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GOOD HEALTH

A MONTHLY JOURNAL OF HYGIENE, DEVOTED TO PHYSICAL, MENTAL, AND MORAL CULTURE.

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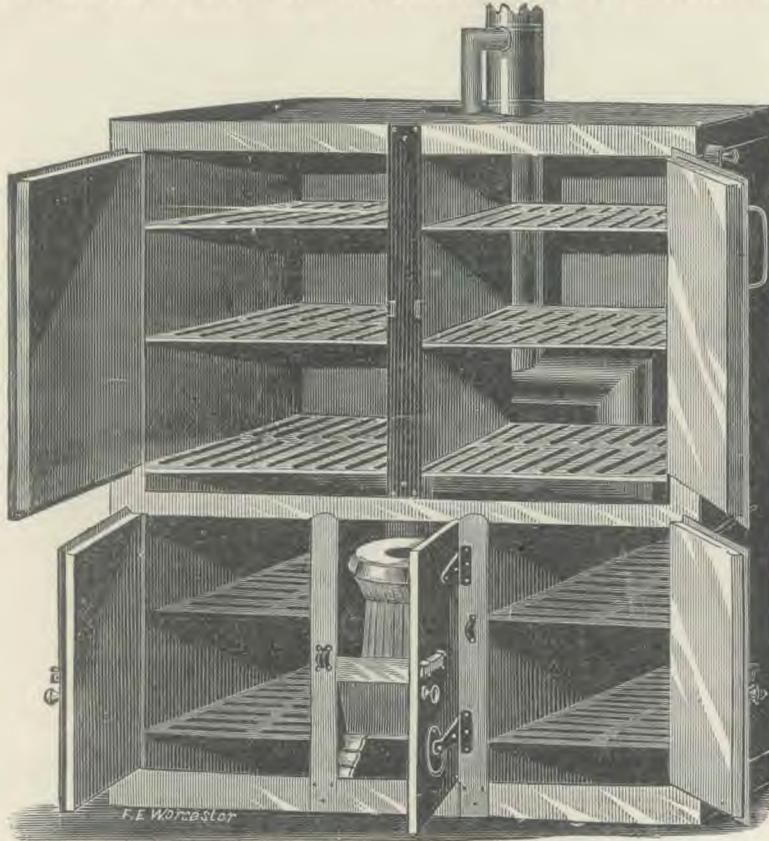
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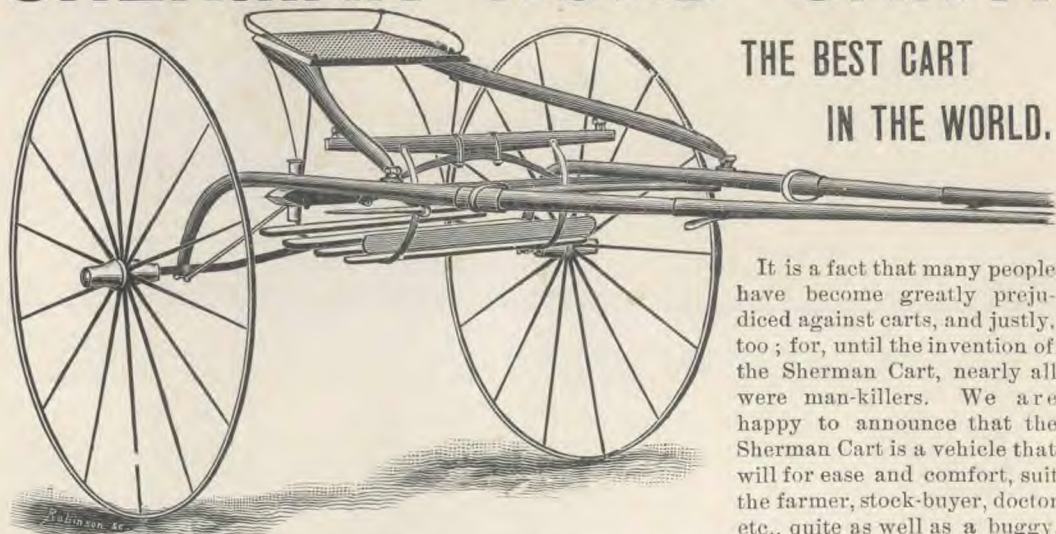
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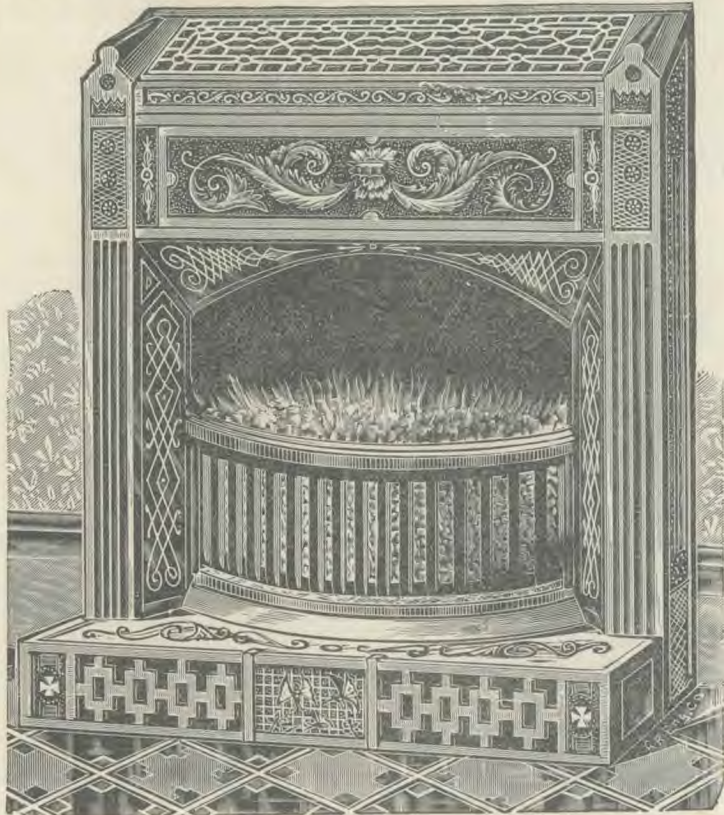
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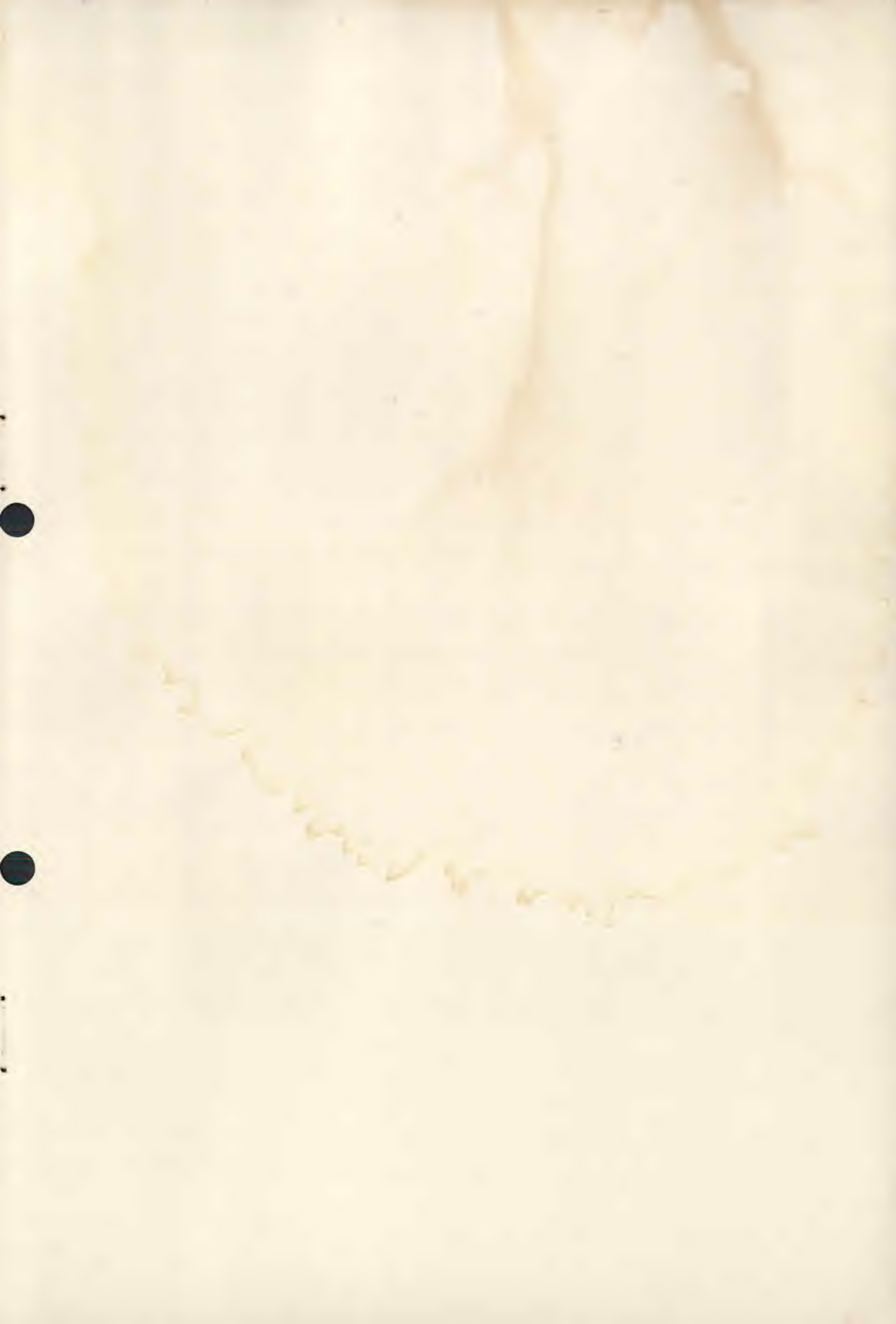
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Volume XXIII.

Number 3.

BATTLE CREEK MICHIGAN:

MARCH, 1888

NASAL CATARRH.

THIRD LECTURE.

THE literal meaning of the word "catarrh" is a "flow," or "discharge." The term is applied to the disease which we are considering, on account of the prominence, as a symptom, of the discharges peculiar to this malady; but it is important that we should at once divest our minds of the common notion that catarrh of the nose is necessarily accompanied by a profuse discharge. We frequently find persons suffering seriously from chronic catarrh, who have been so little inconvenienced by nasal discharges that they have never suspected the presence of the disease until others of its more serious results have begun to make their appearance. An excess of secretion is present in some form in most cases of this disease, at least in its earliest stages; but this symptom is by no means the most serious or the most constant of the various unpleasant features of this disease.

Before we undertake to define more exactly the nature of the disease which we are considering, let us recall some of the chief facts which we have learned respecting the nasal cavity and its surroundings:—

1. We have learned that the nasal cavity is an irregularly shaped space, the round portion of which is divided into two nearly equal parts by the septum of the nose.

2. The outer walls of the cavity present a

number of deep furrows, which are formed by projecting ridges of the bone, which jut out toward the septum.

3. The nasal cavity communicates with the mouth by a large opening behind the soft palate, which, in fact, is a sort of valve by means of which the opening between the nose and the mouth may be controlled.

4. The nasal cavity is also connected with the drum of each ear by a duct on either side, which allows the air from the nasal cavity to enter the ear.

5. The nasal cavity is connected with a number of other similar cavities, the chief of which are two quite large cavities in the bones of the face, the cavity called the *frontal sinus* found in the skull just between the eyes and on a level with the eyebrows, and several large cells in the base of the skull.

6. The nasal cavity is lined with a delicate pink tissue called mucous membrane. This same covering extends through the small ducts connecting the nasal cavity with other cavities, and also lines these several cavities. The ducts extending to the eye and the ear are also lined with mucous membrane, as is the drum of the ear.

7. In the upper part of the nasal cavity the mucous membrane contains very delicate nerve fibers, in which resides the olfactory sense.

In order that we may understand the nat-

ure of this delicate membrane which lines the nasal cavity, let us compare it with the skin, a structure with which we are more familiar. If we place a small portion of the skin under a magnifying glass of moderate power, the first thing we shall notice is that we are scaly creatures. The scales which cover our bodies are not like the great horny plates which constitute the covering of most fishes and some species of reptiles, but are so minute and delicate that a magnifying glass is required to render them visible. We may at any time collect a few for examination by gently scraping the surface of the skin with the edge of a knife. These scales are constantly shedding, being rubbed off by the friction of the clothing and by various objects with which we come in contact. When one takes a Turkish bath, these skin scales are sometimes rubbed off by the shampooer in astonishing quantities. If we study the skin more closely, we find in it two sets of secreting organs, or glands. One set produce the watery fluid called perspiration, or sweat; the other produce a thicker, fatty, or oily, matter by which the surface of the skin is lubricated. The skin also contains numerous nerves, in which reside the senses of touch and temperature.

The mucous membrane is a sort of inner skin, or, as has been termed, a lining skin, and very much resembles in structure, though less in appearance, the outer covering of the body. The mucous membrane, like the skin, is covered with scales. These do not, however, dry up and fall away, as in the case of the skin, but are washed away by the fluid which is always found moistening the surface of a healthy mucous membrane. If you will place under a microscope a drop of saliva from the mouth or of clear mucus from the nose, you will find in it a great abundance of these scales. The mucous membrane also, like the skin, contains glands. As in the case of the skin, one class of these glands produce a thin watery fluid, much like the serum of the blood, from which they are called serous glands. The other set of glands produce a thicker and somewhat tenacious fluid, termed

mucus, which is quite unlike the oily secretion of the skin. You see, then, that the fluid formed by mucous membrane is made up of three things,—the watery fluid formed by the serous glands, the mucus formed by the mucous glands, and the mucous scales which are shed by the mucous membrane. In catarrh accompanied by a discharge, there is always an increase in some of these elements. If the discharge is watery, it is because there is an increase of the serous fluid. If it is thick, it is because there is a great increase in the amount of mucus formed, and in the quantity of mucous scales thrown off.

Catarrh is not confined to the nasal cavity. It may affect the membrane lining the lids and covering the eyeball, that which lines the ears, the lining membrane of the cavities adjacent to the nasal cavity, the mouth, the air passages, the stomach, the intestines, the bladder, or, indeed, any portion of the body which is covered or lined by mucous membrane. From the similarity between the skin and the mucous membrane, it may occur to you that these two structures might easily be affected by the same disease; and this is exactly true. When a child has scarlet fever, the eruption upon the skin is accompanied by a similar eruption upon the mucous membrane. It is this which produces the strawberry tongue and the sore throat, which accompany these diseases. The nasal and throat symptoms which accompany measles are another illustration of the same fact. The same is also true of catarrh. The skin, as well as the mucous membrane, may be affected by a disease essentially the same as catarrh. A common disease of this character is ordinarily known as eczema, salt rheum, or moist tetter.

A "Cold in the Head."—We are now prepared to enter a little more deeply into our subject. Let us study first the symptoms by which we may know when this disease is present. The simplest form of nasal catarrh is that common affection ordinarily termed "a cold in the head." The symptoms present in this condition must be familiar to most of you from personal experience; but in order that we may understand the relation of this

simple form of disease to its more serious and chronic phases, it is well that we should study them somewhat closely.

In order to illustrate the subject for you, I have asked a gentleman who has just consulted me for the relief of an acute cold to present himself before you as a clinical subject, and allow us to question him. While I have been talking, you have noticed that he has sneezed several times. He is obliged to use his handkerchief almost constantly, on account of a watery discharge from the nose. You observe that his eyes are red. As I open his nostrils by means of a little instrument called a nasal speculum, which I hold in my hand, I see that the lining of his nose presents a red appearance, like his eyes. We say that his eyes are blood-shot, which means that the blood-vessels are distended with blood. The mucous membrane lining the nose is also blood-shot, or congested; and as the patient opens his mouth, and allows me to hold down his tongue with the speculum, I look in, and find that his throat presents the same red and congested appearance. You observe also that his face is flushed. There is too much blood in his head. He says that his head aches; and as I take his hand to feel his pulse, I notice that the skin is hot and dry. He says he feels feverish, and is obliged to drink very often. I feel his pulse, and find that it indicates a slight fever; and if we place a thermometer in his mouth, we shall find that his temperature is one or two degrees above the normal, or healthy, standard. Very likely it is about 100° F.

If you observed his tongue when we were looking in his throat, you noticed that it was covered with a white coat. The patient says he has a bad taste in his mouth, and has no appetite. His bowels are inactive. The secretion of the kidneys is disturbed, as is indicated by a pink, whitish, or brick-dust sediment. The patient says that his "bones ache," that his flesh is sore, that he feels weak and unable to perform his usual duties. He feels dull and stupid. Now and then he has shivering sensations about the back.

If we ask our patient when he contracted this cold, he will tell us that he has not been feeling quite as well as usual for a day or two; that he was a little bilious; appetite not quite so good as usual, and bowels inactive; but that he thought little of his condition until two or three hours ago, when, as he was sitting at work in a room without a fire, he began to sneeze; and knowing at once that he was taking cold, he removed to a warmer room, but has been sneezing at short intervals ever since, and his cold seems to be getting worse every moment.

Our friend thought, and this is the common notion, that the sneezing was a sign that he was taking cold. This is quite a mistake. Sneezing is an evidence that a cold has already been taken. When a person begins to sneeze, he already has a cold, and the sneezing is nature's attempt to cure it. This idea probably strikes you as a curious one, yet I believe it to be true, nevertheless. When one makes a vigorous sneeze, the action is not of the nose, but of almost the entire body. In other words, he sneezes all over; almost every muscle of the body makes a jerk. Our unfortunate friend is just now getting ready for an explosion. Notice how strangely the muscles of his face twist his countenance out of shape. He is taking a deep breath. Nature is getting ready to fire a powerful blast at the enemy which is invading her domain in the shape of a cold. There it goes, "ker-c-h-e-w!" It nearly lifted him off his chair. Every muscle in his body made a jump. A sneeze is a spasm by which nature undertakes to re-establish the equilibrium of the nervous forces and the circulation, which have been disturbed by a cold draught or some other cold-producing influence to which the individual has been exposed. I have really sometimes seriously considered whether it would not be a proper thing to revive some of the old-fashioned *sturnutatories* of the pharmacopœias of two centuries ago as a remedy to be used in the first stage of a cold. At any rate, I imagine that a few pinches of snuff at this particular period, provided nature is not able to get up a sufficient number of vigorous sneezes, might be

beneficial; only I should insist that it be not "Scotch snuff," or any other narcotic mixture.

We have already noticed that the discharge at this stage of a cold is of a watery character. In the course of a few hours, the discharge will become somewhat thicker and opaque. If the patient has not previously suffered from repeated attacks of cold, the discharge will gradually lessen, and the various other symp-

come chronic. It may, indeed, become so thoroughly established that nature will break down in her attempt to restore the patient to health, and a permanent diseased condition be established.

In our next we will consider the condition of the patient in such a case. In other words, we will study the symptoms of chronic nasal catarrh.

HYGIENE IN EQUATORIAL AMERICA.

BY EDWARD M. BRIGHAM.

(Continued.)

BRAZILIAN DIET.

THE food is equally simple. For perfect contentment, the humble Brazilian needs but farinha, coffee, a hammock, and a cigar, the first two being his only pabular essentials. Farinha is to him what bread is to us.

The Brazilian is an early riser, and can well afford to be as he takes a midday sleep. The first thing he does in the morning is to take a cup of cafe (coffee) strong enough to serve, after sufficient dilution,

a whole family with us. It is drunk much sweetened, but without milk. Besides coffee, they take no nourishment till about eleven o'clock. Then they breakfast on farinha and coffee, at least. The principal articles of a more liberal *menu* would usually be *carne secca* (jerked beef), or cheap scraps of fresh beef, dried fish, crabs, or turtles. To these may be added occasionally (more according to the express convenience of circumstances than to any determination on the part of the man) one or more kinds of fruit. But he often lives for months at a time upon an un-mixed diet of farinha, waiting with stoical composure till Time and prodigal Nature grant him more. Hardship with him is not the fasting, so much as the sweating that earns the feast.

Farinha is the product of the root of the



FARINHA MAKING.

toms will disappear; and in the course of a week he will be feeling as well as usual, provided he takes ordinary care of himself; and that without any special treatment, either general or local. His cold will have been cured by the natural recuperative efforts of the system. If, however, through exposure, our patient gets an addition to his cold before he has fully recovered, or if his system at the time the cold was contracted was in a state of preparation for catarrh, a condition in which the liver, skin, and other organs of excretion were inactive, so that the blood and tissues were filled with effete or impure matters which should have been eliminated, then the cold will not terminate so quickly. Instead, several weeks or months may elapse before nature is able to complete the remedial process, or in other words, the disease may be-

mandioca plant (*manihot utilissima*), of which there are several varieties. The one most common grows to the size of our elder bush. It is planted in roughly made clearings in the forest. The root resembles a sweet potato in form, but is larger. Very little labor is required in its cultivation, if, indeed, it may be said to be cultivated at all. In planting, sections of the stem are crowded into the soil, where they take root and grow; and the plant struggles with the weeds till six months later, when the root is ready for use. The accompanying engraving from a photograph illustrates the manufacture of farinha from the root. The roots are first sunk in baskets in some convenient body of water, until they are softened, when they are taken out and grated, and the pulp put into an ingenious tubular device which is both press and strainer. This effective apparatus is made of bands of rattan braided in such a manner as to admit of much stretching. Stretching it diminishes its diameter, thus pressing the juice from the pulp through the meshes. This tube is seen in the picture, suspended by a loop in its upper end to a pole near the ridge of the roof, while a little girl bears upon a lever placed through a loop in the lower end. After the juice is pressed from the pulp, the latter is turned from the strainer into the large clay basin resting in the top of a clay fire-place. There a woman is seen with a paddle, stirring and tossing it till all moisture is evaporated. The substance is now in brittle straw-colored

grains, ranging in size from a grain of sand to a small pea. The woman scoops this farinha into baskets of one *arroba*, thirty-two pounds, each, when it is ready for the market.

The juice which is pressed from the pulp falls into a basin—often a turtle's shell—on



TAPIOCA PLANT.

the ground. It is a deadly poison. Thirty-five drops of it are said to have killed a condemned negro in six minutes. Yet in the pan of juice is deposited the fine, pure starch sediment which we call tapioca. "So near grows death to life" in the mandioca root.

It is a little curious that though the Brazilians depend upon their "staff" as we do upon our bread, they seem not to care for

tapioca, the other valuable product of the same plant.

Farinha is sometimes sifted, and the finer particles moistened and dried in cakes,—the so-called cassava bread,—but it is never cooked. It is commonly eaten with a spoon or tossed into the mouth with the fingers; the latter being the invariable method in the thatched houses. About as much practice is required to do this successfully as to use the Chinese chop-sticks.

[We have in the refusal of the native Brazilian to eat tapioca an illustration of the scientific accuracy with which nature often guides the ignorant savage in the selection of his food. Tapioca is almost pure starch, and not capable of maintaining life, while farinha, from its mode of manufacture, must contain all the elements of nutrition.—ED.]

WHY DO WE SMOKE?

WM. E. ZIEGENFUS, M. D.

THERE is really no good reason for smoking. The excuses for it are as varied as for the use of alcoholic stimulants. The reasons given by the Union College students were about as good as any, though one of them was so ridiculous as to cause laughter from those who heard it.

It was in my younger days, when the venerable Dr. Nott was president of the College. He instituted a rigid crusade against the use of tobacco on the College grounds, or, in fact, by students anywhere. But a continual violation of this rule was kept up by some students. So Dr. Nott resolved himself into a committee of one to investigate the source of the odorous emanations. He soon found himself at the door of a certain room from which his olfactory nerves told him the odor proceeded. He gently knocked. There was a momentary lull of the boisterous conversation inside, a moving to and fro, and then the door was opened. Imagine their astonishment when they saw their honored President bow himself in. The pipes and tobacco had been secreted, but what of the smoke? That remained to accuse them, and there was no escape from the dilemma.

The President then began to question the boys as to their object in violating the rules of the College. With serious faces, they began to excuse themselves. One of them smoked because he had a violent toothache, and smoking relieved it. The second one smoked because he had dyspepsia. A third one feared that unless he used tobacco, he also would be troubled with impaired digestion.

There was still one who had given no reason for his smoking. So Dr. N. said, "Well, my young man, and why do *you* smoke?" "I smoke, because I—well—ahem—because I am—I have corns!" At this unexpected reply they all laughed heartily; and upon their promising not to smoke again, the Doctor excused them, and left the room.

Now this sort of reasoning is repeated daily by those who are questioned as to their motives for smoking. The one who smoked for corns was about as nearly correct as the one who used it for dyspepsia.

I am not writing from theory. While I was not a confirmed smoker, I yet smoked moderately for ten years of my life, and I know something from experience on this subject. Last year I thoroughly canvassed the reasons for *my* smoking, and the one or two which constituted the backbone of this habit; viz., as an *anti-fat*, and as a *preventive against infectious diseases* in my daily practice, were discarded. Now for some time I have not used it, and I see many reasons why I should not again do so.

Why so much tobacco should be used, has always been a mystery to me. I can even condone the use of a cigar (perhaps because I smoked), but how men can defile their mouths with chewing tobacco, and even swallowing the juice at times, is beyond my comprehension. It is a disgusting habit, to say nothing of its injurious nature. I have frequently observed railroad cars that presented an appearance unfit for the use of ladies or gentlemen, because some tobacco-chewer had defiled the floor with the filth of his mouth. But why say more of this feature? It is apparent to all.

Then, to think that nine-tenths of the tobacco-users must acquire the habit by diligence and perseverance, which, if directed into other channels, would accomplish wonders! Every boy knows how sick he was when he first used tobacco. I know by experience. How soon the head swims, and one grows dizzy!

The first impression made by the smoke of tobacco is through the blood; and inasmuch as the whole volume of blood courses through the body in from three to five minutes, the indications of its effects, from the many compounds of which it is composed, are felt universally in the young smoker. After a short time, as the blood becomes charged with the poisons, the organic nervous chain and the organs it supplies are powerfully impressed.

I mentioned the fact that nearly all persons who use tobacco have had to make more or less of an effort to overcome the natural resistive force of the body. But there are some few exceptions to this almost universal rule. The children of ancestors who used tobacco are more prone to its use, and, as a rule, there is less resistive force in those persons. But still this is an acquired habit, not of the child, but of its ancestors.

In no instance is the sin of the father more directly visited on the children than in the use of tobacco. It produces in the offspring an enervated and unsound constitution, nervousness, and a hysterical tendency. Smoking tobacco, and the use of tobacco in every form, is a habit better not acquired, and when acquired, is better abandoned. The young should especially avoid the habit. It gives a doubtful pleasure for a certain penalty. So long as the practice of smoking is continued, the smoker is temporarily out of health. Excessive smoking has proved directly fatal. Why do we smoke?

Alpena, Mich.

—More men are physically ruined by gluttony or improper eating than by-liquor. The richest man on earth is he who has a first-class digestion, and is master of his appetite.—*Selected.*

WHAT AILS THE MODERN GIRL?

A WRITER in *Harper's Bazaar* makes a pretty close diagnosis, for a layman, as to what ails the modern girl, at least a good many of them. It is well deserving of record as an *indicatio causalis* in the disease which is so often the despair of the doctor:—

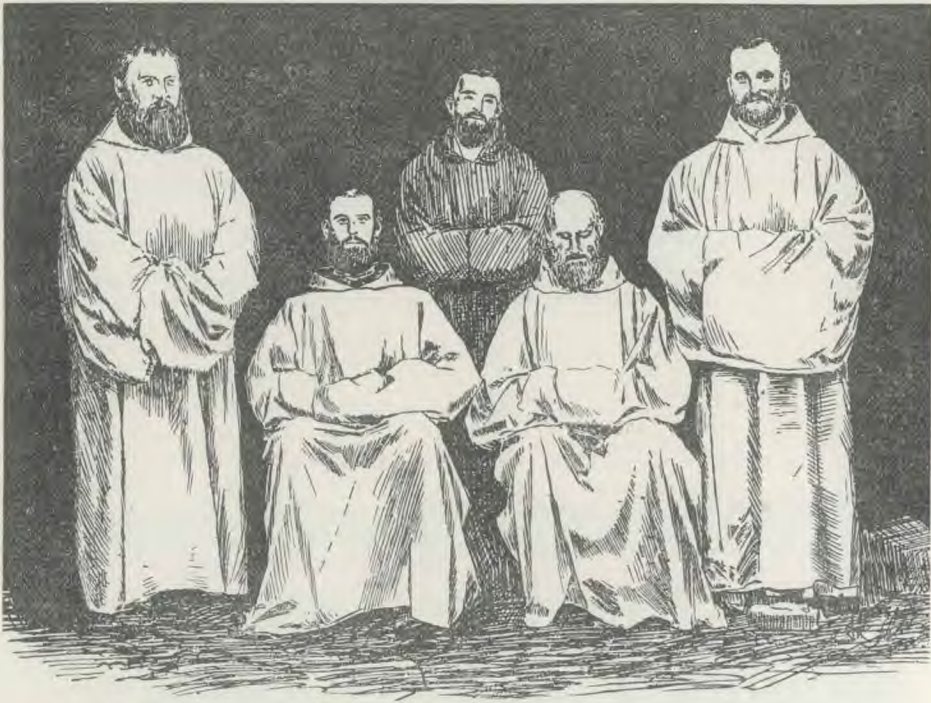
“The modern girl hardly knows what she wants, whether it is the higher education, an aesthetic wardrobe, love, or fame. She plays tennis and progressive euchre, and flirts, and does Kensington work, and reads Herbert Spencer, and very often writes; she dabbles in music, and talks theosophy; and if there are more things in heaven and earth than are dreamed of in her philosophy, one questions what they can be. Withal, she is as restless as the wind. She does not love the quiet of home; she lives on excitement; she goes to Europe, to the springs, the mountains, the theaters, the receptions, if she can get there, or to the modiste; she can always fall back upon clothes as a diversion, and when everything else fails, she has nervous prostration and a trained nurse. In fact, the chief trouble with the modern girl, be she rich or poor, is that she either does too much, keeps her nerves on the strain, and by and by goes to the other extreme, and does literally nothing but consume drugs, talk of her ills, and consult Christian scientists; or she has no real interests, fritters away her time in shallow pursuits, becomes pessimistic and dyspeptic, dissatisfied with herself and all the world, cries, and questions if life is worth living, and feels especially blue on holidays.

“The remedy for all this is, perhaps, an object in life. Those who are well and unselfishly occupied do not question if life is worth living; they know it is; and whether they are busy in the shoe factory, behind a counter, at the fire-side, in the kitchen or the dining-room, so long as they are busy and not shirking, or reaching forward for something more congenial, and neglecting present duty, their minds are at rest and uninvaded by despondency. One of the best remedies for depression of spirits is the effort to bestow happiness. It has been known to prove effectual when all

other methods have failed ; when novels, and new gowns, and cod-liver oil, and bovine, and bromide, admiration and flattery, were no more serviceable than an abracadabra or any heathen spell. Melancholy or other ills of this nature are the direct result of a too strong egotism ; and an absorbing interest in others is a safe and agreeable medicine, but it is usually the last thing a modern girl tries." —*Boston Medical and Surgical Journal.*

stead, constitutes the morning meal. The noon meal consists of soup and vegetables, with bread and water. The soup contains neither butter, oil, nor fat of any kind. Vegetables are cooked in water, to which only a little salt is added. Meat, fish, and eggs never enter into the dietary of these monks.

The Trappist monks inure themselves to privations, and abjure all luxuries, even a great share of what are ordinarily considered neces-



VEGETARIAN MONKS.

For many years there has existed in France an order of monks, an offspring of the Cistercians, known as Trappist Monks, who have been noted alike for their simplicity of life and their remarkable health and longevity. Forty years ago a company of these monks came to this country from Ireland, where they had a large monastery established when they were expelled from France during the French Revolution. The pioneers in this country settled in Iowa, about twelve miles from Dubuque.

The food of the Trappists is as simple as possible. A slice of brown bread, with a glass of water, sometimes a cup of coffee in-

sities. The Trappist frequently sleeps upon a bare board, without covering, pillow, or mattress. He rises at two o'clock in the morning, and on feast days at midnight. From this early hour until eight o'clock p. m., when he retires, every moment is occupied either in toil or in religious duties.

Among the members of this order are to be found a large proportion of very old men. The statistics of France show that these monks are the longest-lived men in that or any other country. The majority die of old age, except in cases where chronic disease was contracted before entering the monastery ; and even in these cases it is claimed that life is greatly pro-

longed by their simple mode of living. A newspaper correspondent who recently visited the establishment of these monks in this country, states that "the brother physician of La Grande Trappi, during a residence of twenty-eight years, has not known a case of apoplexy, dropsy, gout, or cancer;" and "what is most strange," he adds, "is that the most terrible epidemics which have visited the country around the Abbey have invariably stopped at its threshold."

The accompanying engraving is rather a rude sketch of a group of five or six monks clad in the peculiar costume characteristic of the order. Although the pioneers of this society in this country numbered but seven, the community has now increased to seventy. It is said that the order owns five thousand acres of the best farming land of Iowa, which they till with their own hands, raising the finest cattle, sheep, and horses in the country.

While the life of these monks is no doubt unnecessarily severe in its discipline, it certainly teaches a most useful lesson, in demonstrating the fact that the luxurious habits commonly indulged in by civilized people are not only non-essential to life, but are prejudicial to it.

MORTALITY AMONG LIQUOR-SELLERS.

THE *London Post Magazine*, in regard to mortality among liquor-sellers, says that of all the hazardous occupations, that of the liquor-seller is one of the most fatal.

The reports of the registrar-general conclusively show that the mortality of persons of this class is upward of fifty per cent higher than that of the general population, and the experience of various insurance companies confirms this. After comparing, so far as practicable, the combined experience of insurance companies with that of the liquor-sellers of England, the writer states that his preconceived ideas as to the effects of selection on the mortality of liquor-sellers, have been completely shaken, and he has been led to the conclusion that the beneficial effects of selection which are so apparent in insured lives

generally, are counteracted by other influences to which this class of persons is exposed.

With a view of ascertaining the rate of mortality in different sections, he divided the experience into three classes,—licensed grocers, hotel-keepers, and publicans. The mortality of licensed grocers was less than that of hotel-keepers by 29.2 per cent, and less than that of the publicans by 43.26 per cent.

The average extra premium required for insurance was 6s. 8d. per cent for licensed grocers, 17s. 1d. per cent for hotel-keepers, and £1, 4s. 10d. per cent for publicans.

A Clerical Anecdote.—The minister of a rural parish being once at a shepherd's house to christen a wean, a big, fat cock was killed for the christening tea. Like most herd's children, those in the house in question were allowed to run about half wild, and glowered with holy fear from behind doors and kists at the man of prayer, who was observed to eat most of the cock himself. The youngsters, doubtless, made many sage reflections on his voracious appetite, but took care to keep out of reach.

A month or so after, when the minister was visiting in the parish, he came back to the shepherd's cot, and as he seated himself in an arm-chair by the fire, a hen and chickens marched in, having the run of the house, as usual. The children seemed terrified, but at last rushed in between the minister and poultry, and cried: "Shoo! Shoo! Gae wae! Gae wae!" and "waffed" their "pinnies" till they got them out of the house; when, as they scampered over the door-step, they cried: "Rin! Rin! Div ye no ken that's the man that ate yer faither?" — *Clerical Anecdotes, in Newcastle Weekly Chronicle.*

—Almost every human malady is connected, either by high-way or by by-ways, with the stomach.—*Sir Francis Head.*

—The death-rate of the world is sixty-seven a minute, the birth-rate, seventy a minute.



MARCH CLOTHING.

DURING the month of March come sloppy weather and sleeting storms, which require, sometimes for several days in succession, the constant use of the mackintosh and rubbers on going out. Those who wear these articles should remember that they are potent for mischief as well as for protection.

The mackintosh, for example, being waterproof, protects the garments from falling rain, but it does not prevent their becoming moistened by the excretions of the skin. Indeed, the retention of the insensible perspiration, which naturally evaporates through the clothing as rapidly as formed, renders it impossible that garments under the mackintosh should be otherwise than moist, when the rubber covering is worn for any length of time. When the mackintosh is removed, the rapid evaporation from the moist clothing cools the body, and thus produces a chill, and the same evils follow as though the clothing had been moistened by rain.

The same is true respecting rubbers. The feet become moist when rubbers are worn for any length of time; and when removed, the evaporation chills the feet the same as though they had been wet by going out-of-doors without protection.

On removal of the mackintosh and rubbers, the shoes and stockings, and as far as possible the other garments, should be changed, so as to avoid the unpleasant results which are here pointed out.

DRESS AND HEALTH.

IN every age the use of dress as an ornament to attract the other sex has rendered the censures of reformers on its extravagances unavailing. When, for instance, a mania for classicism afflicted the patriots of the French Revolution, the ladies of France adopted the dresses of Greece and Rome, or what they imagined to be such, with fatal eagerness; and with undraped bodies and sandaled feet braved the severity of a Parisian winter. Their light attire exposed them to diseases of the chest, nay, to death itself, but they heeded not. The gold rings shining on their feet could not protect them from the cold of winter, yet they remained faithful to gauze-clad nudity.* It was vain to remonstrate with them on their insufficient clothing; with French readiness they would reply with an epigram—

“The diamond alone must adorn,
Charms which wool would offend.”

In the same way, no arguments of utility or sanity are likely to induce even an elderly lady to adopt the curtailed garments recommended by Dr. Jessop, if the result should be to render her an object of ridicule to man, when compared with a sister dressed in the trailing garments of modern fashion.

Much may be done, much has been accomplished, in the direction of more sanitary clothing; but it has been by gradual and judicious reform of material, and unseen alteration of undergarments, at the suggestion of

* A fashion they carried so far as to discard all chemises for one whole week.

medical men, not by sudden and violent changes of fashion and interference with prejudice. Many ladies now actually wear the woven woolen vests and the flannel knickerbocker drawers recommended by Dr. Jessop. Suspenders attached to the stays replace the injurious garter, and clothed necks and shoulders have replaced, at least in the day-time, the low-necked dresses of our grandmothers.

Much remains to be done in this matter, but it must be attempted with a complete appreciation of the difficulties of the position, and with a competent knowledge of feminine laws of thought. Flowing garments, for instance, will in all probability never be forsaken, because of the superior dignity they confer on the female figure. Indeed, in our opinion, the best hope of discarding the hateful stays rests in a gradual return to the beautiful costume of Greece; for it is almost certain that while waists are accentuated, stays will be worn; but the change must take place in the natural direction of gradual development, directed by competent and judicious leaders of fashion, not in that of violent and inconsiderate revolutions. Until we are sufficiently educated to accept the wise aphorism of Edward I. as our guide, a complete reform of dress is very hopeless. It was that great king who said: "It is impossible to add to or diminish real worth by outward apparel; the only magnificence we must seek is the magnificence of noble and heroic deeds."—*British Medical Journal*.

The Reign of the Corset.—Dress reform has been agitated for forty years, and yet there has been so little progress made that the *New York Tribune* finds ground for the assertion that the reign of the corset is extending at both ends of life. Dealers in women's dress goods state that they never before sold corsets to babies so young nor to women so old. The regulation age at which New York girls put on stays is eight years.

JAPANESE COSTUMES.

In spite of the rapid inroads of English and American customs, the Japanese women still retain their simple and healthful dress. The principal garment is the *kirimon*, a kind of long dressing-gown, which is folded across the breast, and kept in position by a silk or cotton sash. Undergarments are rarely worn, but in compensation for this apparent disre-



A JAPANESE MOTHER AND DAUGHTER.

gard of cleanliness, they make a habit of bathing the entire body at least once a day, and often twice a day. A complete costume among the poorer classes may be obtained for one or two dollars. In the engravings are seen representations of the costumes of the better class, which are sometimes quite elaborate. The scene represented in our illustration of a Japanese woman at her toilet, is one very easy to see in any city of Japan, for the reason that Japanese houses

are so constructed that there is no privacy about their in-door life. The lady of the house is visible to every passer-by as she sits upon the floor before a mirror, and dresses her hair, powders her face, and blackens her teeth. This last singular custom is said to date from very ancient times, and is supposed to insure the wife's fidelity to her husband by making her less attractive to other men.

In Japan, shoes are made of blocks of wood secured to the feet with cords; the Jap-



A JAPANESE AT HER TOILET.

anese stocking resembles a mitten, having a separate place for the great toe. As these shoes are lifted only by the toes, the heels make a rattling sound as their owners walk, which is quite deafening in a crowd. They are not worn in the house, as they would injure the soft straw mats on the floor, but are left at the door. The Japanese shoe gives perfect freedom to the foot. The beauty of the human foot is seen only in the Japanese; they have no corns, no ingrowing nails, no distorted joints. They have the full use of their toes, and to them they are almost like fingers. Nearly every mechanic makes use of his toes in holding his work, every toe being fully developed. Their shoes cost a penny, and last six months.

A DRESS RECEPTION.

SOMEBODY in an Eastern State has evolved a good idea, which if carried out extensively, would undoubtedly result in the evolution of many good ideas respecting woman's dress. It seems that a gentleman who had become something of a pessimist as regards reform in woman's dress, remarked that he had given up expecting to see women anything more than "dress-makers' models." The result was a dress reception, at which each woman attending was required to wear what she considered to be the ideal dress for her sex. The same restriction as regards dress was required of the gentleman critic. The other gentlemen were allowed to dress as they pleased. The following is a description of the dresses worn:—

"The gowns brought out at this unique evening tea, displayed considerable originality, and indicated a greater amount of thought bestowed on healthful and artistically beautiful dress than one would have expected of subjects of the New York ladies' tailor by day and the French modiste by night. They did not follow any existing dress-reform models closely, though one divided skirt was in the field. No two resembled each other, and a number of extremely pleasing costumes were evolved.

"A tall, slight blonde wore a gown of a peach-blow silk crepe. It fitted closely at the back, falling without draperies. In front it dropped loosely in long Greek folds, confined by a silver girdle. The sleeves were close at the elbow, quite full above. No trimmings of any kind were allowed, and no ornaments worn. The shoes were low-cut, without heels, and of a light, undressed kid. The dress just cleared the floor.

"Another gown was of white silk, soft and clinging, cut after a modification of the Directoire fashion. The bodice was cut neither high nor low in the neck, but gathered, perhaps two or three inches below the usual daylight choker level, showing a pretty throat. The loose waist, without darts, was gathered into a belt, and the skirts, absolutely without trimming or drapery, fell close about the

limbs. For the slender, rosy brunette who wore it, nothing more effective could have been devised.

"The majority of the gowns, probably, were in the softer silks, which make the most graceful of drapery dresses, and lend themselves most easily to a departure from conventional forms. Numbers of the women present, giving the occasion its broadest latitude, illustrated their ideas, not of evening and gala gowns, but of every-day dress, suitable to their chosen occupations. A walking-gown, for instance, of russet-brown cashmere, was made with a short skirt without draperies, laid in broad side plaits. The bodice was close-fitting behind, with loose jacket fronts falling over a full blouse of plaited surah in garnet and olive shades.

"An artist's wife, more radical in her dress-reform desires than many of her companions, habited herself in a soft moss-green wool gown, with a full plain skirt some four inches shorter than the customary walking length. With this she put on a full blouse of the same material, falling over a belt, and laced with a silk cord. She allowed herself a wide velvet collar, also velvet cuffs to the leg-of-mutton sleeves, and then declared herself ready for any of life's emergencies, even to running to the fourth story, two steps at once.

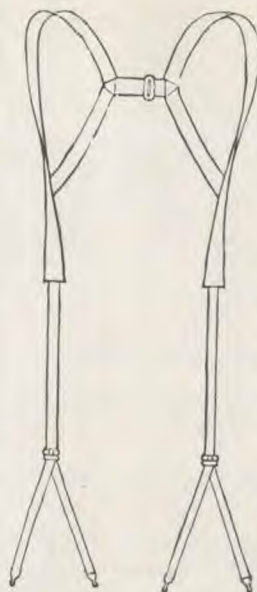
"A Highlandish costume, with skirts reaching just below the knees, and reached by long laced boots, with soft, undressed kid tops colored to harmonize with the gown, was the only startling deviation from ordinary attire. The dresses, without exception, were so contrived as not to insist on the outlines of the figure, and being free instead of strained from bias seam to bias seam, were proportionately graceful. Not one fitted closely above the waist line. There were tea gowns and tennis gowns adapted to all other uses.

"The men of the party did not avail themselves of their privilege very fully, though the individual who was put on his honor to wear what he thought he ought to wear, allowed his conscience to wrestle with him so far as to put on a white flannel shirt, and a painter's jacket instead of a dress-suit."

THE STOCKING SUPPORTER.

THE use of this convenient little article of dress is much more common than in former years, but there are many persons who still adhere to the custom of wearing elastic bands to keep the hose in place. Doubtless many

do not realize the injury likely to result from such a practice, or they would long ago have abandoned it. Whether elastic or inelastic, the effect is essentially the same. Tight bands of any description worn to support the stocking, interfere with the circulation of the blood in the lower limbs, and often produce varicose veins. Cold feet and headache are the ordinary result of their use. School-girls and little



children very frequently suffer from their injurious effects. Ladies and children ought always to have the stockings, as well as all other garments, supported from the shoulders, either by means of a stocking supporter attached to a waist or by the use of such an one as is shown in the accompanying cut.

Corsets and Consumption.—According to the United States Census Report for 1880, five females die of consumption for every four males. In other words, the number of deaths from consumption among women and girls is one-fourth greater than among men and boys. Women are, as a rule, less exposed than men to the inclemency of the weather and sudden changes of temperature, by which pulmonary ailments are often produced. Is it not fair to conclude that the enforced disuse of a considerable portion of the lungs by the wearing of corsets and other restraining articles of dress is the real cause of their excessive mortality from consumption?



THE HAPPY FIRESIDE

DEVOTED TO TEMPERANCE MENTAL AND MORAL CULTURE
 HOME CULTURE, NATURAL HISTORY AND
 OTHER INTERESTING TOPICS
 CONDUCTED BY MRS. E. E. KELLOGG A.M.

IT PAYS.

It pays to wear a smiling face,
 And laugh our troubles down;
 For all our little trials wait
 Our laughter or our frown.
 Beneath the magic of a smile
 Our doubts will fade away,
 As melts the frost in early spring
 Beneath the sunny ray.
 It pays to make a worthy cause,
 By helping it, our own;
 To give the current of our lives
 A true and noble tone.
 It pays to comfort heavy hearts,
 Oppressed by dull despair,
 And leave in sorrow-darkened lives
 One gleam of brightness there.
 It pays to give a helping hand
 To eager, earnest youth;
 To note with all their waywardness,
 Their courage and their truth;
 To strive with sympathy and love,
 Their confidence to win;
 It pays to open wide the heart,
 And let the sunshine in.—*Selected.*

—Some readers are like the hour-glass—
 their reading is as the sand. It runs in, and
 it runs out, but leaves not a vestige behind.
 Some are like a sponge, which imbibes every-
 thing, and returns it in the same state, only a
 little dirtier; some like a jelly-bag, which al-
 lows all that is pure to pass away, and retains
 only the refuse and dregs. The fourth class
 may be compared to the slave of Golconda,
 who, casting away all that is worthless, pre-
 serves only the pure gems.—*Coleridge.*

WHICH?

BY MINNIE MARSH.

THE wind was out for a frolic. It danced
 lightly over the mud and slush of the city
 streets, determined to act the scavenger in
 this one night no more than it could possibly
 help. It took a rollicking delight in carrying
 away hats, and blowing inside out the um-
 brellas of the hurrying people. It rose to the
 buildings, and made the signs creak and bang
 again, as it rushed on its way out of the great
 city, gaining force with every rod. It tore
 among the empty freight cars standing idly
 in the yards, and came at last to a long level
 of curveless railroad track. Now for a rush!
 No horrid odors and filthy moisture to be car-
 ried from here!

As it paused to gain force, a suburban train
 shot past. The wind started after it, and sang
 through the ventilators to the home-bound
 men within. They frowned through the win-
 dows at the tossing willows and bending oaks
 that flew past in huddling clusters, and turned
 again with shivers to their evening papers and
 the temporary comfort within. "A dreadful
 night!"

What cared the wind for their opinion?
 Wasn't it doing with all its strength what it
 could to make the world a healthful place for
 those very grumblers? It good naturedly
 pushed against the back of the rear coach,
 and tried to coax on the snorting engine.
 'Twas no use. That train would not be has-
 tened. So, with a sigh for those who must be

so slow, it swept on, making the wires moan and seethe in its hurry.

As it sped round the houses grouped on the bleak prairie, it came to one pretty little cottage with only a flickering light at its front windows. Surely, having but little light, they needed some air. So round and round the house it went, vainly seeking a place to enter. All was tight. How did people expect it could do its duty by them, if they shut it out so completely?

At length an angry gust against the front door pushed away the mat, and in swept the wind with a joyful whistle. Whew! how warm! It crossed the hall, and crept softly along the floor to the fire on the grate. One moment it stopped about two little figures at play on the rug, then up the chimney with a roar, making the flames flash broadly up with it.

Baby gave a weak little sneeze as the draught struck him, rubbed his pug nose with the back of his little hand, sneezed again, and went on with his play.

The echo of those familiar sounds brought mamma quickly to the door. Had Fred taken another cold? There he sat, beaming on his faithful black-and-tan, and feeding him his own precious sugar pills, one by one.

Mamma's eyes flew open. This was a great sacrifice on baby's part. Not that he loved Tip less, but pills more. He really doted on those little sweets that she had dealt out in such small quantities so regularly all winter.

Well, doggie liked them too. He sat there uttering little short barks, his head to one side, his right ear knowingly up, and his eyes on every pill, which he would eagerly swallow before it really came to him; and like "Oliver," beg for "more."

The smile died on mamma's face as she went thoughtfully back to the dining-room. She wondered if Fred had not found the best use for that medicine after all. She had literally fed him on it all winter; and in spite of it, one cold had trodden upon another's heels, so fast they followed; and now her boy was only a relic of the hearty babe he was last summer.

What a disappointment the year had been! It seemed an age back when she had grown so tired of the confinement of boarding-house life, and longed so for a home, no matter how tiny, just so it was her own. Was it only last spring? What fun they had house-hunting! And they had chosen this; it was so cute. The little rooms, with their pretty grates and large windows, had promised such cozy freedom. What if the yard was small? It was decidedly better than none, and seemed the model of a safe, healthful play-room for baby's coming summers. But the straw that had turned the scale in favor of this, above all other houses, was such a gem of a cellar! Under the whole house it was. The front part, with its soft ground floor, proved, as she had expected, a splendid place for old barrels, boxes, invalid chairs, discarded toys, and wash-tubs,—and rats. True, Nellie had not counted much on the rats, they were entirely an "extra." Under the kitchen was a true cellar, with brick walls and floor, swinging shelves, and cupboards.

Every one knows how much cheaper it is to buy provisions at wholesale; and here was room to store more than they could use during a whole winter. And it was just the place to keep them from Jack Frost, who seemed to inexperienced Nell, to be the enemy of housewives. And so, when that cellar was their own, the cell-like windows were tightly shut, and all made close and warm to guard those precious stores that Charlie—bountiful fellow!—bought at wholesale, indeed.

And now, in March, had the experiment proved a failure?—N—o! The home was a little haven, with its simple furniture and little nothings she knew so well how to make the most of. Nothing had frozen in the precious cellar. No, oh no! she certainly would not board again. But—

The clock struck seven as she went for another peep at Fred. She was just in time to see him flying toward the ceiling, and safely caught in a pair of rough-sleeved arms, and to hear a hearty—"Ha, ha! Trying to kill the dog, now, are you? You young rascal!" Baby smiled as he was playfully shaken and

rolled in mid air, but he was too miserably sick to enjoy the romp. He cuddled down against the rough collar, and stroked the big face with his little hot hand. Papa walked about, petting him until he slept. Then tucking him snugly under an afghan, he went in search of mamma.

The two were soon seated with the dainty supper table between them, trying to believe it was not dull without baby.

Charlie rattled on gaily about the weather, his business, anything to make Nellie forget her trouble, and look more like the girl he had married a few years ago. He made her laugh merrily over his description of the way he scampered about State Street after his vanishing umbrella, and how, in spite of his hurry, he just missed the early train.

"Oh, by the way, do you remember that delicate little girl of Robinson's? Well, she was at the station; she missed the dummy, too. She has grown to be a fine, hearty-looking woman. 'How did it happen?'—Well, she said they took her from school soon after we lost track of her,—she was about thirteen then,—and sent her into the country. Some crank on hygiene was out there, and he persuaded her to leave off all her toggery, and dress comfortably; had her staying out-of-doors working at something most of the time; coaxed her to eat plain food and plenty of milk,—the genuine article, you know. He fixed up a shower-bath for her; and told her so many stories about the bathing establishments of the old Romans, that she liked to use it.

"Of course, when she went home, her mother tried to have her go back into school. She wanted her to rush on to college, thinking that such a fine brain as Clara's ought not to be allowed to lie idle. She'd surely make something of her powers, if she would only persevere in the right direction. But Clara insisted that her 'fine brain' did not work as true as it used to; and she believed it was because she was sick so much. 'T was her theory that the right direction was to get well, then she would soon be able to make up any time lost in that way. And she has done it.

She says she's never sick. She is running her father's business since his death, and makes more at it than he did. Does some fair literary work besides, I believe."

And he was still talking of Clara's wonderful recovery as they left the table.

They found Fred sleeping uneasily, and little rest did they get that night. In the morning their worst fears were realized. Good old Dr. Knox—who had always been Nellie's physician and her mother's before her—came, and gently called it "diphtheria."

A very, very, sick baby was their little sunshine. Mamma cooled the hot face, and lovingly held the baby hands that clung to her through all. Must her darling die? She bowed her face down to his, her heart to Him who gave him, and moaned a mighty prayer that he might yet be spared to her.

The doctor patrolled the pleasant rooms, with hands clasped firmly behind him, and quiet, thoughtful steps. Charlie stood at the window, anxiously awaiting the verdict.

"Have you a cellar?" came suddenly in Charlie's astonished ears, as the doctor halted before him.

"Yes, indeed; Nell's favorite song used to be, 'What is home without a cellar?' It is the pride of her life, next to the boy."

"He took the candle to light the doctor through that favorite spot, chatting all the while about the advantages of having things convenient.

"Humph!" came abruptly from the M. D. as he slipped on the last step, and stood peering into the dark, disdainfully sniffing the thick air.

"It is rather damp; be careful, there's a pool; do n't slip again. This candle seemed good enough up in the sunshine, but it does n't give much light here in the dark," apologized Charlie.

The old gentleman kept on poking his cane into every box and bin, and his nose into every corner. Each movement was more energetic than the one before it.

"It is not a very inviting place to come into," admitted the host; "but it's a splendid place to keep things."

"Keep things!" thundered the doctor, "I should say so! Where else have you kept your boy's colds and diphtheria, and your wife's pale cheeks? Right here where you'd have them handy, to be sure. You had only to open the door, and they'd obligingly come out by themselves, right into your living-rooms. Why, man, you have diseases enough here to send the entire community to eternity, if you only give them time; and they won't take much time either," he growled, as he kicked aside a barrel of those "provisions," and stepped toward the window.

Charlie's mouth and eyes gradually closed to near their natural size, after the doctor's cane had smashed through the dingy glass. After thus admitting all the air he could, the somewhat subsided physician turned to his dumbfounded host, and advised him to "have that place disinfected like a small-pox hospital, and waste no time about it, either."

Charlie gave a hostile look toward those stores, of which he'd been so proud.

Any way, it was fine to know the cause of all their sickness. He felt brighter already; and so did the candle. It burned clearly as he mounted the steps, seeming to be a shining example of what his loved ones would be when they, too, could get away from that cellar.

It was hard for Nellie to believe that her troubles had come from her precious cellar. But when the doctor had explained it beyond a reasonable doubt, and told her she must choose between her two pets, she was not long in deciding in favor of the baby.

Well, when Fred grew better, and the cellar had been cleaned, and scoured, and cemented, both within and without, Charlie proudly took them down to view that now airy retreat. Standing in the cool breeze between the open windows, he playfully vowed on baby's bobbing head, that no damp should invade his future stores, and that Zephyrus might have full liberty to carry away every germ of disease he could find.

—Our duty is to be useful, not according to our desires but according to our powers.

FAMOUS WOMEN INTERESTED IN HYGIENE AND TEMPERANCE.

Mrs. Mary A. Livermore.

(See *Frontispiece.*)

To many, the name at the head of this sketch will suggest scenes, during the late Rebellion, of dreary hospitals or the bloody fields of carnage after the battle, with the noble women of the Sanitary Commission, of whom Mrs. Livermore was among the foremost, providing supplies and comforts for the sick and wounded, and with calm and cheerful courage and womanly sympathy ministering to their various needs. Great emergencies are the means of bringing forth great characters. Although Mrs. Livermore had then lived forty years, and as teacher, editor, the wife of a minister, and the mother of three lovely children, had been doing a noble life-work, it was not until, with heart deeply stirred by the needs of the men who were fighting and dying for their country, she espoused their cause, that her rare and womanly powers found expression in words and deeds that have endeared her forever to the hearts of the American people.

When the need of funds to carry forward the work of the Sanitary Commission became imminent, Mrs. Livermore went among the people soliciting money and supplies. Until this time she had not been before the world as a public speaker. The incidents connected with her first address before a mixed audience are thus related by Mrs. Bolton, in her "Girls Who Became Famous:"—

"One night it was arranged that Mrs. Livermore should speak in Dubuque, Iowa, so that the people of that State might hear directly from their soldiers at the front. When she arrived, instead of finding a few women, as she had expected, she found a large church packed with both men and women, eager to listen. The governor of the State and other officials were present. She had never spoken to a mixed assembly. Her conservative training made her shrink from it, and, unfortunately, made her feel incapable of doing it. 'I

cannot speak,' she said to the women who had asked her to come.

"Disappointed and disheartened, they at last arranged with a prominent Statesman to jot down the facts from her lips; and then, as best he could, tell to the audience the experiences of the woman who had been on battle-fields, amid the wounded and dying. Just as they were about to go upon the platform, the gentleman said, 'Mrs. Livermore, I have heard you say at the front, that you would give your all for the soldiers. Now is the time to give your voice, if you wish to do good.' She meditated a moment, and then said, 'I will try.'

"When she arose to speak, the sea of faces before her seemed blurred, and she could not even hear her own voice; but as she went on, the needs of the soldiers crowding upon her mind, she forgot all fear, and for two hours held the audience spell-bound."

Eight thousand dollars were pledged that evening, and plans were perfected by which sixty thousand more were added. Afterwards Mrs. Livermore's eloquent voice was heard in hundreds of towns, and hundreds of thousands of the millions of dollars used during the war for the succor of the suffering soldiers, were secured through her efficient efforts. It was she who suggested and planned the great North Western Sanitary Fair, the first of a series of similar undertakings, which united the cities of the North in one common bond of grand and wide-spread charity.

Her head and hands were never idle, and during the entire war, not a week passed that she did not publish somewhere something of interest and value. "Often," relates Mrs. Hodge, who was her associate in work, "when we were at the front after a battle, and I had gone to my bed in utter exhaustion after a day's nursing, I have heard the pen of that indomitable woman scratching away in the night, and even until dawn. Articles for her husband's paper, appeals to the people for supplies, letters to the anxious friends of wounded soldiers,—always something interesting or needful."

When the war was ended, Mrs. Livermore

entered the lecture field, and has for years held the foremost place among women as a public speaker. Her addresses are most eloquent pleas for higher physical education, and such other moral and social reforms as will ennoble and elevate humanity.

She is an earnest advocate of the principles of health and hygiene. In her admirable book, "What Shall We Do with Our Daughters?" she says: "Good health is a great prerequisite of successful or happy living. Very much of the peevishness, irritability, capriciousness, and impatience seen in men and women has its root in bodily illness. The very morals suffer from disease of the body. Therefore, I would give to our daughters a good physical education. If she be so unfortunate as to have a sickly body at birth, learn what is the cause of her feebleness, and then how to remedy it—by wise hygienic living. Correct living and intelligent physical training will eliminate many of the tendencies to ill-health which we bring into the world with us."

Mrs. Livermore has for years been a recognized leader in the temperance reform, and a warm advocate of woman's suffrage; and there are few women whose personal influence has done so much in advancing the interests of these reforms as hers.

E. E. K.

A SERPENT AMONG THE BOOKS.

ONE day a gentleman in India went into his library, and took down a book from the shelves. As he did so, he felt a slight pain in his finger, like the prick of a pin. He thought a pin had been stuck in the corner of the book by some careless person. But soon his finger began to swell, then his arm, and then his whole body, and in a few days he died. It was not a pin among the books, but a small and deadly serpent. There are many serpents among the books now-a-days; they nestle in the foliage of some of our most fascinating literature; they coil around the flowers whose perfume intoxicates the senses. People read, and are charmed by the plot of the story, by the skill with which the char-

acters are sculptured or grouped, by the gorgeousness of the word-painting; and hardly feel the pin-prick of the evil that is insinuated. But it stings and poisons. When the record of ruined souls is made up, on what multitudes will be inscribed, "Poisoned by serpents among the books." Let us watch against the serpent, and read only that which is instructive and profitable.—*Sel.*

TREE DWELLINGS.

A STUDY of the various habitations which do service as the home of man, is at once most curious and interesting. We find them made of almost every conceivable material,—of snow and ice, of mud and sod, of the skins of animals, and of the leaves, bark, and twigs of trees, as well as of the many other materials commonly considered suitable for building purposes. Quite as varied are the sites selected for dwellings; the caves of the earth, the cliffs of the rocks, the almost inaccessible mountain-side, the low-land swamps, and even lakes sometimes form the site of a pile village.

In thinly-populated districts of Southern and Central Africa, where wild beasts abound, the natives dwell in huts which resemble gigantic bee-hives. These huts are firmly fixed among the large branches of the baobab, an immense tree,—sometimes more than one hundred feet in circumference,—which rises like a dwarf tower from twenty to thirty feet,

and then throws out branches like a miniature forest. One such tree furnishes ample room for several houses, and it is said that thirty families have been found to occupy a single tree. In many instances, natives who till the soil at any great distance from their tribe,



A Tree Dwelling in New Guinea.

build these huts for nightly accommodation.

The natives of New Guinea are said to build their houses in high trees, sometimes upon the narrowest and most inaccessible ridges of the mountains. To these dwellings bamboo ladders are the only means of access. To give these ladders strength, and to render the ascent and descent easier, vines are cultivated to clamber up them.

The Waraus, a tribe of Indians, living upon

the banks of the Orinoco, also sometimes build their huts in the tree-tops. The Indian searches through the forest until he finds a tree which suits his fancy, then proceeds to fashion a hut among its branches. When the annual floods come, he uses it as a raft, and floats away to some locality which pleases him better.

Tree houses certainly offer some advantages from a sanitary point of view. The dwellers in them are sure of an abundance of good air. "Swinging in the tree-tops," they may enjoy an atmosphere unpolluted by ground air, a damp basement, or an unclean cellar.

E. E. K.

"Is thy cruse of comfort failing ?

Rise and share it with another,
And through all the years of famine
It shall serve thee and thy brother ;
Love divine shall fill thy store-house,
Or thy handful still renew ;
Scanty fare for one will offer.
Make a royal feast for two."

—The highest position a man can occupy, is that for which he is best fitted, and in which he performs cheerfully the best work ; the lowest is that for which he is not adapted, and in which he is content to receive personal benefit for inferior performance. Society has not fully learned, in the matter of work, to pay honor always where honor is due ; to distinguish gold from dross, the true from the false, the noble from the mean. When it does, the energy now employed in pushing and striving for coveted positions will be turned into the endeavor to make the work that naturally falls to each one, as perfect of its kind and for its purpose as possible.

—Taking a cigar out of his mouth, the minister said to one of his parishioners who was fond of sleeping in sermon-time, "There is no sleeping-car on the road to heaven." "And no smoking-car, either, I reckon," said the man in reply.

—Some people are like parrots, who chatter nonsense all their lives, with only now and then a fragment of borrowed sense accidentally mixed in.

Temperance Notes.

—The obscure Arab who invented alcoholic stimulant, died more than nine hundred years ago, but his "spirit" still lives.

—It is estimated that for every missionary who goes to Africa, seventy-five thousand gallons of liquor are sent to that country.

—It is stated that in the city of Chicago there is one baker for every four hundred and seventy families, one grocer for every eighty-nine families, and one liquor saloon for every thirty-five families.

—It is said that enough beer is yearly consumed in Chicago to give seven hundred and twenty glasses to every man, woman, and child in the city, or thirty-four dollars and seventy cents' worth for each person.

—Mrs. Cleveland still continues to present the praiseworthy example of personal total abstinence, as is shown from the fact that at a recent State dinner, although there were six wines for the President and his guests, she ordered only Apollinaris water.

—During the last six years the population of Chicago has increased twenty-five per cent. During the same period the consumption of beer in that city has increased ninety-seven per cent, and arrests have increased thirty-eight per cent.

—The London *Christian*, commenting upon "Ireland's Drink Bill," says : "It is rather a startling fact that the poorest country in the world should be spending annually eleven million pounds upon an absolutely unproductive luxury."

—According to Dr. B. W. Richardson, if all the public houses in the United Kingdom were grouped together, they would make a city of one hundred and eighty thousand houses, with nine hundred thousand inhabitants, which, with attendants and frequenters, would equal London in size.

—A Detroit correspondent of the *Temperance Advocate* says : "During the last seventeen months an unusually large number of young men have been sent to the insane asylum in this State. It happens that nearly all of them were large consumers of cigarettes, and this fact has given rise to the report that cigarette-smoking was the cause of their insanity. In several cases this is positively known to be the case, and there is consequently considerable alarm felt by parents for their cigarette-consuming sons."

Popular Science.

—A process has been recently discovered by which sugar can be refined by electricity.

—The London Road Car Company are trying the experiment of lighting their omnibuses and other vehicles with incandescent electric lights.

—An extinct volcano has recently been discovered in Connecticut. The volcanic remains are located near Mt. Lamentation, the highest peak in the Meriden Hills.

—An eastern inventor has perfected an electrical type-writer, by means of which a message may be transmitted over a telegraph wire to almost any distance, and printed at the other end.

—A French inventor has devised a method of making a substitute for leather, with gutta-percha and sulphur mixed with raw cotton and antimony. This artificial leather is used especially for making heels and soles of shoes.

—Bricks made from a composition of cork, sand, and lime are being used in Germany for the construction of light partition walls. These are said to exclude sound better than ordinary brick, while they are also light, and good non-conductors of heat.

—Latest investigations respecting the climbing of flies, which has been a matter of much curious study on the part of scientists, seem to show conclusively that the fly adheres to a perpendicular smooth surface by means of an adhesive substance which is secreted in its feet.

—Captain Zboinski, who has for some time been doing duty in the Congo State, claims to have found evidence that Africa, as well as Europe, has had its stone age. The stone implements which were discovered are of the same nature as those found elsewhere, consisting of scraping and piercing instruments.

—Electric heat indicators, consisting of thermometers incased and protected by iron tubes, provided with platinum wires, and connected to a system of electric bells and indicators on deck, are the latest invention for preventing spontaneous combustion among ship cargoes. Should any undue heat arise in any part of the cargo, the mercury in the thermometers will rise, make contact with the platinum wire, and give an instantaneous alarm on deck, indicating at the same time the exact spot where the heat exists.

—Nitro-glycerine shells are now made in all parts of the world. In the use of nitro-glycerine and dynamite shells various other explosives are also used. As a trial a ship was demolished by a single shell. The experiment was to show that the strongest iron-clads can be blown to atoms in a few seconds by this new weapon of destruction.

A Leather Worm.—Prof. Riley, the eminent entomologist, has discovered an insect which preys upon boots and shoes. The pest can be destroyed by a vapor of bisulphide of carbon.

A Natural Barometer.—An English journal asserts that a spider's web is a simple and reliable barometer. It is claimed that the filaments by which the web is suspended shorten when rain or wind approaches, and lengthen when it is to be fine weather. If a spider keeps at work during a rain, it is an evidence that fair weather is near at hand.

Cave of Ice.—The coast cities of California are supplied with ice from an ice cave on the White Salmon, a branch of the Columbia River. This cave extends several miles under the base of Mt. Adams, the melting snow of which, trickling down from the roof of the cave, freezes, forming large columns which are cut into blocks, and shipped all along the coast.

A Big Explosion Predicted.—A newspaper writer thinks there is great danger in gas wells. He has raked up an item in Chinese history, from which it appears that away back in the days when the great wall was building, or before, gas wells were discovered in China. (China has always come out ahead in every invention or discovery made known up to the present date.) It seems that the big wells got the start of the little wells, and set them working backward, so that air was sucked down into the subterranean magazines of gas. When the air reached the proper proportions, the whole thing went off like a gasoline stove with a leaky tank. The result was the destruction of the inhabitants of a large district, and the making of a great hole in the ground now occupied by Lake Foo Chang.

The writer referred to, goes on to say: "Should a similar explosion occur, there would be such an upheaval as would dwarf the most terrible earthquakes ever known. The country along the gas belt from Toledo through Ohio, Indiana, and Kentucky, would be ripped up to the depth of 1200 to 1500 feet, and flopped over like a pancake, leaving a chasm through which the waters of Lake Erie will come howling down, filling the Ohio and Mississippi Valleys, and blotting them out forever. Some prompt action should be taken at once to prevent this catastrophe."



SOCIAL PURITY.

"Blessed are the Pure in Heart."

SOCIAL LEPERS.

LAST summer the fashionable circles of the East made an exhibition of the depravity of modern social morals in their treatment of the Duke of Marlborough, a man who in England has so long and so frequently figured in scandal and divorce suits that his name has come to be a synonym for every word that means moral nastiness. Dr. Talmage, who has a very plain way of putting things, thus appropriately criticises this too common but most reprehensible conduct on the part of those who move in the highest circles of fashionable society:—

"Before things are right in this world, genteel villains are to be expurgated. Instead of being welcomed into respectable society because of the stars, garters, medals, and estates they represent, they ought to be fumigated two or three years before they are allowed, without peril to themselves, to put their hands on the door knob of a moral house. The time must come when a masculine estray will be as repugnant to good society, as a feminine estray, and no coat of arms or family emblazoning can pass a Lothario unchallenged among the sanctities of home life. By what law of God or common sense is an Absalom better than a Delilah? a Don Juan better than a Messalina? The brush that paints one black must paint the other exactly so.

"But what a spectacle it was when, last summer, much of watering-place society went wild with enthusiasm over an unclean foreign dignitary whose name in both hemispheres is a synonym for profligacy; and princesses of

American society from all parts of the land had him ride in their carriages, and sit at their tables, though they knew him to be a portable lazaret, a charnel house of putrefaction, his breath a typhoid, his foot that of a satyr, and his touch death! Here is an evil which men cannot stop, but women may.

"Keep all such out of your parlors; have no recognition for them in the streets, and no more think of allying your life and destiny with theirs than gales from Araby would consent to pass the honey-moon with an Egyptian plague."

THE GREAT OBSTACLE TO THE REFORM OF "WANDERERS."

THE most serious obstacle in the way of reclaiming many of those who have wandered from the path of virtue is the uncharitable spirit with which these returning wanderers are met at every step of their advance toward a better life. We would not write a word to lessen the contempt with which decent men and women look upon those who give themselves up to lives of sin. This is one of the most valuable barriers against vice. But why should the sin of impurity be made unpardonable in the social code, when it is placed in the moral code along-side of other sins, which in the eyes of an all-wise God, are doubtless equally heinous, and all of which are pardonable on the one condition of genuine repentance?

Christ set an example that few are willing to follow; and the consequence of this unwillingness to imitate the Master, to learn the lesson which he evidently designed by his

action to teach, is that when a woman has once been led by want, or violence, or artful snares, or waywardness, to enter a life of sin, there seems no way of escape for her. She may repent ever so bitterly, she may shed tears of remorse, and, through the awakening of her conscience, may abhor the life she has led; but every door seems closed and securely barred against her.

The following eloquent words from the pen of a clergyman who has done good service in opening the way for these returning wanderers, must be recognized by all who have thought upon this subject, as a truthful portrayal of a state of society which needs reforming before much headway can be made in the reformation of those social outcasts whose existence is at once a reproach and a menace to every civilized community:—

“Suppose one of these wanderers should knock at your door; would you admit her? Suppose you knew where she came from; would you ask her to sit down at your dining-table? Would you ask her to become the governess of your children? Would you introduce her among your acquaintances? Would you take the responsibility of pulling on the outside of the gate of hell, while she pulled on the inside of that gate, trying to get out?”

“You write beautiful poetry over her sorrows, and weep over her misfortunes, but to give her practical help you never will. There is not one person out of a thousand that will; there is not one out of five thousand who has come so near the heart of the Lord Jesus as to dare to help one of these fallen souls.

“But you say, ‘Are there no ways by which the wanderer may escape?’—O, yes; three or four. One way is the sewing-girl’s garret, dingy, cold, hunger-blasted.

“But you say, ‘Is there no other way for her to escape?’—O, yes. Another way is the street that leads to the East River, at midnight, and to the end of the city dock, where the moon shining down on the water, makes it look so smooth she wonders if it is deed enough. It is. No boatman is near enough to hear the plunge, no watchman near

enough to pick her out before she sinks the third time.

“‘No other way?’—Yes. By the curve of the Hudson River Railroad, at the point where the engineer of the lightning express train cannot see a hundred yards ahead to the form that lies across the track. He may whistle ‘down brakes,’ but not soon enough to disappoint the one who seeks her death.

“But you say, ‘Is n’t God good? and won’t he forgive?’—Yes; but man will not, woman will not. The church of God says it will, but it will not.”

DECOLLETE DRESS.

It is a good omen to see that even the newspapers are beginning warfare against the decollete style of dress. A writer in the *New York World* says upon this subject: “The question is, Have the intelligent, substantial, influential women the moral courage to combat the aggressiveness of a scandalous fashion, which had its greatest encouragement and saw its most extreme length in France at a time when virtue was but little respected, and when almost every sound principle of society and government was set at naught? The decollete costume of to-day is quite as extreme as in the days of Louis XVI. or, a little later, under the Directory. In truth, it is difficult to see how it could ever have been or how it ever can be more extreme than it is now, and be a costume at all. It is the nearest to nothing of anything worn this side of Eve, when she hastily improvised a scanty raiment of fig leaves. I am sure, if the many perfectly innocent and good women who wear decollete dresses would but stop a moment and consider the origin and history of that style of attire and the opportunity it furnishes a large part of the world who are always seeking for excuses for their own wickedness, as well as for grounds of disrespectful comment against whatever is sacred or pure, they could but blush at the hazard they are running, and at their failure to be truly loyal to their own sex.

“If men are to protect good women, good women ought to set the example by making an endeavor to protect themselves. How any

man, however strong and chivalrous, is to protect a woman from a thousand curious eyes, and all manner of jest and innuendo by all manner of people, when she goes into a miscellaneous assemblage dressed as scores of women are, on every occasion of this kind, I confess I cannot understand; and that, too, after some experience and some endeavor to look at the better side of things, how a modest woman can screw herself up to the point of making herself the inevitable subject of this sort of remark. What is conspicuous is not necessarily wrong or harmful. A woman's hair may be so red as to be conspicuous and as to excite comment; and yet I do not imagine the reddest-haired woman who ever lived was so red-haired that it did her or anybody else any harm because something was said about it. But there is a difference between conspicuous red hair and conspicuous bare shoulders. Let us save *something* from comment and the common gaze.

"Suppose we go to the other end of the subject, and take up the ballet girl, who may expose a good deal of her legs, but who always has them incased in tights. Many good mothers would no more allow their daughters to go to the theater and see these same ballet girls than they would allow them to parade in the street on the Fourth of July. And yet they will attire their daughters in the most décolleté of décolleté dresses, and attire themselves likewise, and go off to the opera or to a ball, where there will be as many remarks made about them as are made about the ballet girls. I heard a very intelligent and well-bred little girl of twelve say to her mother the other evening as she came in from the opera: 'Oh, mamma, I saw a lady in one of the boxes dressed real indecent.' She had simply been a little shocked by an example of the décolleté, and had not been educated up to the point of seeing it and saying nothing about it. She had the same sort of a shock that she would have felt at the sight of a well-equipped ballet girl. This proves there is no distinction made by the purely innocent mind, which is the mind that makes the standard by which every other is to be judged.

"The décolleté dress, as we see it nine times out of ten, is a shame, a disgrace, and an outrage. It ought not to be tolerated by respectable women for one moment. They ought to rebel against it with one heart and voice, and relegate it to where it consistently belongs. Let those wear it who invented it, and whose motives in wearing it are never mistaken."

TELL YOUR MOTHER.

I WONDER how many girls tell their mothers everything! Not those "young ladies" who, going to and from school, smile, bow, and exchange notes and *carte de visites* with young men, who make fun of them and their pictures, speaking in a way that would make their cheeks burn with shame if they heard it. All this, most incredulous and romantic young ladies, they will do, although they gaze at your fresh, young faces admiringly, and send or give you charming verses or bouquets. No matter what other girls may do, do n't you do it. School-girl flirtation may end disastrously, as many a foolish and wretched young girl can tell you. Your yearning for some one to love is a great need of a woman's heart. But there is a time for everything. Do not let the bloom and freshness of your heart be brushed off in silly flirtation. And above all, tell your mother everything. "Fun" in your dictionary would be indiscretion in hers. It would do no harm to look and see. Never be ashamed to tell her, who should be your best friend and confident, all you think and feel. It is strange that so many young girls will tell every person before "mother" that which it is most important she should know. It is very sad that indifferent persons should know more about her fair young daughter than she herself. Have no secrets that you would not be willing to trust to your mother. She is your friend, and is ever devoted to your honor and interest. Tell her all.—*Fanny Fern.*

—An infamous fellow has recently been arrested in New York, who, under the guise of an "astrologer," had for a long time been engaged in decoying girls to Panama for immoral purposes.

Slavery in Wisconsin.—Exposures of a system of human chantage worse than any form of African slavery yet discovered, is reported as existing in the lumber woods of Wisconsin, in the vicinity of Hurley. Young women are enticed from the cities, under contracts to work in families or in factories, or to teach school, and are imprisoned in pens with high board fences, and guarded by huge fierce dogs, to prevent their escape. In these dens they are subjected to the grossest brutalities. How long will the citizens of Wisconsin allow this iniquity to continue? Is there not in that great State a single citizen of sufficient spirit to compel delinquent officials to do their duty?

Flirts.—The following portrayal by an eminent pulpit orator, of the wickedness of flirtation, is none too severe in its denunciations:—

“It seems to me that the world ought to cast out from business credits and from good neighborhoods those who boast of the number of hearts they have won, as the Indian boasts of the number of scalps he has taken. If a man will lie to a woman, and if a woman will lie to a man, about so important a matter as that of a life-time’s welfare, they will lie about a bill of goods, and lie about finances, and lie about anything. Society to-day is brimful of gallants, and man-milliners, and carpet knights, and coquettes, and those most God-forsaken of all wretches—flirts. And they go about in drawing-rooms and in the parlors of watering places, simpering, and bowing, and scraping, and whispering, and then return to the club-rooms, if they be men, or to their special gatherings, if they be women, to chatter and gigue over what was said to them in confidence. Condign punishment is apt to come upon them, and they get paid in their own coin. I could point you to a score whom society has let drop very hard, in return for their base traffic in human hearts.

“As to such men, they walk around in their celibacy, after their hair is streaked with gray, pretending they are naturally short-sighted, when their eyes are so old in sin that they need the spectacles of a septuagenarian, an

eyeglass about No. 8; they think they are bewitching in their stride and overpowering in their glances, although they are simply laughing-stocks for all mankind. And if these base dealers in human hearts be females, they are left after a while severely alone, striving in a very desperation of agony of cosmetics to get back to the attractiveness they had when they used to brag how many masculine affections they had slaughtered. Forsaken of God and of honest men and good women, are sure to be all such masculine and feminine triflers with human affections.”

Social-Purity Work in Shanghai.—We are in receipt of a little pamphlet entitled a “Statement and an Appeal,” published by the White Shield Union, of Shanghai, China, which gives a history of license and the lock hospital systems, which have been in operation in that city for the last ten years; and it makes such a showing of the operations of this infamous system as must appeal strongly to the good sense of the Chinese authorities, in the direction of its abolition. The facts brought out in this little pamphlet are of too startling a character to be given here, and certainly reflect great dishonor upon the English authorities, who have allowed and encouraged the state of things which is depicted. We trust the effort will be successful in securing the repeal of the laws by which infamy is made respectable, and the unwary invited to sin with the promise that the laws of God and nature may be transgressed without any penalty.

—The police of Bay City have recently created a sensation by the exposure of the fact that a number of girls, ranging in age from fourteen to sixteen years, and connected with the best families of the city, have for some time been in the habit of spending the day in places of evil repute instead of at school, where their parents supposed them to be. The evil influences abroad in society at the present day are such that parents need to look carefully after the whereabouts of their daughters, as well as of their sons.

GOOD HEALTH
 J. H. KELLOGG, M. D. EDITOR.
 BATTLE CREEK, MICHIGAN. MARCH, 1888.

HEALTH AND MORALS.

It is asserted that many a poor fellow has swung from the gallows simply because the judge happened to have a fit of indigestion. Whether this be true or not, any one who has visited a penitentiary must have been convinced that many a man has been sent to State-prison who ought to have been sent to the hospital. Old Dr. Abernethy used to say, "Every sick man is a rascal." We think the old doctor was rather hard on the sick man; nevertheless, an extended experience with sick people has convinced us that, on the whole, it is easier for a well man to be good, or decent, or pious, than for a sick man. Good health does not always go with good morals, but good morals are certainly more apt to be associated with good health than the contrary.

A vast amount of harm grows out of the notion, which has been extensively cultivated by a certain species of Sunday-school books, that a person must be sickly to be good. Some years ago the writer saw in a European picture gallery a painting of the Madona by an old artist, in which the saint was represented with pale and sunken cheeks and hollow eyes, looking as though the artist had made a picture from life, of a woe-begone dyspeptic. Doubtless this was his ideal of the highest type of womanly piety. There is

a great amount of this sickly saintliness to be found in the religious story books of the day. Almost all of the good little boys are cripples, or hunchbacks, or consumptive; and the good girls are homely, or cross-eyed, or have red hair, or are deformed in some way. The good men become pious on their death-beds, after having spent their lives in dissipation; and the pious mothers are represented after the style of the Madona of the picture gallery.

All this is mockery, unreal, and depraving in its tendency. It inculcates in the boy's mind the idea that to be angelic is to be sort of pale and sickly, and to be good and pious is the next thing to being angelic. Boys ought to be taught that it is a good and pious thing to be healthy, to have stalwart forms and brawny muscles. There is no necessary relation between hard muscles and hard heartedness, and there is a very common association between flabby muscles, weak nerves, weak wills, and wickedness. A man who has muscles strong enough to cope with any man of his size, is equipped with steady nerves, and a stronger will, and hence, is better prepared to resist the devil in the guise of morbid appetites and sordid passions.

The total depravity which we often hear talked about is, half the time at least, nothing more nor less than total indigestion. So good a man as Calvin signed the paper which

sent Servetus to the stake for heresy. We never could comprehend so inconsistent an action until we learned that just after this atrocious action the great theologian wrote in his diary that he had for several weeks been tormented by a dyspeptic stomach.

For parents who find their children still ungovernable, notwithstanding the frequent use of the rod, we recommend the advice of a wise writer, that "cow's milk is a much better means of curing a boy's waywardness than cow's hide." Many parents who give their children an abundance of wise counsel and religious training, send their boys to the saloon and the brothel by the influence of morbid and inflamed appetites, engendered by the irritating and passion-stimulating foods with which they feed them at the dinner table. Somebody has well said, "There is religion in a loaf of bread" (providing, of course, that the loaf is a good one). It is equally true that there is infamy and perdition in mince pies, spiced pickles, ginger snaps, and pepper-sauce.

It is high time that those who are seeking to reform the world, should begin to preach the gospel of health. Instead of sending missionaries to the Kafirs, Hottentots, Kalmucks, and Fiji Islanders, let us send a few messengers bearing the glad tidings of good health to the great "unwashed," badly-fed, the poorly-slept, the generally-neglected, and physically-depraved multitudes of our great cities. A clean skin and clean morals are not invariably concomitants, but we could never subscribe to the doctrine taught by one of the "fathers," that the "purest souls are to be found in the dirtiest bodies;" neither should we be found among the admirers of that other saint who was considered to be pre-eminent in piety because he allowed his hair to clot with dirt, and had three hundred patches on his pantaloons.

The best foundation for good morals is good health. The man who respects himself sufficiently to keep his exterior in a wholesome condition is likely to be, by that same self-respect, restrained from polluting his inner man. We never knew any young man to be thoroughly wicked, who took good care of his

body. One of the best omens for the future generation is the fact that quite a majority of the States in the Union have, within the last three years, passed a law making the study of hygiene, including temperance, compulsory. Ignorance is the greatest foe to good health as well as to good morals. Let every friend of humanity join in the good work of spreading abroad the gospel of health; and the result will be a thinning out of the jails, prisons, poor-houses, asylums, and hospitals, such as would astonish the world.

ABSENT-MINDEDNESS.

THERE is more virtue in absent-mindedness than one is likely, at first thought, to accredit to this mental peculiarity. There are plenty of people who are so absent-minded that they do not know that they are unhappy or uncomfortable, and, consequently, are *not* so, until some officious person comes along and points out to them causes for complaint of which they were before wholly unconscious.

The following story, illustrative of this principle, is told of Horace Greeley, who is said to have been one of the most absent-minded men that ever lived: "One remarkably cold morning in spring he marched down to the *Tribune* office, and plunged into his exchanges. The janitor had neglected to light any fires. Mr. Greeley went into the editorial rooms, and his feet feeling cold, he took off his shoes and rested his feet upon the register. Presently the foreman came down on some business errand. It was freezing, and there was a cold draught rushing through the register where Mr. Greeley sat immersed in exchanges, wholly oblivious of all sublunary discomforts. 'Why, Mr. Greeley,' exclaimed the foreman, 'what in the world are you doing? There's no fire there, and you'll take your death cold!' 'Confound it!' said the philosopher pettishly, 'why did you tell me? I was warming myself very nicely.'"

How many women are perfectly contented with their homes and their surroundings until some meddlesome person comes along, and sows the seed of discontent! How many

men are satisfied to let well enough alone until some visionary castle-builder, or some social Esau plants a root of bitterness in his soul, in the shape of some visionary theory of social reform, "land theory," or something else! Many a person considers himself well,—and practically is so, and able to perform his part in the world without discomfort to himself and with benefit to others,—until some lying newspaper advertisement of a "kidney cure," or "nervous-debility cure," or some other wicked nostrum, sets him to looking over his internal arrangements, and watching little symptoms of which everybody has more or less; and pretty soon he begins to think himself just upon the brink of a physical break-down. There ought to be some means of punishing these dangerous disturbers of the peace.

Even sanitary reformers may do as much harm as good, if they are not discreet in the diffusion of the valuable knowledge which they possess. Many a man has caught the cholera from a diseased imagination. Many a woman has retired into the ranks of chronic invalidism simply because somebody told her she looked sick. Be on the lookout for those pestiferous persons who go around hunting up sore spots and weak points in people's constitutions. They are not "angels in disguise."

An Anti-Tobacco Crank.—A writer in a leading medical journal gives the following account of the rather unusual effect of tobacco upon a peculiarly susceptible person:—

"A man came into the writer's office one evening to be examined for life-insurance, and as the writer was smoking, asked him to desist, saying that otherwise he would not hold himself responsible for the consequences. He stated that the smoke first caused an intense pain over both eyes, causing him to knit his brows; then he became, as he termed it, 'cranky,' and would fight with his best friend. After this cranky condition lasted for a time, he became sick at the stomach, and would throw up the contents of his stomach, after which he would have to lie down.

He further stated that his mother had the same idiosyncrasy with regard to tobacco smoke, and he believed he inherited it; his father was a smoker."

One cannot resist the suspicion that the man's father must have had a pretty uncomfortable time with his smoking. Suppose this anti-tobacco disease should spread; it might become positively dangerous for a man to smoke, except under police protection, or in some secluded spot, where he would not be likely to encounter any one with the anti-tobacco idiosyncrasy. Let us hope, for the sake of the rising generation, that the disease may prove to be contagious, and that an extensive epidemic may break out.

Death to Germs.—According to the best authorities, typhoid-fever germs, as well as many other members of the germ family, are not killed by any ordinary degree of continuous cold, nor by any but such high degrees of heat as are obtainable only by artificial means. We are informed, however, that the germs are unable to withstand repeated freezing and thawing. This is a great compensation for the discomfort and inconveniences experienced when the mercury is frequently oscillating above and below the freezing-point. A country which is deprived of the beneficent influence of frost, is a land swarming with disease germs, and certain to abound with germ diseases.

Vaccination.—According to the *Sanitarian*, the recent experience of Zurich, Switzerland, is a strong argument in favor of vaccination. For a number of years previous to 1883 a vaccination law obtained; and as the result, small-pox was wholly prevented. In 1882, not a single case occurred. This fact was used as an argument for the repeal of the vaccination law, which was accomplished. The next year, 1883, in over one thousand deaths, there were but two from small-pox; in 1884, three deaths in one thousand were the result of small-pox; in 1885, seventeen; and in the first quarter of 1886, eighty-five, which would amount to three hundred and forty for the entire year.

Typhoid-Fever Germs.—Prof. V. C. Vaughan, of Ann Arbor, Michigan, who has attained world-wide celebrity by his discoveries in chemico-sanitary science, particularly in the discovery of *tyro-toxicon* or cheese poison, has recently added to his laurels by a new and important discovery. It has for a long time been believed that the germ which produces typhoid fever had been isolated; but all attempts to propagate the germ from contaminated water and produce deadly effects in animals, have heretofore failed.

Dr. Vaughan procured a sample of water from a well near the Chapin mine, the scene of the recent terrible outbreak of typhoid fever. He found the germs present in the water in great numbers. A vigorous crop of germs was cultivated in milk, and in a preparation of beef. They were also found to grow luxuriantly upon a soil of boiled potato. A poison was separated from both the milk and meat preparation, which, when administered to cats, produced symptoms of poisoning similar to those present in typhoid fever.

A full account of these most valuable and interesting experiments will appear in the first quarterly report of the Laboratory of Hygiene, for which an appropriation was made by the last legislature of this State. This is the kind of work which advances sanitary science, and Dr. Vaughan is to be congratulated upon his brilliant success in so soon accomplishing such valuable results, as also in having achieved what has hitherto been attempted in vain in the most celebrated laboratories of Europe. The report referred to can be obtained by addressing Dr. H. B. Baker, Secretary of the State Board of Health, Lansing, Michigan.

Use of the Tonsils.—There has been a great deal of controversy as to the purpose of the little granular organs found at either side of the mouth at its back part, called the tonsils. The opinion of some has been that the principal business of these glands was to make business for the doctors in removing them when they had become subject to chronic disease. Recent experiments by Prof. Rossbach, of

Jena, seem to prove conclusively that the tonsils furnish a secretion which is of use in digestion. It was found that the tonsils, when quickly removed after death, possess the power of converting starch into sugar with great rapidity. The efficiency of the secretion seems to be due to the presence of white blood corpuscles, which the tonsils probably separate from the blood, although it is found that the white blood corpuscles from the tonsils possess the sugar-forming power in much greater degree than those from other parts of the body. So it is at last proved that the tonsils serve some useful purpose after all.

Consumption among the Irish.—Statistics show that in this country the largest number of deaths from consumption occur among persons of Irish parentage. The proportion of deaths from consumption among the Irish to those of all nationalities in this country is as five to four. In other words, the fatality among the Irish is one-fourth greater than that of all nationalities, including the Irish. This excessive mortality cannot be due to climate, since the Irish at home live in a cold, damp climate, which is much better suited to the development of consumption than is the climate of this country. There seems to be no other cause to which the difference can be assigned, than the change in diet which the Irishman makes on coming to this country. At home, he is accustomed to a very plain, simple, and wholesome diet, consisting almost wholly of good milk, oatmeal, and plainly-cooked vegetables. Here, he adopts the heavy and indigestible diet of the average American. At home, his drink is water and milk; here, it is strong tea or coffee. At home, his breakfast consists of a bit of coarse bread and a liberal supply of oatmeal porridge. Here, he indulges in rich gravies and various spiced and highly-seasoned foods. At home, he rarely tastes meat. Dr. Letheby states that the average Irishman eats less meat in a week than the average Englishman eats in one day. Here, meat figures even more largely in his dietary than in that of the average Englishman.

Hereditary Diseases.—Much has been written respecting the heredity of disease. A long list of maladies have been included in the list of diseases which may be transmitted by heredity, chief among which are consumption, gout, rheumatism, insanity, scrofula, various forms of skin diseases, diseases resulting from immorality, and various nervous disorders. Consumption and insanity probably figure more largely in the matter of heredity than do others. Thousands of people live all their lives under a cloud, because a father or mother or some more distant relative suffered or died from one of these maladies. Doubtless many people are actually frightened into consumption or driven to the mad-house, simply by apprehension of a malady which they would have escaped, if they had had no knowledge of the influence of heredity, or had been unaware that a possible influence of this sort existed in their particular cases. That a father, mother, or other relative has died of consumption, or has been insane, should never be looked upon as a necessary cause of either of these maladies. Heredity should be looked upon simply as a predisposing cause, whose influence may be escaped by a proper mode of life. A man who has a predisposition to consumption or insanity or any other so-called hereditary disease, need not necessarily suffer from the malady to which he is predisposed. All that is necessary is that he should carefully avoid the exciting causes by which the particular malady in question is produced. However strong the predisposition to any malady may be, the action of some particular exciting cause is necessary to bring about the development of the malady. In this enlightened age, when public and personal hygiene are so thoroughly understood, the influence of heredity may be almost ignored. At any rate, its sole influence should be to lead a person with a known hereditary predisposition, to a somewhat more careful mode of life than he otherwise might follow. Hereditary tendencies may be extinguished by carefully following necessary health rules, and by observing proper hygienic precautions.

Anti-Tobacco Law.—In numerous countries, the evil effects of tobacco-using by boys has been recognized sufficiently to induce the civil authorities to enact laws prohibiting its sale to, and use by, young boys. It is made a misdemeanor for boys under the age of fifteen to smoke or use tobacco in any form. If a lad under this age is found upon the street smoking, he is as promptly arrested and sent to the police station, as though he had been caught stealing. There is a very prevalent fashion of enforcing the laws in republican Switzerland. We are quite in favor of the growing movement looking toward the prohibition of the manufacture and sale of alcoholic liquors; and we shall be equally in favor of a similar movement, when the right time comes, prohibiting the manufacture, sale, and use of the still more deadly poison, *nicotiana tabacum*.

Surgical Literature.—The "Annals of Surgery," the only English journal published which is devoted exclusively to surgery, enters now upon its fourth year.

Drs. L. S. Pilcher, of Brooklyn, N. Y., and C. B. Keetley, of London, England, are the chief editors, assisted by nearly all the able surgeons of both this country and Europe, which is a sufficient guarantee of its literary merits. We bespeak for it the co-operation of members of the profession, who are interested in progressive surgery.

J. H. Chambers & Co., St. Louis, Mo., are the publishers, and deserve great credit both for undertaking to produce such an important journal as the "Annals," and for its artistic execution.

Insane from Faith-Cure.—It is reported that a Chicago lady was recently made insane by the "faith-cure." There is talk of arresting the doctor for practicing medicine without a diploma.

—In Switzerland there is one lunatic for every two hundred inhabitants, the cause of which is largely traceable to unhygienic conditions.

Club Doctors.—It has been suggested that an improvement in the ordinary mode of employing medical aid when sick, would be the payment of an annual fee for medical services, which would make it greatly to the doctor's advantage to keep the patient in good health, instead of setting a premium on sickness. We are not quite willing to admit that this sort of restraint is needed even for the average doctor, certainly not for those of the better class; although there are, doubtless, men who are called doctors that rejoice in the coming of epidemics, and fatten upon the calamities of their fellow-men.

The new plan is being strongly championed, however, and we are informed that it has been adopted to quite an extent among certain classes in New York. A club will hire a physician by the year to attend the families of its members. The salary is low, much below the average cost of medical attendance; but it is claimed that the doctor gets a percentage from the druggist, and prescribes great quantities of medicines, so that he makes a good thing out of his practice after all. If this is to be the effect of the new departure, we sincerely hope it may not become popular, for the American people are already swallowing more drugs than their stomachs can bear, and the great American dyspepsia daily develops new proportions and greater depths of misery.

Sleeping Bags.—The Arctic traveler imitates the Esquimau by sleeping in a bag of fur, into which he pulls himself feet foremost. The late Wendell Philips, "the silver-tongued orator," who often spent half the winter on lecturing tours through the West, adopted the same custom, and thus saved himself many a night of misery in spare beds between damp sheets, in fireless chambers. Perhaps many other travelers might with profit adopt the same precaution.

—A German who has recently counted the hairs of several human heads, found the number as follows: Red, 90,000; black, 108,000; brown, 109,000; blonde, 140,000.

Killed by Tobacco.—A boy recently died in Philadelphia, at the age of eleven years, whose physician says he was killed by cigarette-smoking. "Killed by tobacco" might be appropriately engraved upon many a tombstone of old and young. Every such death is a disgrace to our boasted Christian civilization. When shall we become truly civilized?

A Deadly Well.—In the recent Iron-Mountain epidemic, there were thirteen cases of the disease in a single family that obtained its water supply from a certain well. An examination of the water showed it to be swarming with germs, and grossly contaminated with human excreta. It was but forty feet distant from a privy-vault and a barn-yard.

—It is stated on the authority of the *Philadelphia Press* that cigarettes are kept for sale in some of the school stores expressly for the purpose of catching the trade of small boys, who may be seen smoking in troops as they go along the streets to their homes. This is a strange method of emphasizing the instruction in scientific temperance which is made obligatory by law.

—All friends of prohibition are rejoiced at the recent decision of the United States Supreme Court, by which the prohibition law of Kansas is declared constitutional, and the State, therefore, under no obligation to compensate brewers or distillers for losses resulting from the enforcement of the law.

—The *Quarterly Journal of Inebriety* seems to be something of a pessimist as regards the reformation of drunkards. The editor quotes with approval, as applied to inebriates, the remark of Oliver Wendell Holmes, that the patient would have been saved, if the physician had been called two or three generations back.

—It ought to be more generally known that shaving in a public barber-shop is a dangerous means of contracting one of the most loathsome diseases. Two cases of the sort have been recently reported.

DOMESTIC MEDICINE



NURSING.

MRS. ELIZABETH ROBINSON SCOVIL gives the following valuable suggestions, which are well worth perusal by any person who has the care of the sick:—

“Nursing has of late years risen to the rank of a profession, and a very honorable one. Two years of earnest work is thought none too long to master its intricacies by the pupil nurses in our training-schools. Surely, then, every woman should be willing to give a little time and a little trouble to learning the general principles that underlie the intelligent care of the sick, that when she is called upon to practice them, she may not be found wholly wanting in due preparation for what should be to her a labor of love. Trained nurses can be had in large cities; and where expense need not be considered, one can be summoned from a distance, in case of necessity. Such aid is invaluable when it can be had, but in the vast majority of cases this is impossible, and then reliance must be placed upon the assistance at hand. It is the positive duty of every woman to see that when she is called upon to render this service, she has a clear idea of the end to be accomplished, and of the best means by which it can be attained.

“The object of nursing is to place the patient in such a condition that nature may be helped and not hindered in the efforts she is making toward recovery. If the ventilation of the sick-room be imperfect, the air tainted, and the heat improperly regulated, all of which may easily happen without an ordinary attendant being in the least conscious that

anything is wrong, the chances of a favorable issue to the case are materially lessened. The recuperative powers of the body, already fully taxed in the conflict with disease, are overburdened by this new demand upon them, which never should have been made; and perhaps prove unequal to the task required of them. Humanly speaking, a very small thing may turn the scale one way or the other, and decide the result.

“Pure air and proper food are the fundamental points in the care of the sick,—the two pillars of good nursing on which the whole structure rests. If these are withheld, all else that can be done is like pouring water into a sieve; a little clings while the greater part is lost. When these are given, many minor details that are usually insisted upon as of great importance may be overlooked, or omitted, without serious detriment to the sufferer. To the superficial observer they may seem easy things to furnish, but any physician with a large practice will testify that, under the most favorable circumstances, he has more or less difficulty in obtaining them for his patients. In many cases, even with incessant watchfulness on his part, he cannot be sure that in his absence they are continuously provided in proper quantities.

“In order to have pure air, the most scrupulous cleanliness must prevail in the sick-room; all the surroundings of the invalid must be spotlessly neat and fresh. To keep them so, requires no small amount of care and ingenuity on the part of the nurse, and all her knowledge will be needed to do it without disturb-

ing and irritating her charge. It is evident, then, that pure air involves much more than the mere labor of opening and shutting a window.

“To provide proper food for a sick person, it is indispensable that the nurse should know something of the effect of different forms of food on the human system,—what kinds are best adapted to repair the waste of disease, and how they should be administered to obtain the best result. Milk, for instance, which is the staple article of diet for most persons suffering from serious illness, may be so given as to be positively injurious, instead of beneficial. Although it is a liquid when swallowed, the action of the gastric juice in the stomach turns it into a solid curd, like soft blanc-mange. This must be again converted into a fluid, before it can be absorbed to aid in the nourishment of the body. If too much is given at once, a mass of curd is formed, which is more than the stomach can take care of in its weakened condition. It digests very slowly, or not at all, and causes discomfort and oppression, if it is not rejected altogether, thus exhausting instead of benefiting the patient.”

Bright's Disease.—An eminent writer in the *British Medical Journal* calls attention to the fact that Bright's disease is usually preceded often for years, by a sediment in the urine. It may be a whitish, pinkish, or a brick-dust sediment. After a time a small quantity of albumen appears, and increases as the disease progresses. These sediments are generally due to errors in diet, particularly to the large use of flesh, or from indigestion arising from diseases of the stomach. This points clearly to the fact to which we have many times called attention, that Bright's disease is most commonly the result of dietetic errors.

Water-Drinking.—Probably the majority of people drink too little water. Tea, coffee, beer, wine, and other drinks are freely indulged in by many; but these liquids, besides being in themselves injurious, are not a substitute for water, which is one of the most important of all substances required for the nourishment of the

body. Water is required by the system to the amount of two or three pints daily. When the skin is unusually active, as in very warm weather, the superfluous heat of the body must be carried off by evaporation from the surface; and a still larger quantity is required. It is probable that the hygienic value of water as a drink is not appreciated. Some persons are even so unwise as to purposely abstain from water-drinking, with the idea that there is a virtue in so doing. Such may do themselves great harm. As a rule, from two to six glasses of water should be taken daily in addition to that usually taken with the meals, unless the diet consists largely of milk, soups, or other fluid food.

The Period of Incubation.—Most contagious and infectious diseases undergo a certain period of incubation after exposure, before the first symptoms make their appearance. This period is somewhat variable. As a rule, the shorter the period of incubation, the more severe will be the attack. The following list includes the most common contagious maladies:—

- Measles, seven to fourteen days.
- Chicken-pox, one to two weeks.
- Scarlet fever, one to fourteen days.
- Diphtheria, two days to two weeks.
- Small-pox, one to three weeks.
- Whooping-cough, four to fourteen days.
- Mumps, one to three weeks.
- Typhoid fever, twelve days.

Congestion of the Liver.—An eminent French physician, Jules Cyr, in the treatment of congestion of the liver, employs cold compresses over the region of the liver, renewing them frequently. He also recommends a douche applied over the region of the liver, while the patient is in a reclining position. We have found the frequent application of fomentations, not long continued at one time, and followed by a cold compress, an excellent means of treating this affection. An enema to unload the bowels, and a restricted diet are additional means of value, which should not be neglected.

HYGIENE FOR YOUNG FOLKS



A SMOKING FAMILY.

This is a picture of a family such as we presume none of our little readers have ever seen. Perhaps there never was just such a family. It may be the artist has drawn an imaginary picture, so that the

Notice the little boy who stands in front; does n't he look just like some of the boys you meet on the street with cigars or cigarettes in their mouths? He evidently thinks he is a very smart boy, just because he can puff a cigar. Such boys imagine that smoking is a manly thing, and so they are anxious to learn to smoke as soon as they can.

This is a very great mistake, is it not? A man who smokes, always has a bad smell about him. How much nicer and cleaner a man may be who does not smoke! Besides, every wise doctor will tell you that smoking never does any one any real good, and often does a vast deal of harm. All agree that smoking is bad for boys.

In some countries, boys are not allowed to smoke. A boy who is found smoking on the street in Switzerland is arrested and taken to prison. Perhaps we may have such a good law in this country sometime.

Please look at the picture again, and notice the degrading effect of tobacco which is evident in every face. You see no books on the mantel, only packages of tobacco. No one in such a family would care

for books. Even the dog seems to have become demoralized with the rest. You notice that he is holding a pipe under his paw.

"Oh!" some of you will exclaim, "There never could be such a family as that."

Why not? There are plenty of smoking men; and if men smoke, why may not women? and if tobacco is good for father and mother, why not for the children? and if the dog could be taught to smoke, why might it not do him good too?

We trust our little readers are all ready to answer that tobacco is bad for all persons, old or young, and that none of them will ever become addicted to the use of the filthy weed.



The Smoking Family.

fathers who smoke can see what the result would be if everybody should follow their bad example.

But, really, there are some families which are almost as much addicted to this bad habit as the one shown in the picture. The writer has known of families in which the father, the mother, and all the large boys and girls were habitual smokers; and sometimes one of the older smokers would take the baby on his knees and actually place a nasty pipe to its lips. At first, baby made up a wry face, and turned its head away, but after a time it learned to smoke with the rest.

How would you like to belong to such a family?

JIMMY'S LECTURE.

BY LOUISA M. ALCOTT.

"JIMMY, throw that jug into the pig-pen. Smash it first, and be sure you do n't taste a drop of the vile stuff," said an anxious-looking woman, as she handed her little son the brown jug which she had just found hidden in the shed.

"Father wont like it," began the boy, eying the ugly thing with a look of fear and hate; for it made mother miserable, and father a brute.

"I said I'd make way with it the next time I found it, and I will! It's full, and I don't feel as if I could live through another dreadful time like the last. If we put it out of sight, maybe father will keep sober for another month. Go quick, before he comes home." And the poor woman pushed the boy to the door, as if she could not wait a minute, till the curse of her life was destroyed.

Glad to comfort her, and have the fun of smashing anything, Jimmy ran off, and, giving the jug a good bang on the post, let the whisky run where it would, as he flung the pieces into the pig-pen, and went back to his work.

He was only eleven; but he struggled manfully with the old saw, and the tough apple-tree boughs he had collected for fuel. It was father's work, but he neglected it, and Jimmy would n't see mother suffer from cold, so he trimmed the trees, and did his best to keep the fire going. He had to stop often to rest, and in these pauses he talked to himself, having no other company.

Not long after the destruction of the jug, he heard a great commotion in the pen, and looking in, saw the two pigs capering about in a curious way. They ran up and down, squealed, skipped, and bumped against each other, as if they did n't see straight, and had no control of their legs.

Jimmy was much amused for a few minutes; but, when one staggered to the trough, and began to drink something there, and the other tumbled down and could not get up, he understood the cause of these antics.

"Oh, dear! I let the whisky run into the trough, and those bad pigs are tipsy! What shall I do?"

He watched them an instant, and then added in a sober tone, as he shook his head sadly, "That's just the way father does,—lively first, then cross, then stupid. They do n't look funny to me now, and I'm so sorry for 'em. They will be dreadfully ashamed when they get sober. I'm glád there is n't any wife and little son to be scared and mortified and sorry over 'em. I'll talk to 'em and tell 'em what the man said in the temperance lecture we went to last night. Maybe it will do 'em good."

So Jimmy mounted the chopping-block close by, and repeated all he could remember, making a funny jumble, but being very much in earnest, and quite

unconscious that he had another hearer beside the pigs:—

"My friends, rum is an awful thing. People who drink are slaves. They are worse than dumb beasts, who don't drink. (Yes, they do; but that was my fault.) Half the sin and sorrow in the world come from rum. Men waste their money, neglect their families, break their wives' hearts, and set a bad example before their children. People better die than drink and make brutes of themselves. Lots of money is wasted. Folks kill other folks when they are drunk, and steal and lie, and do every bad thing. Now, my friends, (I mean you pigs), turn from your evil ways, and drink no more. (I'll smash the jug behind the barn next time, where even the hens can't find it. Rise in your manhood, and free yourselves from this awful slavery. (They are both fast asleep, but I'll help 'em up when they wake.) Lead better lives, and don't let those who love you suffer shame and fear and grief for your weakness. (I do love you old fellows, and I am so sorry to see you make such pigs of yourselves.) Here is the pledge; come and sign it. Keep it all your lives, and be good men. (I mean pigs.)"

Here Jimmy smiled, but he meant what he said; and, pulling out of his pocket a piece of paper and a pencil, he jumped down to use the block as a desk, saying, as he wrote in big letters, "They shall have a pledge, and they can make a mark as people do who can't write. I'll make it short, so they can understand it, and I know they'll keep it, for I shall help them."

So busy was the boy with his work that he never saw a man steal from behind the pen where he had been listening and laughing at Jimmy's lecture, till something seemed to change the smiles to tears; for, as he peeped over the lad's shoulder, he saw how worn the little jacket was, how bruised and blistered the poor hands were with too hard work, and how he stood on one foot, because his toes were out of the old shoes.

A month's wages were in the man's pocket, and he meant to spend it in more whisky when his jug was empty. Now the money seemed all too little to make his son tidy, and he could n't bear to think how much he had wasted on low pleasures that made a worse brute of him than the pigs.

"There!" said Jimmy, "I guess that will do. We, Tom and Jerry, do solemnly promise never to touch, taste, or handle anything that can make us drunk."

"Now for the names. Which shall mark first?"

"I will!" said the man, startling Jimmy so much that he nearly tumbled into the pen as he was climbing up. The paper fluttered down inside, and both forgot it as the boy looked up at the man, saying, half ashamed, half glad,—"Why, father, did you hear me? I was only sort of playing."

"I am in earnest, for your lecture was a very good one; and I'm not going to be a beast any longer. Here's money for new shoes and jacket. Give me the saw. I'll do my own work now, and you go tell mother what I say."

Jimmy was about to run away, when the sight of Tom and Jerry eating up the paper made him clap his hands, exclaiming joyfully,—

"They've taken the pledge really and truly. I'm so glad!"

It was impossible to help laughing; but the man was very sober again as he said slowly, with his hand on Jimmy's shoulder,—

"You shall write another for me. I'll sign it, and keep it too, if you will help me, my good little son."

"I will, father, I will!" cried Jimmy with all his happy heart, and then ran to carry the good news to mother.

That was his first lecture, but not his last; for he delivered many more when he was a man, because the work begun that day prospered well, and those pledges were truly kept.—*The Press.*

Question Box.

Live Animals in the Stomach.—Mrs. J. M. T., Dakota, inquires whether it is possible that a snake or any sort of worm might get into the stomach by the drinking of water; and describes the symptoms which are supposed to arise from such a cause.

Ans. It is possible that small worms might find access to the stomach by the drinking of water; and that the eggs of various kinds of intestinal parasites are often received in this way is beyond question. It is not at all probable, however, that snakes, lizards, or worms of any size can be received into the body in this way. Indeed, it would not be possible for such creatures to live in the stomach, if they should find entrance to it. They would be quickly digested by the gastric juice. There are no parasites which inhabit the stomach. Tape-worms and other intestinal worms reside in different portions of the intestines. There is no authentic case in which snakes, lizards, or other live creatures have been found in the human stomach. It is true that worms are sometimes vomited up from the stomach. In these cases the worm had found its way into the stomach from the intestines, and was quickly disposed of by the effort of vomiting. Any other kind of living creature in the stomach would be treated in the same way, unless it were dissolved by the process of digestion. The symptoms referred to may be due to tape-worm, but are more likely the result of stomach and intestinal dyspepsia.

Tobacco-Using.—A subscriber whose friend asserts that tobacco-using does him good, asks why it is?

Ans. As to why the gentleman thinks tobacco does him good, we cannot say. There are thousands of persons laboring under this same delusion. Probably a hundred thousand men could be found in this country who would testify that whisky did them good. Opium-eaters and smokers are sure the poison does them all sorts of good. Tobacco and all other narcotic poisons, produce a sensation of comfort, and so afford a sort of pleasure; but they are in no way protective against disease, and are productive of an immense amount of mischief.

Enuresis.—E. W. H. has two children, aged respectively thirteen and eight years, both of whom are afflicted with enuresis, or involuntary escape of urine during sleep. He wishes a remedy.

Ans. The habits of these children should be carefully looked into. There are several causes of this condition, the chief of which are bad practices, improper diet, as eating late at night, eating flesh food or rich condiments, constipation, and intestinal worms. The disease is sometimes due to hereditary weakness of the spinal cord. It is impossible to describe any single remedy which will meet all these cases, hence an intelligent and experienced physician should be consulted.

Dandruff—Sugar—Diet for Catarrh.—H. D. J., Missouri, inquires:—

"1. What will cure dandruff?"

"2. Is sirup or sugar difficult of digestion?"

"3. Is blood used in connection with the manufacture of sugar?"

"4. What food is best for persons suffering from catarrh or consumption?"

Ans. 1. Shampoo the scalp with castile-soap two or three times a week, and after drying the hair, apply a mixture of equal parts of castor-oil and alcohol.

2. Yes.

3. Yes.

4. Nutritious and digestible food. A diet of fruits, grains, milk, and cream, is usually the best diet for persons suffering in this way.

Graham Bread—Nervous Dyspepsia.—J. D. H., Michigan, asks:—

1. For a "recipe for making such graham bread as is used at the Sanitarium."

"2. Please name a few States in which a person who is troubled during the winter with stomach, liver, and nervous disorders, the result of chronic diarrhoea, may profitably spend the winter months."

Ans. 1. The recipe will be found in the Household Science Department of this number.

2. New Mexico, Arizona, Southern Colorado, or California will probably be found the most suitable.

Literary Notices.

THE WOMAN'S WORLD, for February, is an especially interesting number. The frontispiece is a portrait of the Princess of Wales in her academic robes as doctor of music. A poem on "Historic Women" opens the reading pages. This is followed by a prose description of a historic house, "Kirby Hall, the home of Sir Christopher Hatton." "Medicine as a Profession for Women" is the subject of a paper by Dr. Mary Marshall. "The Corner House Shortlands" is an interesting sketch of the home of the late Dinah Mulock Craik, with portrait and many fine illustrations. The *Woman's World* is published by Cassell & Co., New York, at \$3.50 a year in advance.

THE high promise with which the ATLANTIC MONTHLY began the current year is well sustained in the February number. Among the noticeable articles is "Endymion," a poem by James Russell Lowell; "The Gifts of Fate," by Paul Hermes; "No 'Songs in Winter,'" by T. B. Aldrich; "The Medea of Euripides," by Wm. C. Lawton; "The Marriage Celebration in Europe," by Frank Gaylord Cook; and "Carnations in Winter," by Bliss Carman. Houghton Mifflin & Co., Boston.

Two of the little known religious communities in Pennsylvania—the Harmonites and the Moravians—will have their quaint customs and peaceful abodes described in illustrated articles in the next number of THE AMERICAN MAGAZINE. As the Harmonites already light their village with natural gas, and the Moravians have deposited their antiquities in a museum, it would seem that the hand of progress must ere long sweep away their distinctive features.

IN glancing over the table of contents of THE CHAUTAUQUAN, for March, one is struck with the excellence of the names; among them being Maurice Thompson, Hjalmer Hjorth Boyesen, President C. K. Adams, of Cornell University, the Rev. Lyman Abbott, Lieut. Frederick Schwatka, Dr. Titus Munson Coan, Rose Hawthorne Lothrop, Mrs. Mary A. Livermore, and many others equally well known in the literary world.

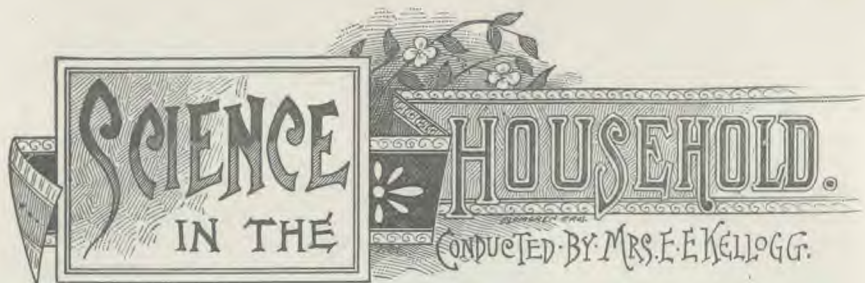
TO THE SWISS CROSS, now entering on its third volume, we extend our good wishes. The significance of its name is apparent, when we mention that it is the monthly organ of the Agassiz Association, succeeding *The St. Nicholas* in this capacity a year ago or more. It is adapted to young minds, and makes science a most interesting study. It is published by N. D. C. Hodges, 47 Lafayette Place, New York. \$1.50 per year.

IN the February *St. Nicholas*, Mary Hallock Foote has drawn the frontispiece,—two young housekeepers in consultation over "Family Affairs." A touching Russian Christmas Story by Amelia E. Barr, entitled "Michael and Feodosia," begins the number, and is appropriately illustrated by E. H. Blashfield. Mrs. Burnett completes "Sara Crewe" by a very delightful "happy ending." In "The Story of an Old Bridge," will be found a historical sketch of London Bridge and the great events with which it has been connected, illustrated with drawings by Peters and Brennan; and by other pictures. Mr. John Preston True begins an interesting school serial, "Drill: A Story of School-boy Life;" Delia W. Lyman tells "How Polly Saw the Aprons Grow;" and Tudor Jenks contributes "The Astrologer's Niece." Other interesting features are: "A Wonderful Wall," with curious pictures, by the author, S. Mary Norton; an answer to Grace Denio Litchfield's poem, "My Other Me," by Alice Wellington Rollins; and the usual pictures, jingles, and departments.

WE are just in receipt of the FIRST BOOK IN PHYSIOLOGY, published by Harper Bros., New York. This is the first of a series of text books for schools, which Dr. Kellogg has been writing by the request of this well-known publishing house, and which they are now bringing out. The first edition of 10,000 copies was completed only a few days ago. We have been informed by the publishers that a second edition is already in press, from which we judge that the work is likely to meet with a large sale. Sample copies may be obtained by addressing Harper Bros., Franklin Square, New York, or W. J. Button, 252 Wabash Ave., Chicago, Ill.

WHAT to do in the sudden emergencies of childhood, is a question often asked by anxious mothers. BABYHOOD for February answers this question in a comprehensive medical article, which says what to do in cases of convulsions, bruises, burns, cuts, foreign bodies in the ear, nose, etc. An equally important article is that on "Contagion and Disinfection," by Dr. Chapin. Contributions in a lighter vein, such as "Babies and Papas," "A Chinese Method of Baby Feeding," an unusually full department of "Nursery Helps and Novelties," and the customary "Nursery Problems" and "Mothers' Parliament," justify Babyhood's claim of being an indispensable companion to young mothers. 15 cents a number; \$1.50 per year. BABYHOOD PUBLISHING CO., 5 Beekman St., New York.

SCRIBNER'S MAGAZINE, for February, offers its readers an interesting bill of fare. Among the leading articles are "Mendelssohn's Letters to Moschelles;" "The Man at Arms," by E. H. Blashfield; "Volcanoes," by N. S. Shaler. Each of these is beautifully illustrated. Chas. Scribner's Sons, New York.



SEASONABLE BILLS OF FARE.

BREAKFAST, NO. 1.

Oranges,
Oatmeal with Cream, Baked Sweet Apples,
Whole-Wheat Puffs, Canned Strawberries,
Baked Potatoes with Brown Sauce,
Snow-Flake Toast.

BREAKFAST, NO. 2.

Apples,
Flinted Wheat with Cream, Dates,
Graham Breakfast Rolls, Canned Peaches,
Stewed Potato, Hoe Cake,*

† Tomato Toast.

DINNER, NO. 1.

Vegetable-Oyster Soup,†
Mashed Potato, Stewed Cabbage,
Mashed Beans,
Whole-Wheat Bread, Corn-Meal Puffs,
Graham Grits,
Prune Pie.

DINNER, NO. 2.

Sago and Potato Soup,
Cabbage Hash, Scalloped Vegetable Oysters,‡
Dry Toast, Whole-Wheat Bread,
Granola, Hominy with Cream,
Apples, Farina Custard.

* See Dec., 1887., Number. † See Nov., 1887, Number.

‡ See Nov., 1886, Number.

Snow-Flake Toast.—Prepare a sauce, by heating to boiling, a quart of milk, to which a half-cup of cream, and a little salt if desired, has been added. When boiling, thicken the milk with a table-spoonful of flour well braided in a little cold milk. Have ready the whites of two eggs, beaten to a stiff froth; and when the flour is well cooked, add the egg to the sauce, beating in lightly. Allow the sauce to boil up only once after the egg is added, just sufficiently to coagulate the albumen of the egg, but not to harden it. Pour this sauce over hot toast, well-browned, and serve at once. If the toast has been prepared by drying in the oven, dip each slice first into a little hot milk.

Tomato Toast.—Prepare a sauce, by seasoning strained, stewed tomatoes with a little cream, and salt if desired, and thickening the same with a little flour, the same as for Snow-flake Toast. Pour this, while hot, over slices of nicely-browned toast, and serve at once.

Mashed Beans.—Look over carefully, and soak over night in cold water, a quart of nice white beans; put into cold water, and boil till perfectly tender, when the water should be nearly evaporated. Take up, mash through a colander to remove the skins, season with salt, put in a shallow pudding-dish, and brown in the oven.

Sago and Potato Soup.—Boil a quart of sliced potatoes in as little water as possible without burning. When tender, rub through a colander. Then add one cup of thin cream and a pint of hot milk, or enough to make the soup of the proper consistency. Turn a second time through the colander to remove any lumps that may have escaped notice. Add a half-tea-spoonful of celery salt. Reheat, and when just at the boiling point, add two table-spoonfuls of sago that has been soaked for twenty minutes in water just sufficient to cover it. Stir the sago carefully in, and allow the soup to boil, stirring often, for five or ten minutes, or until the sago is transparent.

Farina Custard.—Flavor a quart of milk with cocoanut, by steeping in it a half-cupful of desiccated cocoanut for twenty minutes, and then removing the same by turning the milk through a colander. After flavoring, care must be taken to remeasure the milk, and add enough fresh to make up for any that has evaporated during the flavoring process. Reserve enough of the quart of milk to make a batter with two table-spoonfuls of farina. Heat the remainder of the milk to boiling, and then stir in the farina mixture. When the whole is thickened, set aside till cool. Then add two table-spoonfuls of sugar, a little salt if desired, and the well-beaten yolks of two eggs. Beat all together thoroughly, then add the whites of the eggs, which have been previously beaten to a stiff froth. Bake in a dish set inside of another filled with hot water, just long enough to set the custard. Serve cold.

Corn Puffs.—One cup of cold mashed potatoes and one cup of milk, rubbed through a colander to work out all the lumps; add the yolk of a well-beaten egg; and stir in slowly, beating continuously, one cup of corn meal; add, lastly, the white of the egg, beaten to a stiff froth, and bake at once in well-heated gemirons.

Cabbage Hash.—Chop equal parts of cold boiled potato and boiled cabbage together, and salt to taste. To each quart of the mixture add three-fourths of a cup of thin cream. Mix well, and boil all together for a few minutes, till well heated.

HOUSEHOLD CONVENIENCES.

THE ECONOMY ROASTER.



A READER of this journal, who is the happy possessor of one of the Economy Roasters advertised in our last number, writes us that she has taken so much comfort in its use that she wants all housekeepers to know what a labor-saving device it is.

She says: "My first experiment with it was in baking bread. I prepared the sponge over night, and in the morning made it into six small loaves, which were put in the roaster, and set in a warm place to rise. When well risen, the roaster was put into a moderate oven, and the bread baked. It came out baked evenly, with a thin crust,—the nicest bread I ever saw. It needed no watching nor turning, and at the end of an hour and a half was done to perfection.

Meats cooked in the roaster need no watching nor basting. I give a little more time in the oven than when cooked in the ordinary way. With a moderate fire and this roaster, there is no excuse for having poorly-cooked food. On Sunday about ten o'clock, I have put into the roaster two white fish, seasoned, and a very little water, laying all around them pared

sweet potatoes; and on reaching home about half past twelve, I have found all cooked and ready for the table. A ten-pound turkey was roasted in two hours, superior to any we had ever eaten. It is also excellent for steaming many kinds of foods, but they should be placed in a dish that will set inside the roaster, leaving space for an inch of water outside and around the inner dish. Everything but bread browns nicely with the aperture at the end of the pan closed. For bread it needs to be left open."

WHOLE-WHEAT BREAD.

A CORRESPONDENT desires the recipe for making whole-wheat bread like that used at the Sanitarium. Below, we give directions, as fully as possible in our limited space, for preparing such bread. The reader will understand that the necessary conditions for raising, baking, and caring for bread must all be supplied in this connection, in order to insure good bread.

Mix together thoroughly three pounds of entire wheat flour (Sanitarium brand) and the same quantity of Minnesota spring-wheat flour. Place the flour in a deep earthen bowl, and prepare a sponge in the center of it, by using one and one-half pints of warm water, one-half ounce of salt, and one-half a cake of Fleischmann's compressed yeast. Allow this to rise. If kept at an equable temperature of 85°, this process will require about three hours. When the sponge is well risen, add one and one-half pints more of warm water and one-half cup of New Orleans molasses. Mix and work the bread thoroughly, allowing it to rise twice before putting into tins. After placing in the tins, allow it to rise still another time, and bake in a moderate oven. The quantity of ingredients as given, is sufficient for four loaves of ordinary size.

Damp-Proof Glue.—Take of the best and strongest glue, enough to make a pint when melted. Soak this until soft. Pour off the water as in ordinary glue-making, and add a little water if the glue is likely to be too thick. When melted, add three table-spoonfuls of boiled linseed oil. Stir frequently, and keep up the heat till the oil disappears, which may take the whole day and perhaps more. If necessary, add water to make up for that lost by evaporation. When no more oil is seen, a table-spoonful of whiting should be added, and thoroughly incorporated with the glue.

Prepared in this way, the glue is stronger than that made in the ordinary way, and resists dampness far better. It does not come exactly under the head of water-proof glue, though it is not affected by moisture. Glue of this kind has been used with success in fastening belts in wheel-pits where the joint was constantly exposed to damp.

Publisher's Page.

With the next number we shall begin the publication of a series of articles entitled, "Gleanings from the Sanitarium Question Box," which we trust will be of more than ordinary interest to our readers.

We wish to call the attention of our Canadian patrons to the fact that a recent ruling of the United States Treasury Department places Canadian currency at a discount of twenty-five per cent. Remittances to this office should be in postal orders or United States currency.

We would call especial attention to the advertisements of several new articles for sale by the Sanitary Supply Co., which appear in this number. The articles offered by this firm are in all respects just what they are recommended to be.

The first edition of "Sunbeams of Health and Temperance" has found so rapid a sale that the publishers are already compelled to go to press with another edition. An agent for this work is wanted in every town and city in the United States. It is a unique book, presenting facts of a most interesting character, which have never been brought together in a single volume before, and making the study of hygiene so entertaining and interesting that those who would otherwise give it no attention are enticed into a careful study of the subject. Orders for sample copies and terms should be addressed to the Good Health Publishing Co., Battle Creek, Michigan.

SPECIAL NOTICE TO OUR FOREIGN SUBSCRIBERS.

OUR foreign subscribers, who formerly numbered but a few scores of names, have, within the last year, rapidly increased in numbers, until now the list is fast growing into the thousands,—thanks to the energetic efforts of the friends of the journal who have taken pains to introduce it into nearly every English-speaking country of the globe.

To accommodate our foreign agents, particularly those in Australia, New Zealand, the Sandwich Islands, and South Africa, we shall hereafter print the foreign edition of GOOD HEALTH early enough to enable the journal to reach our most remote subscribers pretty nearly on time. In order to do this, it has been necessary to drop the March issue, sending April instead. In so doing, however, our foreign subscribers will lose nothing, as the subscription of each will be advanced one month in 1889, and none of the valuable matter of the home edition of the March number will be omitted from the foreign edition for April.

At the present writing, Michigan is enjoying April weather. There is barely a suggestion of snow on the ground, the air is soft and warm, and the sun shines a greater portion of the time. Michigan, this winter, as usual, has escaped the blizzards which have prevailed so extensively in the West and Northwest. The thermometer has been at zero only a few times and for short seasons. Upon the whole, Michigan seems to be a very comfortable State to spend a winter in, and its seasons seem to be growing more and more moderate. Winters are shorter and less severe, and summers cooler. But every section of the country has its peculiar advantages. California furnishes flowers and fruits the year round. Colorado supplies a rare and pure atmosphere, which is specially favorable for certain classes of invalids. Arizona and New

Mexico furnish a dry and warm atmosphere, with scarcely a drop of rain or the suggestion of a cloud at any time of the year excepting during August and September. Minnesota and Dakota, notwithstanding their arctic winters, enjoy balmy summers. So Michigan does not claim to have a monopoly of good things in the weather line, but certainly averages as a fair place to live in.

The publishers of GOOD HEALTH rejoice in the prosperity of their contemporaries in health journalism, and would mention especially the names of the *Pacific Health Journal*, published by the Pacific Press, Oakland, California, which is rapidly winning popularity, and already commands a wide circulation; the *Sundhedsbladet* and the *Helse-og Sjukværd*, both published at Christiania, Norway, with a combined circulation of more than 10,000 copies monthly. Both these journals were founded by Eld. J. G. Matteson, who has for many years been a warm friend of this journal and its principles, and were the first journals devoted to health subjects ever printed in Scandinavian countries. We understand that the enterprising publishers of these journals have recently started another journal in the Danish language, which is also winning a liberal support. We hope also to be able to announce at an early date the publication of a new health monthly at Bale, Switzerland. All these journals advocate the same principles which are upheld in this journal, and are published in the same philanthropic spirit. We wish them all an abundant success.

THE SANITARIUM SCHOOL OF DOMESTIC ECONOMY.

In the advertising pages of this number will be found the announcement of this new educational enterprise. The need of schools of this character is too evident to require emphasis. There are thousands of young women who are destined to become wives, and charged with the care of homes, who require just the advantages afforded by this school. The managers of this school have made the terms such that any energetic young woman, who wishes to avail herself of its advantages, may do so without any expense other than her time. They even offer an inducement after the first month to those whose proficiency and ability are such as to render their services valuable. We know of no way in which a young woman can spend six months better than in pursuing the course of study which has been laid down for this school.

The publishers are delighted to find that so large a proportion of the many thousands of new subscribers added to the list during last year find the journal so indispensable that they are constrained to renew their subscription for 1888. Hundreds have written us "We cannot keep house without it." It is the aim of the managers of this journal to make it so practical in character, and so valuable and instructive on health subjects, that it will become a necessity to all who are interested in the subjects to which it is devoted. At this season of the year publishers generally expect to have the ranks of their subscribers considerably thinned out by the expiration of old subscriptions, but we are glad to find that this is not our experience. So small a proportion of our old subscribers are dropped, and so many new ones are constantly being added, our circulation the present month exceeds that of any previous month in the history of our journal, and is nearly three times as large as it was one year ago, for which we have to thank the friends of our journal for their kindly efforts in bringing it to the notice of those who are very ready to give it a welcome to their homes, to the majority of which we trust the journal has become a permanent visitor.

The editor of this journal was, at the last annual meeting of the Calhoun County Medical Association, elected president of the association for the present year.

On Wednesday afternoon, February 23d, the editor had the pleasure of addressing a large audience in the Presbyterian Church at Marshall, Michigan, on the relation of health to morals. The occasion was a Sunday-school convention for Calhoun County. The large number present showed an enthusiastic interest in the moral education of children and youth.

We have received an excellent, most readable, and instructive story from the pen of Miss Fannie Bolton, with whom our readers are already acquainted. The title of this new story is "Anarchy in the Town of Human Being." In an early number of the journal, we shall be happy to delight our readers with this interesting sketch, which we think is one of the best the writer has ever produced.

Some of our subscribers have complained at the appearance in our advertising columns of an article called a "Skirt Supporter, with bustle attachment." We are glad our patrons examine our advertising columns so closely, and are not displeased that they hold us to so strict an account for everything that appears therein. We are glad to be able to say that in the matter referred to, the only objectionable feature is the name. The so-called "bustle" is not a bustle at all, but simply a skirt supporter, which holds the garments up so as to prevent pressure upon the lower part of the spine. The

article is a good one, but its name must be changed. We do not approve of the bustle, which is an essentially different device.

CANVASSERS SHOULD REMEMBER

That the Pacific Press Publishers, Oakland, Cal., allow the same commission on renewals to the *American Sentinel*, *Signs of the Times*, and *Pacific Health Journal* as for new subscribers to those periodicals. Write at once for their new *American Sentinel* and *Pacific Health Journal* canvass. It will be sent free, upon receipt of a two-cent stamp to pay postage. They will also send you sample copies of these periodicals post-paid.

BOUND VOLUMES OF THE "SENTINEL."

We can furnish Volume 1, 1886, and Volume 2, 1887, of the *American Sentinel*, with index, bound in strong paper covers, at 60 cents per volume, post-paid. Either volume in cloth binding for \$1.00, post-paid. The two volumes bound in one, in cloth, with gilt title, for \$1.75, post-paid, or for \$1.50 if taken at the office or sent with other books by freight, where we do not have to pay the 25 cents postage.

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A package Mixed Flower Seeds (500 kinds), with PARK'S FLORAL GUIDE, all for 2 stamps. Every flower lover delighted. Tell all your friends. G. W. PARK, Fannettsburg, Pa.

Send at once. This notice will not appear again.

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Containing what everybody wants to know, and is thoroughly practical. Its range of subjects is unlimited, embracing everything that in any way affects the health. Its articles being short and pointed, it is specially adapted to farmers, mechanics, and housekeepers, who have but little leisure for reading. It is just the journal that every family needs, and may be read with profit by all. Price, \$1.00 per year, or with the 300-page premium book—"Practical Manual of Hygiene and Temperance," containing household and cooking recipes—post-paid for \$1.40.

Address, PACIFIC PRESS, Publishers, Oakland, Cal.

The Columbia Bicycle Catalogue for 1888 has just been published by the Pope Mfg. Co., of Boston, New York and Chicago. It is a handsomely printed book of sixty pages, illustrated with forty fine wood engravings. In it appear descriptions of the Light Roadster, Expert, Volunteer (new), Veloce (new), Safety, Semi-Roadster, Standard and Racer Columbia bicycles; and the Light Roadster, Ladies' Two-track, Surprise (new), Tandem and Racer Columbia tricycles. This catalogue, which is the most comprehensive of its class published, will be sent free by mail upon application.



LUCRATIVE EMPLOYMENT

Send for the Economy Roaster and Baker if you want to make money, have a tender roast or good bread. Sample by mail, \$1.00.

T. M. GARDNER, Mfr.,
So. Vineland, N. J.

WHOLE-WHEAT BREAD.—Letters received from different places ask for information about this wholesome article of food. The old-fashioned graham bread, in spite of ridicule, has conquered for itself a place in American cookery. It seems that the bran, acting on the lining membrane of the intestines, promotes their peristaltic action, and prevents all ordinary constipation. Thousands of persons have been relieved by it from what had been a very sore trouble. It was subsequently seen that the same result would follow from the use of clear wheat bran, taken in connection with the ordinary food; and that this was, in some respects, the best way to secure the desired results, since one could not always depend on getting good graham bread, but could easily lay in a permanent supply of good bran. But science has revealed the fact that boiling, which gives to flour the whiteness so much desired by our American housekeepers, throws out its most important constituent, namely, the phosphorus, which enters so largely into the composition of the brain and nerves. This is contained in the dark layer of the wheat which lies next to the hull. Hence, white flour and bran are far from imparting the full value of bread as the staff of life. The lack of this rejected constituent is now believed to account largely for the fact that our American population suffer so greatly from nervous troubles. Besides, much of the constipation simply results from the weakness of the nervous centres which preside over the action of the bowels. *Within a few years improved methods of manufacture have secured an article of flour greatly superior to the graham, called whole-wheat flour. It reduces the hull to very fine particles, retains all the constituents of the flour, and, by the cold blast process, guards against all heating.*—*Youth's Companion, Oct. 13, 1887. Circulation 400,000.*

Wheat Berry Flour

From the

WHOLE WHEAT.

This is the Best Brand of Whole Wheat Flour on the Market. It is sold by hundreds of dealers, and will be sent to any part of the United States or Europe.

To consumers who wish this flour we would say, if it is not sold by your grocer, then send to us for the amount you wish, at \$6 per bbl., 196 lbs., or \$3 per half-bbl., 90 lbs., and we will sell direct to you at retail, until it is handled in your vicinity.

CHESTER & WILSON,
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MERCHANT MILLERS,

— ALSO —

MANUFACTURERS OF BREAKFAST CEREALS.

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(RACE STREET.)

BRANCHES: { Lockport, N. Y. (48 Main Street).
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{ Brooklyn, N. Y. (107 Wallabout Market).

Capacity Patent Roller Flour, - - -	500 Barrels per day.
Capacity Breakfast Cereals, - - -	3,000 Packages per day.
Capacity Whole-Wheat Flour, - - -	300 Barrels per day.
Capacity Graham Flour, - - -	300 Barrels per day.

These goods are used largely by Sanitariums and Health Food Companies, including the Battle Creek Sanitarium.

'88.

For the year 1888 Frank Leslie's "Popular Monthly," which has been aptly styled "The Monarch of the Monthlies," will be better than ever. Articles upon topics of current public interest; sketches of eminent persons; strong and brilliant stories; poetry of a high order, all profusely illustrated, and by writers of recognized merit, will fill its pages. To the old and favorite corps of contributors will be added writers of promise, and no effort will be spared to keep the magazine in the foremost rank.

In the November number was begun an earnest and powerful tale,

"PRINCE LUCIFER,"

By Etta W. Pierce,

which has already attracted widespread attention and charmed multitudes of readers. Subscriptions may begin, if desired, with the November number.

Each issue contains a

FULL PAGE PICTURE IN COLORS,

the series of twelve forming for the year a beautiful collection of gems of modern art.

The "Popular Monthly" contains 128 large octavo pages, nearly twice the matter of similar publications, and is not only the best, but by far the cheapest, of any of the magazines for the people.

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'88.



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AT DRUGGISTS OR MAILED.

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"As a cleanser and absorbent of the oils and particles which collect on the teeth, it has no equal and never can have a rival."

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"It ought to be a luxury as well as a stimulant to use the Felt Brush constructed as it is, and I believe that with that and the floss silk between the teeth, nothing better can be relied upon."

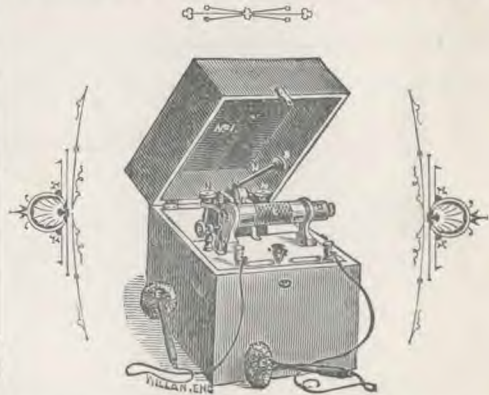
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18 Felt Brush "Heads" boxed 25c, each good for 10 days' use. Handsome Imperishable Holder 35c. Bristle "Head" (40c quality) 15c. Mailed to any address on receipt of price.

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This we can recommend, having thoroughly tested its merits. Directions for use accompany each Battery. The various applications of electricity in disease are fully explained in the Home Hand-Book.

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(See opposite page.)

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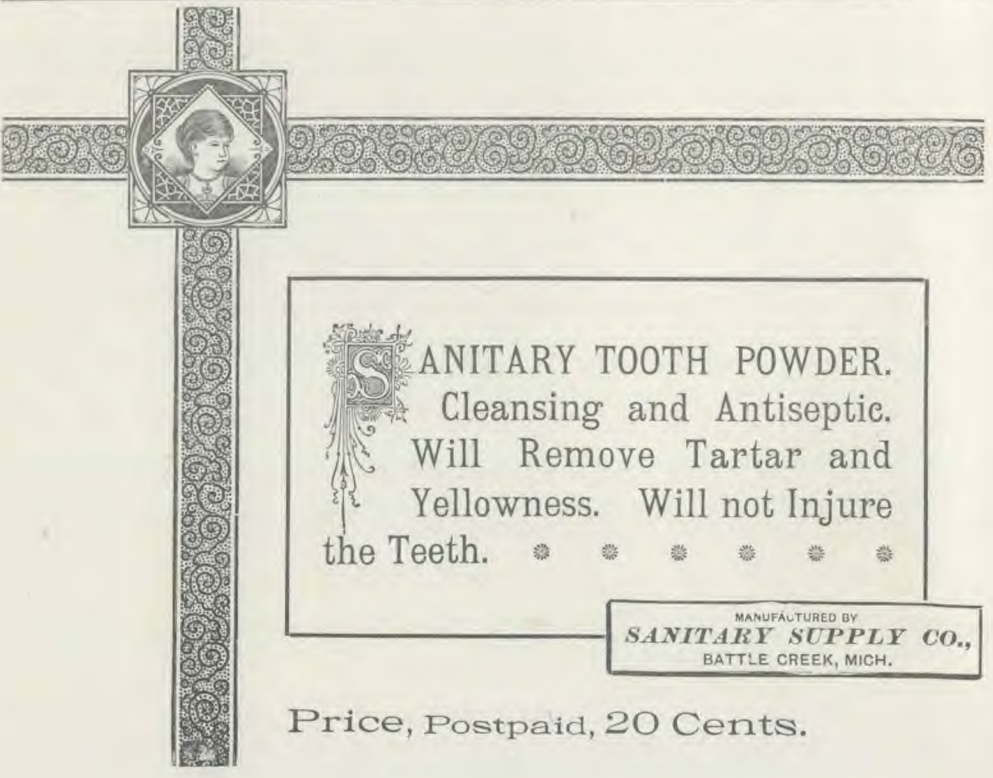
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Oatmeal Biscuit,.....12	White Crackers,.....10	Wheatena,.....12
Medium Oatmeal Crackers,.....10	Whole-Wheat Wafers,.....12	Avenola,.....13
Plain Oatmeal Crackers,.....10	Gluten Wafers,.....30	Granola,.....12
No. 1 Graham Crackers,.....10	Rye Wafers,.....12	Gluten Food,.....40
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All grain preparations can be supplied in large or small lots, as we keep a fresh supply constantly on hand of goods which are largely made expressly for us, of a superior quality of grain. Address,

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 Will Remove Tartar and
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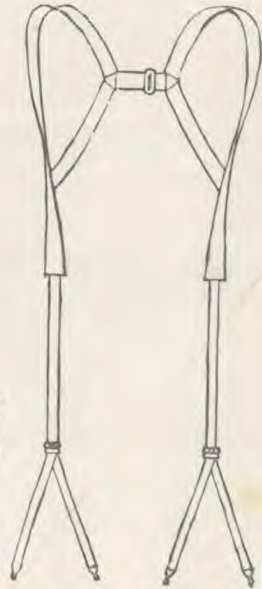
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Michigan City	9.05	11.08	4.51	10.18	11.27
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Kalamazoo	12.17	1.50	6.58	12.33	2.27	6.45	5.38
Battle Creek	1.12	2.27	7.38	1.25	3.18	7.31	6.30
Jackson	4.20	4.20	8.49	3.15	4.50	9.15	8.20
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		P. M.	P. M.	P. M.	A. M.	A. M.	P. M.	P. M.

TRAINS WEST.		Mall.	Day Exp's	Ch'go Exp's	P'off's Exp's	Eve'g Exp's	Kal. Acc'n	Local Pass.
STATIONS.		A. M.	A. M.	P. M.	P. M.	P. M.	A. M.	P. M.
Detroit	.....	7.00	9.1	1.30	4.15	8.00	4.00	.....
Ann Arbor	.....	8.18	10.30	2.32	11.35	9.12	5.30	.....
Jackson	.....	9.40	11.35	3.32	12.54	10.52	7.10	6.45
Battle Creek	.....	11.20	1.12	4.40	2.23	12.12	8.52	8.22
Kalamazoo	.....	12.17	1.50	5.15	3.07	1.30	9.45	9.05
Niles	.....	2.05	3.22	6.27	4.23	3.00	.....	10.38
Michigan City	.....	3.28	4.35	7.32	5.48	4.32	.....	.....
Chicago	.....	5.40	6.40	9.30	7.45	7.00	.....	.....
		P. M.	P. M.	P. M.	A. M.	A. M.	P. M.	P. M.

* Connects with railroads diverging. † Connects with L. E. and W. and L. N. A. & C. ‡ Connects with C. W. & M. § Connects with G. R. & L. and L. S. & M. S. ¶ Connects with L. S. & M. S. and Grand Trunk. ** Connects with T. A. A. and N. M. †† Connects with railroads diverging and Steamboat lines. ‡‡ Daily. All other Trains daily except Sunday.

O. W. RUGGLES, General Pass. & Ticket Agent, Chicago. **O. E. JONES,** Ticket Agent, Battle Creek.

CHICAGO & GRAND TRUNK R. R.

Time Table, in effect May 15, 1887.

GOING WEST.				STATIONS.		GOING EAST.				
Chgo. Pass.	Mall.	Day Exp.	Faste. R. Crk. Pass.	Dep.	Arr.	Mall.	Lmt'd Exp.	Atla. Exp.	San. Pass.	Pt. Ha. Pass.
.....
.....	5.55	7.15	8.05	4.10	.....	10.20	1.15	7.35	10.50
.....	7.28	8.31	9.34	5.40	.....	8.42	11.57	6.17	9.17
.....	8.05	9.10	10.15	6.29	.....	7.53	11.27	5.40	8.40
.....	8.48	9.35	10.58	7.29	.....	7.05	10.58	5.03	8.05
.....	10.01	11.30	11.53	8.26	.....	5.20	10.07	4.00	6.45
.....	10.57	11.00	12.25	9.03	.....	4.45	9.57	3.25	6.15
.....	11.30	11.45	1.15	10.05	.....	.....	8.55	2.35	6.30
.....	0.30	12.05	1.20	10.05	A	3.40	8.50	2.30	6.30
.....	7.18	12.45	2.21	.....	A	2.11	8.11	1.43	.....
.....	7.30	12.55	2.32	.....	A	2.31	.....	1.27	.....
.....	8.17	1.45	3.19	Acc.	.....	1.45	7.26	12.43	.....
.....	9.00	Pass.	4.07	.....	.....	1.55	6.50	12.01	.....
.....	10.15	am	3.49	.....	.....	.....	.....	.....	.....
.....	11.30	7.35	4.05	6.52	6.05	.....	.....	.....	.....
.....	12.40	10.00	6.25	9.10	8.43	.....	.....	.....	.....
.....	pm	am	pm	am	am	.....	.....	.....	.....
.....	pm	am	pm	am	am	.....	.....	.....	.....

† Stops only on signal. Where no time is given, train does not stop. Trains run by Central Standard Time. Valparaiso Accommodation, Battle Creek Passenger, Chicago Passenger, Ft. Huron Passenger, and Mail trains, daily except Sunday. Pacific, Limited, Day, and Atlantic Expresses, daily. Sunday Passenger, Sunday only. **GEO. B. REEVE,** Traffic Manager. **W. J. SPICER,** General Manager.



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