accommodations for the public during the past year, and at the close of 1900 we hope to be able to see still greater improvement in this direction.

WE have just received some very encouraging reports from Europe. Notwithstanding the excitement there at present, over the war in South Africa, a large amount of health foods and health literature is being distributed, and the eagerness with which the health work is received, shows a deep and rapidly growing interest in the proper ways of living.

A LARGE company of health missionaries, under the direction of Dr. J. E. Froom, is working in

western Illinois and eastern Iowa. Several Schools of Health have been organized, and a vigorous health campaign is in progress. It is the purpose of the workers to give every home an opportunity to become thoroughly conversant with the health principles.

Accidental Wounds of the Female Bladder.

THE following is an abstract from the *Journal of the American Medical Association* of Sept. 9, 1899, of an article by Frederick Holme Wiggin, M. D., New York City, presented to the Section on Obstetrics and Diseases of Women, at the fiftieth annual meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899:—

“Accidental opening of the bladder has, for many years, been considered one of the most serious accidents that could occur in the course of the complicated work which gynecic surgeons are often called on to perform. The following case is offered in illustration of this type of injury:—

A non-poisonous antiseptic mouth wash,

one that can be safely left on the bath-room stand, is LISTERINE. Composed of ozoniferous essences, vegetable antiseptics, and benzo-boracic acid, LISTERINE is readily miscible with water in any proportion. A teaspoonful of LISTERINE in a tumbler of water makes a refreshing and delightfully fragrant mouth wash. Used at the morning toilet it effectively removes all agglutinated mucus which may have accumulated during the hours of rest.

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LITERATURE UPON DEMAND.

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SOLE MAKERS OF LISTERINE.

"M. H., unmarried, aged forty-one, was admitted to the city hospital, Blackwell's Island, N. Y., Sept. 30, 1898, suffering from a large myoma, which sprang from the anterior uterine wall and extended above the umbilicus. On October 3, the abdomen was opened, and the tumor, which weighed seventeen pounds, was drawn through an incision six inches in length, freed from its attachments, and removed, together with the body of the uterus amputated near the internal os. As hemorrhage was profuse, it became necessary to remove the mass very rapidly, to accomplish which the anterior attachment of the tumor was clamped and cut, when it was discovered, from the escape of urine, that the bladder had been opened near the fundus.

"The general cavity had previously been shut off with gauze pads, and thoroughly irrigated, followed by the use of Hydrozone in half strength, and this, in turn, by a saline solution. The gauze pads were now changed, and the opening in the bladder, four inches in length, was closed by means of two layers of chromicized catgut sutures. The wound was then disinfected, and there being a large peritoneal flap, it was attached to the bladder, and made to cover the line of sutures, thus making the bladder wound extra-peritoneal.

"After further washing out of the abdominal cavity with Hydrozone and the saline solution, the external wound was closed, without drainage, and the usual dressings applied. The patient being feeble, it was thought not advisable to make a vesico-vaginal fistula to drain the bladder, but, instead, a self-retaining catheter was introduced. At the end of ten days, however, tumefaction occurred over the lower angle of the abdominal wound, and, on opening it, urine began to escape. A vesico-vaginal fistula was now made in order to afford adequate drainage. The sinus in the abdominal wall was curetted, and after being thoroughly disinfected with Hydrozone, its walls were sutured. Soon afterward, the sinus having closed, the sutures which kept open the vesico-vaginal fistula were removed, and the latter closed quickly without any further operative interference.

"Percival (*British Medical Journal*, 1897, Vol. I, p. 1282) reports a case of ruptured bladder on which he had operated. It was closed by means of a double wall of Lembert silk sutures. The wound in the abdominal wall was closed, after the peritoneal cavity had been flushed out with boric acid solution, and a large quantity of clots and urinous fluids had been removed. For a few days the patient did well, and then died from peritonitis. But the necropsy proved that the bladder wound

had completely healed. It is the writer's opinion that had the saline solution and Hydrozone been used, instead of boric acid, and the abdominal wound closed, leaving the saline solution in the peritoneal cavity, the patient would probably have recovered.

AN error crept into last month's GOOD HEALTH, by which Miss Anne E. Tabor was made to refer to a lady's *waist* as being sixty inches around, when she intended to say *bust*. The sentence (page 743, December number) should have read thus: "They are so arranged and mathematically adjusted that garments may be cut by them to fit any figure, from that the infant twenty inches in circumference to the woman whose bust measures sixty inches."

THE OLD ISSUE.

(With apologies to Mr. Rudyard Kipling.)

ALL we have for eating — all we kill and cook —
This our fathers gained with stone, arrow, gun, and
hook.

Custom as unnoticed as the seamen's strike —
Leave to kill by no beast's leave any beast we like.

Ox and sheep and porker, cod, and pheasant high,
These our dear old fathers ate in years gone by.

Till those hunters 'stablished, "after bloody years,"
Slaughterhouses hidden from our eyes and ears

Give no ear to faddists bidding 'us be kind
To the beef and lamb on which ancient Britons
dined.

Give no heed to faddists mating food with peace.
Slay the ox; we want his flesh, want his blood and
grease.

Belly rules the conscience; brothers, let us feast,
Keeping to the former type, barbarian and beast.
— *The Vegetarian.*

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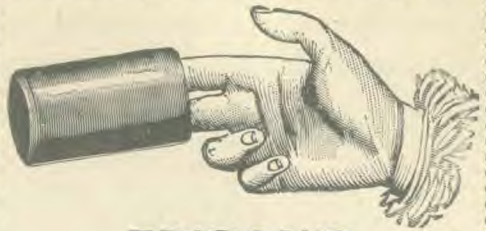
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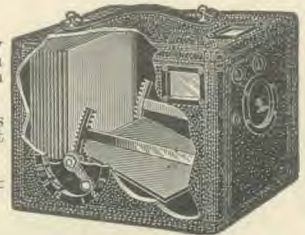


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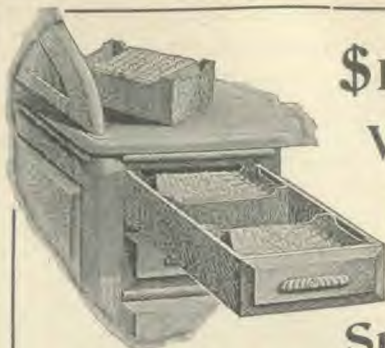
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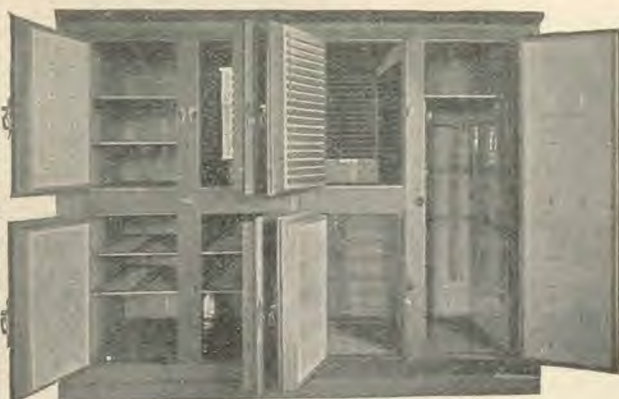
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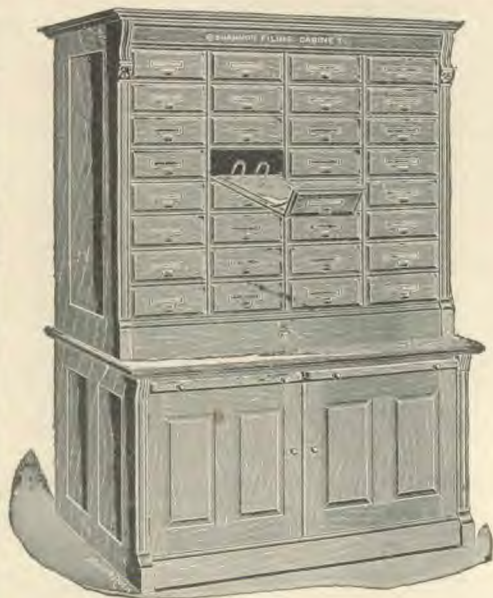
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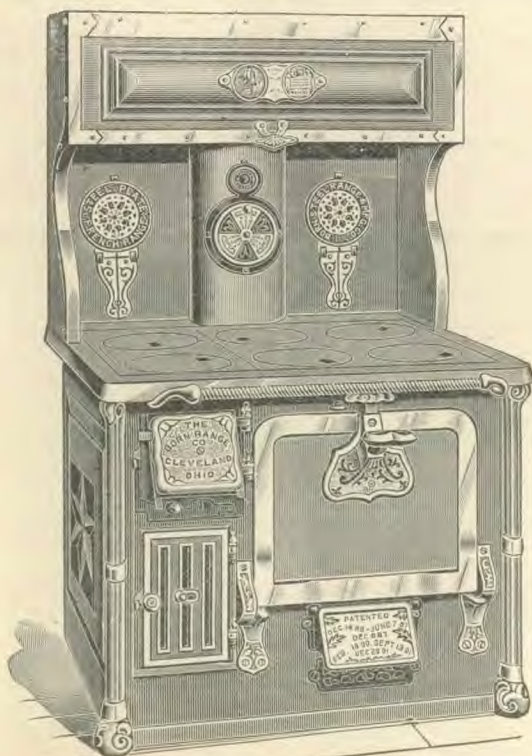
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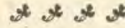
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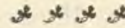
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For \$1.25**

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YOU (man or woman) can make **\$5.00** every day taking orders for these garments. At your low prices, everyone will order from you, for no one can meet your prices.

WE WANT ONE AGENT (man or woman) in every city and county in the United States. No experience necessary, no capital required. We furnish a **BIG BOOK** of Mackintosh Cloth Samples, fashion figures, etc., one confidential price and instruction book, tape measure, business cards, all necessary stationery. Everything complete for doing business. **We are the LARGEST DEALERS in America in Men's and Women's Waterproof Mackintoshes** and we sell them at the lowest prices ever known, and exclusively through regularly appointed men and women agents, who make **\$50.00 to \$200.00 every month at the work.**

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START TO WORK AT ONCE. You need no money; show the samples, take the orders at your own price, adding a good profit for yourself; we will fill your orders daily. send the mackintoshes to your customers C. O. D., subject to examination, collect your full selling price and weekly send you in cash your full profit. No other work is so simple. Money can't be made easier. Any man or woman anywhere can make \$5.00 every day. Our book of instructions makes everything so plain that anyone can do the work AT ONCE and be sure of big wages from the start. Cut this notice out and send to us today saying you will give it 10 days' trial. **YOU WILL NEVER REGRET IT.** Nearly everyone sends the 50 cents with their application. We refer to Metropolitan National Bank or any Express Co. in Chicago.

Address, **DUNDEE RUBBER CORPORATION, 184 Fulton St., Chicago.**

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\$4.95 SEAL PLUSH



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CUT THIS AD. OUT and send to us, state your weight and height also number inches around body at bust and neck, and we will send this Beautiful Plush Cape to you by express, C. O. D., subject to examination. You can examine and try it on at your nearest express office and if found perfectly satisfactory, exactly as represented and the MOST WONDERFUL VALUE you ever saw or heard of, pay the express agent OUR SPECIAL OFFER PRICE \$4.95 and express charges; express charges will average 50 to 75 cents for 1,000 miles.

This Circular Plush Cape is very latest style for Fall and Winter, made of finest Salt's Seal Plush, 20 inches long, cut full sweep, lined throughout with Merceized Silks in black, blue or red. Very elaborately embroidered with soutache braid and black beading as illustrated. Trimmed all around with extra fine Black Thibet Fur, heavily interlined with wadding and fiber chamois. Write for free Cloak Catalogue, Address, **SEARS, ROEBUCK & CO., CHICAGO** (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

CAN FREE...

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SANTARIUM HEALTH FOOD CO.,
BATTLE CREEK, MICH.

Branch Office, cor. Colburn and Fall Mall Streets, London, Ont.

SEND NO MONEY

ING MACHINE by freight C. O. D. subject to examination. You can examine it at your nearest freight depot and if found perfectly satisfactory, exactly as represented, equal to machines others sell as high as \$60.00, and **THE GREATEST BARGAIN YOU EVER HEARD OF**, pay your freight agent **Our Special Offer Price, \$15.50** and freight charges. The machine weighs 120 lbs. and the freight will average 75 cents for each 500 miles. **GIVE IT THREE MONTHS' TRIAL** in your own home, and we will return your \$15.50 any day you are not satisfied. We sell different makes and grades of Sewing Machines at \$8.50, \$10.00, \$11.00, \$12.00 and up, all fully described in our Free Sewing Machine Catalogue, but \$15.50 for this **DROP DESK CABINET BURDICK** is the greatest value ever offered by any house.

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This shows the machine closed as a center table, stand or desk.

SOLID QUARTER SAWED OAK DROP DESK CABINET, PLAN POLISHED. One illustration shows machine closed, (head drooping from sight) to be used as a center table, stand or desk; the other open with full length table and head in place for sewing. Four fancy drawers, latest 1899 skeleton frame, carved, paneled, embossed and decorated cabinet finish, finest nickel drawer pulls; rests on 4 casters, ball bearing adjustable treadle genuine Smyth iron stand. Finest large High Arm head, positive foot motion feed, self threading vibrating shuttle, automatic bobbin winder, adjustable bearings, patent tension liberator, improved loose wheel, adjustable presser foot, improved shuttle carrier patent needle bar, patent dress guard, head is handsomely decorated and ornamented and beautifully Nickel Trimmed.

GUARANTEED the lightest running, most durable and nearest noiseless machine made. Every known attachment is furnished and our Free Instruction Book tells just how anyone can run it and do either plain or any kind of fancy work. A 20-YEAR BINDING GUARANTEE is sent with every machine. **IT COSTS YOU NOTHING** to see and examine this machine, compare it with those your store-keeper sells at \$40.00 to \$60.00, and then if convinced you are saving \$25.00 to \$40.00, pay your freight agent the \$15.50, **WE TO RETURN YOUR \$15.50** if at any time within three months you say you are not satisfied. **ORDER TODAY. DON'T DELAY.**

Address, **SEARS, ROEBUCK & CO. (Inc.) Chicago, Ill.**



This illustration shows the machine open, ready for use.

with every machine. **IT COSTS YOU NOTHING** to see and examine this machine, compare it with those your store-keeper sells at \$40.00 to \$60.00, and then if convinced you are saving \$25.00 to \$40.00, pay your freight agent the \$15.50, **WE TO RETURN YOUR \$15.50** if at any time within three months you say you are not satisfied. **ORDER TODAY. DON'T DELAY.** (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

SEND ONE DOLLAR

CUT THIS AD. OUT and send to us, and we will send you this **BIG NEW-STYLE 100-PIECE VITREOUS WHITE CHINA DINNER SET** by freight, C. O. D., subject to examination. You can examine it at your freight depot and if found perfectly satisfactory, exactly as represented and **THE GREATEST VALUE YOU EVER HEARD OF**, pay the freight agent our **SPECIAL OFFER PRICE \$5.95** less the \$1.00, or \$4.95, and freight charges. Freight will average about 50c. for each 500 miles. **THIS SET CONSISTS OF 100 PIECES**

OF THE HIGHEST GRADE GENUINE VITREOUS WHITE CHINA of the very latest and most stylish shape, is as hard as flint, practically indestructible, pure white in color. **THE FOLLOWING 100 FULL-SIZE PIECES COMPLETE THE SET:** 12 soup plates, 12 5-inch plates, 12 7-inch plates, 12 coffee cups, 12 saucers, 12 individual butter dishes, 12 4-inch fruit plates, 1 8-inch platter, 1 12-inch platter, 1 7-inch baker, 1 8-inch baker, 1 8-inch covered dish, 1 pickle dish, 1 sauce boat, 1 covered butter dish, 1 sugar bowl, 1 extra bowl, 1 large pitcher, 1 me-



dum pitcher. Freight will be about 50 cents for each 500 miles. **YOU WILL SAVE ONE-HALF IN PRICE. ORDER NOW; DON'T DELAY.** Write for free catalogue of everything in Crockery. Address, **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.**

In replying to advertisements please mention **GOOD HEALTH.**


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CANADIAN

PACIFIC

RAILWAY

GIVES OPPORTUNITIES FOR

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RANGING FROM

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into the best sporting interior of Maine, Quebec, or New Brunswick, or the Atlantic Seaside Resorts ;

A Day or Two

across the Upper Lakes, Huron and Superior, in our Clyde-built steamships from Owen Sound .

A Week or Two

across the continent, over the vast prairies and magnificent Rockies ;

A Month or Two

across the vast Pacific, to Japan and China, the Philippines, Hawaiian Islands, Fiji, and Australia —our Empress steamships are the finest afloat — to

A YEAR OR SO

around the world by various routes, but all of the best. Write, and say which you will take and we will send you descriptive pamphlets.

— ADDRESS —

ROBERT KERR, Passenger Traffic Manager, **Montreal, Que.**

ARCHER BAKER, Gen'l European Agent, 67 and 68 King William St., E. C., **London, Eng.**

J. FRANCIS LEE, Gen'l Agent Passenger Dept., 228 So. Clark St., **Chicago, Ill., U.S.A.**

Or any of the Company's Agents in the United States, Canada, Great Britain, Australia, New Zealand, etc.



ILLINOIS CENTRAL
 Double Daily Service

ST. LOUIS TO CHICAGO

NEW DAY TRAIN
DAYLIGHT SPECIAL

Free Reclining Chair Cars.
 Parlor-Café Cars.

POPULAR
THE DIAMOND SPECIAL
NIGHT TRAIN

Free Reclining Chair Cars. Pullman Buffet Open
 and Compartment Sleeping Cars.

See that your ticket between Chicago and St. Louis

READS VIA THE ILLINOIS CENTRAL R. R.

It can be obtained of your local ticket agent.

A. H. HANSON, G. P. A. Ill. Cent. R. R. Chicago, Ill.



Why Take Any Other Route?

WHEN IT IS

Only One Night to Utah, Only
 Two Nights to California,

From the Missouri River, VIA....



The Most Direct Line.

QUICKER TIME

To Colorado, Wyoming, Utah, California, Oregon,
 and Puget Sound Points than any other line.

Service Unsurpassed. Double Drawing-room
 Pullman Palace Sleepers. Buffet Smoking and
 Library Cars. Dining Cars, meals à la Carte.
 Free Reclining Chair Cars, etc., etc.

For time tables, folders, illustrated books,
 pamphlets descriptive of the territory traversed, or
 any information, apply to your local agent, who
 can sell you a ticket via the Union Pacific, or
 address—

E. L. LOMAX, Omaha, Neb.

General Passenger and Ticket Agent.

ASHEVILLE

**AND THE LAND OF
 THE SKY.**

2,000 feet elevation. Delightful climate.
 300 days of sunshine per year. Finest
 hotel accommodations in the South. The
 world's greatest sanitarium and place for
 recreation.

A REDUCED RATE

is in effect from the North every day in
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QUEEN & CRESCENT ROUTE and SOUTHERN RY.

Through Pullman drawing-room sleepers
 from Cincinnati daily with direct connec-
 tion from Louisville.

W. C. RINEARSON, G. P. A., Queen and Crescent,
 Cincinnati.

WM. H. TAYLOR, A. G. P. A., Southern Ry.,
 Louisville, Ky.

Printed matter and full information on application.

GRAND TRUNK RAILWAY SYSTEM.

Time Card in Effect Nov. 19, 1899.

C. & G. T. DIVISION.

WEST-BOUND FROM BATTLE CREEK.

No. 9, Mail and Express, to Chicago.....	12.15 P. M.
No. 1, Chicago Express, to Chicago.....	9.00 A. M.
No. 3, Lehigh Valley Express, to Chicago...	3.40 P. M.
No. 5, Pacific Exp., to Chicago, with sleeper	1.10 A. M.
No. 75, Mixed, to South Bend.....	8.20 A. M.
Nos. 9 and 75, daily, except Sunday.	
Nos. 1, 3, and 5, daily.	

EAST-BOUND FROM BATTLE CREEK.

No. 8, Mail and Express, to Pt. Huron, East, and Detroit.....	3.45 P. M.
No. 4, Lehigh Express, to Pt. Huron and East	8.27 P. M.
No. 6, Atlantic Express, to Pt. Huron, East, and Detroit.....	2.25 A. M.
No. 2, Lehigh Express, to Saginaw, Bay City, Port Huron, and East.....	6.50 A. M.
No. 74, Mixed, to Durand (starts at Nichols yards).....	7.15 A. M.
Nos. 8 and 74, daily, except Sunday.	
Nos. 4, 6, and 2, daily.	

A. S. PARKER, Ticket Agent,
BATTLE CREEK.

MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected Nov. 19, 1899.

EAST	8	12	6	10	14	20	36
	*Night Express	† Det't. Accon.	† Mail & Express	* N. Y. & Bos. Sp.	* East'n Express	* J'n Accon.	* Atl'tic Express
Chicago	pm 9.35		am 6.45	am 10.30	pm 8.00		pm 11.30
Michigan City	11.35		8.40	pm 12.08	4.40		am 1.20
Niles	am 12.40		10.15	1.00	5.37		2.30
Kalamazoo	2.10	am 7.30	pm 1.10	2.08	6.52	pm 6.00	4.10
Battle Creek	3.00	8.10	1.00	2.42	7.28		5.05
Marshall		8.35	1.30	3.09	7.51		5.30
Aubon	3.50	8.57	1.50	3.30	8.11		5.52
Jackson	4.40	10.05	3.35	4.05	8.50	8.15	6.40
Ann Arbor	5.55	11.10	4.47	4.58	9.38		7.48
Detroit	7.15	pm 12.25	5.30	6.00	10.45		9.15
Falls View					am 5.02		pm 4.13
Suspension Bridge					5.30		4.40
Niagara Falls				am 12.20	6.14		5.30
Buffalo					3.13		8.40
Rochester					5.15		10.45
Syracuse					9.05		am 2.50
Albany					pm 1.80		7.00
New York					12.16		7.40
Springfield					3.00		10.34
Boston							

WEST	7	15	3	5	23	13	37
	*Night Express	* N.Y. Ro. & Ch. Sp.	† Mail & Express	* News Express	* West'n Express	* Kal. Accon.	* Pacific Express
Boston		am 10.30			pm 3.00		pm 6.01
New York		pm 1.00			6.00		am 12.10
Syracuse		8.10			am 2.00		pm 12.25
Rochester		10.00			4.05		2.25
Buffalo		am 12.05			5.20		3.51
Niagara Falls					6.02		4.31
Falls View					6.34	pm	5.05
Detroit	pm 8.20	am 7.20	am 8.25		pm 12.40	4.55	11.25
Ann Arbor	9.43	8.18	9.40		1.38	5.45	am 12.31
Jackson	11.15	9.20	11.05	am 4.30	2.40	7.30	1.51
Battle Creek	am 12.40	10.30	pm 12.25	4.35	3.50	9.08	3.01
Kalamazoo	1.40	11.05	1.20	5.15	4.28	10.00	3.33
Niles	3.13	pm 12.22	2.55		6.05		5.04
Michigan City	4.28	1.20	4.10		7.05		6.01
Chicago	6.30	3.00	6.05		8.55		7.50

* Daily. † Daily except Sunday.

Trains on Battle Creek Division depart at 8.05 a. m. and 4.10 p. m., and arrive at 12.40 p. m. and 6.10 p. m. Daily except Sunday.

O. W. RUGGLES,
General Pass. & Ticket Agent, Chicago.

R. N. R. WHEELER,
Ticket Agent, Battle Creek.

THE NORTH-WESTERN LINE

The Through Car Route to the Pacific Coast.

THE
OVERLAND
LIMITED

Leaves Chicago 6.30 p. m. daily. Buffet-Smoking and Library Cars with Barber Shop. All meals in Dining Cars. Palace Drawing-room Sleeping Cars to San Francisco without change. Through Tourist Sleeping Cars to California and Oregon. This train to

CALIFORNIA in 3 Days

THE PACIFIC
EXPRESS

The Pacific Express leaves Chicago 10.30 p. m. daily. Through Palace Sleeping Cars to Portland, with Sleeping-Car accommodations to San Francisco and Los Angeles; Palace Sleeping Car to Denver, and through Tourist Sleeping Car service to San Francisco, Los Angeles and Portland.

THE PIONEER LINE WEST AND NORTHWEST OF CHICAGO.

CHICAGO & NORTH-WESTERN RAILWAY

PRINCIPAL AGENCIES:

NEW YORK,
461 Broadway,
287 Broadway.

BOSTON,
368 Washington St.,
5 State St.

CHICAGO,
212 Clark St.
206 Clark St

CALIFORNIA

HINTS...

TO THE

Home Seeker
Health Seeker
Pleasure Seeker
Sight Seer
Business Man
Tourist

Has a genial climate and the greatest variety of medicinal springs on the continent.

Has cheap and fertile lands, and the possibilities of production are almost fabulous.

Has a great many delightful pleasure resorts.

Has business advantages superior to any other part of the nation, because the field is not crowded, competition is not so brisk, and there are greater opportunities for the development of new enterprises.

The entire Pacific territory is now experiencing a great industrial revival. Good openings for all classes.



RIVALS THE WORLD



for Picturesque
Sublime and
Heroic
Scenery

ROUND-TRIP TICKETS to Principal Pacific Coast Points that read going via any of the Southern Pacific Company's THREE ROUTES,

● ——— SUNSET, OGDEN, OR SHASTA ——— ●

and returning via the same or either of the others, are on sale at all important railway stations in the United States and Canada.

For California literature, maps, rates, and complete information, address —

W. G. NEIMYER, General Western Agent, 238 Clark Street, Chicago.
EDWIN HAWLEY, Assistant General Traffic Manager, 349 Broadway, New York.
W. H. CONNOR, Com'l Agent, Chamber Commerce Bldg., Cincinnati, Ohio.
W. J. BERG, Trav. Pass. Agent, 220 Ellicott Square, Buffalo, N. Y.



Chicago and Detroit
 — TO —
BUFFALO, NEW YORK
 and **BOSTON**
 Via **NIAGARA FALLS.**

Splendid equipment of Palace Sleeping Cars running through without change. □ Dining Car Service Unsurpassed.

R. H. L'HOMMEDIU,
 GEN'L SUPERINTENDENT,
 DETROIT.

O. W. RUGGLES,
 GEN'L PASS. AND TICKET AGT.
 CHICAGO.

**The Cincinnati Northern
 Railroad Co.**

TIME TABLE NO. 3.

IN EFFECT SEPT. 24, 1899.

Trains Pass Battle Creek as follows:

WEST-BOUND.

No. 21, Mail and Express	6.58 P. M.
No. 23, Accommodation	2.07 P. M.
No. 27, Local Freight	8.25 A. M.

EAST-BOUND.

No. 22, Mail and Express	8.25 A. M.
No. 24, Accommodation	1.45 P. M.
No. 28, Local Freight	5.30 P. M.

Direct connections are made at Toledo with all roads diverging. Close connections for Detroit and Cincinnati.

J. L. READE,
 Ticket Agt., Battle Creek.

E. R. SMITH, City Pass. Agt., 6 West Main St.

Down East

... VIA THE ...

Big Four

THE ROUTE OF THE
 FAMOUS

KNICKERBOCKER SPECIAL

FINEST SERVICE EVER
 OFFERED TO THE

**MOUNTAINS
 LAKES and
 SEASIDE.**

Through Sleepers from St. Louis
 ... TO ...

NEW YORK and BOSTON
 via New York Central.

Through Sleepers to Washington,
 reaching all the health and

**PLEASURE RESORTS
 OF VIRGINIA.**

W. P. DEPPE, A. G. P. A.

WARREN J. LYNCH,
 GENERAL PASSENGER AND TICKET AGENT,
 Cincinnati, O.

YOU are going south this winter for recreation, rest, relaxation. The winter resorts are open now.

You can ride over the Queen & Crescent Route and Southern Ry. from snowy North to sunny South, your sleeper, diner, smoking room, easy chair, all at hand. Many travelers will this year add a short sea voyage from Miami or Tampa for a visit to Cuba or Porto Rico to their itinerary.

Tickets through to Havana on sale via the Queen & Crescent Route, Southern Ry. and connecting lines, include meals and berth on steamers. We have a very interesting booklet on Cuba and Porto Rico now in press. We will gladly send it to you.



W. C. RINEARSON, G. P. A.,
Cincinnati, Ohio.

Mexican Central

..... RAILWAY

In reading and seeking "GOOD HEALTH," do not overlook Mexico, and the fact that the **Mexican Central Ry.** is not only the best but the most popular route through that country.

Passengers via this line avoid the annoyances incidental to transfer at the border, secure through Pullman Buffet Car Service, and more comfort than could possibly be the case otherwise.

Mexico is one of the very few combination summer and winter resorts on the continent.

Call on any **Mexican Central** Agent for further particulars, or address,

T. R. RYAN, General Agent,
236 S. Clark St., Chicago.

W. D. MURDOCK,
Ass't Gen'l Pass. Agent,
MEXICO CITY, MEX.

Pullman Buffet Car Service.

... THE ...
Cincinnati Northern
Railroad Co.

Direct Line between JACKSON, ADDISON JUNCTION, and CINCINNATI. NO CHANGE OF CARS between these points. Short Line to all Military Camps in the South, via Cincinnati. Through Tickets on sale at principal stations.

For further information as to Rates and Time of Trains, call on or address,—

S. E. KIRK, Commercial Agent,
JACKSON, MICH.,
or the undersigned,

T. C. M. SCHINDLER, G. P. A.,
TOLEDO, OHIO.

Climate Cure

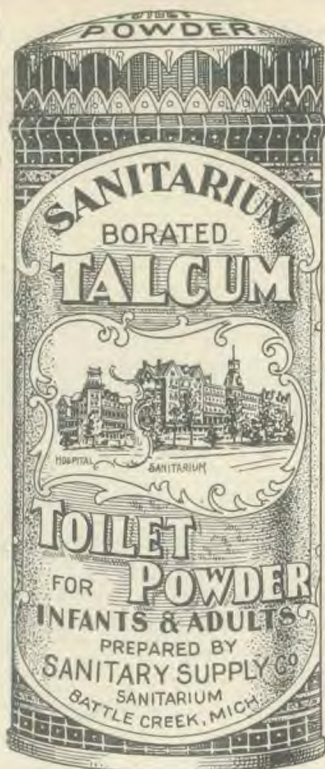
For
Weak Lungs,
Weak Throats,
Weak Bodies.

The Health Resorts of New Mexico
and Arizona

are unrivaled. Pure, dry air, an equa-
ble temperature, the right altitude, con-
stant sunshine.

Send for descriptive pamphlets issued
by Santa Fé Route Passenger Depart-
ment.

General Passenger Office,
The Atchison, Topeka & Santa Fé Railway,
CHICAGO.



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

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

It is an excellent remedy for PER-
SPRING FEET
and is especially
adapted —

For Infants.

Delightful After
Shaving.

Price, post-paid, 25c
per box.

Agents Wanted.

4 BOOKS for Less than Half the Price of One!

JUST THINK OF IT.

EVERY MOTHER is interested in her own home and the training of her child. "Studies in Home and Child Life" deals in a practical way with the vital questions of child-training, such as are constantly demanding answers in the home where there are young children. With the exception of the Bible, it is the best book ever written on child-training, and in anticipation of the great field of usefulness before it, we make this exceptional offer that every American home may enjoy and profit by its teaching.

"STUDIES IN HOME AND CHILD LIFE,"

Illustrated, 256 pages (regular price, \$1.50).

"NATURAL FOOD RECIPES,"

containing 120 new recipes by Mrs. E. E. Kellogg.

"THE NEW DIETARY."

(Just issued.)

ILLUSTRATED "DRESS SYSTEM" BOOKLET,

containing the latest designs for healthful and artistic dress.

ALL FOR 60 CENTS!

and 15 cents to cover postage.

Address GOOD HEALTH, Battle Creek, Mich.

Sufferers From Chronic Constipation

Will find **Granose Flakes or Biscuit** will relieve the trouble. Granose enriches the blood and builds healthy flesh. Served at thirteen sanitariums, and enjoyed by the hearty and the invalid.

If you will send us the name of a grocer who does not sell Granose, we will send you a free sample.

BATTLE CREEK, MICH.
SANITARIUM HEALTH FOOD CO.

Branch Office, cor. Colburn and Pall Mall Sts.,
London, Ont.

Strong Men of Smyrna.

The porters of Smyrna are without doubt the strongest men in the world. They carry upon their necks and shoulders loads heavy enough to crush a donkey. It is not an uncommon sight to see one of these porters carrying through the streets six or eight great trunks bound in a bundle with a long rope and balanced upon his back. These men live almost exclusively upon wheat or barley cakes and figs. A diet consisting of cereal foods, fruit, and a small seasoning of nuts constitutes the most natural and most wholesome bill of fare for human beings. Such a dietary is conducive to long life, good digestion, clearness of mind, light-heartedness, joyous spirits, and general well-being. The nut food products of the Sanitas Nut Food Co., Battle Creek, Mich., constitute a perfect bill of fare, and have proved a Godsend to thousands of persons.

An interesting art booklet containing valuable recipes sent on application.



A MALTED NUT BABY, AGE 5 MONTHS AND 3 WEEKS.

Malted Nuts

Is equal to one pound and a quarter of beefsteak in blood- and tissue-making qualities; and in addition, is equal to 3-4 of a pound of butter in fat-making properties. It is equal in nutritive value to 3 1-2 pounds of the best beef or mutton.

SANITAS NUT FOOD CO., Ltd., Battle Creek, Mich.

BRANCH OFFICE : COR. COLBURN AND PALL MALL STS., LONDON, ONT.

UNIVERSITY OF WISCONSIN,
MADISON.

SCHOOL OF EDUCATION.

26 October, 1899.

Gentlemen:-

For over a year I have been using freely in my home certain of your nut foods, especially Protose, Malted Nuts, and Nut Butter. I can not too highly commend them alike for their palatableness and their nutritious quality. I feel that they furnish a most admirable substitute for animal fat and albumin. My children have been using the Malted Nuts especially, and enjoy the flavor very much; and I am sure it meets their needs very satisfactorily. I have commended the nut products to many people, both in Madison and in other parts of the country, and I shall continue to do so in the future.

Very truly yours,

Sanitas Nut Food Co.

M. V. O'Neil

"The Peril of the Republic of the United States."

BY PERCY T. MAGAN.

**Great Literature,
Great History,
Greater Prophecy.**

HUNDREDS
should sell it.
THOUSANDS
should buy it.
MILLIONS
should read it.

ON its pages the old light of the prophecies blazes up afresh. If you would touch the hearts of men, you must touch them over the things upon which they are thinking, and in which they expect to act a part.

FIVE THOUSAND COPIES of "The Peril of the Republic" were sold before the plates left the presses, and before any advertising had been undertaken.

Here are some of the chapter headings: "A Nation's Birthright," "National Apostasy," "Manifest Destiny," "In the Trail of Rome," "Amity or Armageddon."

"If you would know this most important history of *this time*, you will have to read the 'Peril of the Republic;' for the history is given nowhere else."—*Alonzo T. Jones, in Review and Herald, Jan. 2, 1900.*

196 pages, bound in red cloth, cover embossed in ink and aluminum. Postpaid, \$1.00.

GOOD HEALTH PUBLISHING CO., Battle Creek, Mich.

Guadalajara Sanitarium

Guadalajara, Mexico.



THIS elegant and commodious modern building stands on its own extensive grounds, surrounded by lovely semi-tropical gardens. It is situated in the highest part of the city of Guadalajara, the western capital of Mexico, and known as "The Pearl of the West," on account of its beauty and its magnificent climate, which is specially beneficial to persons affected with throat and lung troubles. Guadalajara has a population of 100,000, and is second only to the City of Mexico as a place of interest.

Its climate is simply perfect all the year round, the temperature ranging only from 65° to 85° F. in the daytime. Its elevation is 5,000 feet above the sea-level. The Mexican Central Railroad runs through Pullman palace cars, via Silao. Round-trip excursion tickets good for nine months from date of issue, allowing stop-over at all points in Mexico, are on sale every day at the following rates:—

From Washington, \$107.85; from Chicago, \$88.60; from St. Louis, \$77.00; from Kansas City, \$71.20; from New Orleans, \$62.85; from San Francisco (six months), \$110.00; from Los Angeles (six months), \$100.00.

The Sanitarium is fitted up with all modern appliances for rational curative treatment. First-class resident physicians and trained nurses from the Battle Creek Sanitarium, excellent service, home comforts, moderate terms. Apply for information to—

GUADALAJARA SANITARIUM, Guadalajara, Mexico,
or to the **BATTLE CREEK SANITARIUM, Battle Creek, Mich.**



*Have
You
Tried
Yuco?*

What is Yuco?



It is made in the WASHBURN CROSBY MILLS, Minneapolis, so must be all right. Made from the most nutritious wheat grown. A Perfect Health Food. Two-pound packages. ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

A book of recipes in every package.

Grocers Are Selling It.

WASHBURN CROSBY CO.,

MINNEAPOLIS, MINN.

Battle Creek Sanitarium



Acknowledged
to be the Oldest
and Most
Extensive Sani-
tarium
Conducted on
Rational Princi-
ples in the
United States.

Dining-room
with a Seating
Capacity of 300.

Everything an invalid needs. Special dietaries prepared as directed. Baths of every description, including the electric-light bath. All conveniences of a first-class hotel. Incurable and offensive patients not received.

For circulars, address,—

BATTLE CREEK SANITARIUM, Battle Creek, Michigan.

A FAMILY BOX

Containing the following useful articles will be sent to
new subscribers who request it:—

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|--|--------------------------|
| 1 Pkg. PEARLINE. | 1-2 Lb. PROTOSE. |
| 2 Pkgs. QUAKER OATS. | 1-2 Lb. NUT BUTTER. |
| 1 Bar COSMO BUTTERMILK
SOAP. | 1 Pkg. GRANOSE BISCUIT. |
| 1 Bar FAIRY SOAP. | 1-4 Lb. FIG BROMOSE. |
| 1 Pkg. ALLEN'S FOOT-EASE. | 1 Pkg. GRANOLA. |
| 1 Large Box TALCUM POWDER | 1 Can PROTOSE and BEANS. |
| 1 Copy Healthful and Artistic Dress System Pamphlet (Illustrated). | 1 Lb. CAMEL-CEREAL. |



THE articles listed are among the home necessities for daily use. Boxes will be furnished only to new subscribers to GOOD HEALTH, and every application must be accompanied by the subscription price, \$1. If you were to purchase these articles, they would cost you more than \$4.50; thus you effect a saving in purchasing goods you must have, and also get a year's subscription to GOOD HEALTH free.

No more than one box will be furnished to the same person. We will send by freight collect.

If you are already a subscriber, one new subscription will entitle you to the FAMILY BOX.

GOOD HEALTH, Battle Creek, Mich.