

JANUARY, 1893.

# GOOD



# HEALTH

CONDUCTED  
BY

J. H. KELLOGG M.D.

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PUBLISHED MONTHLY.

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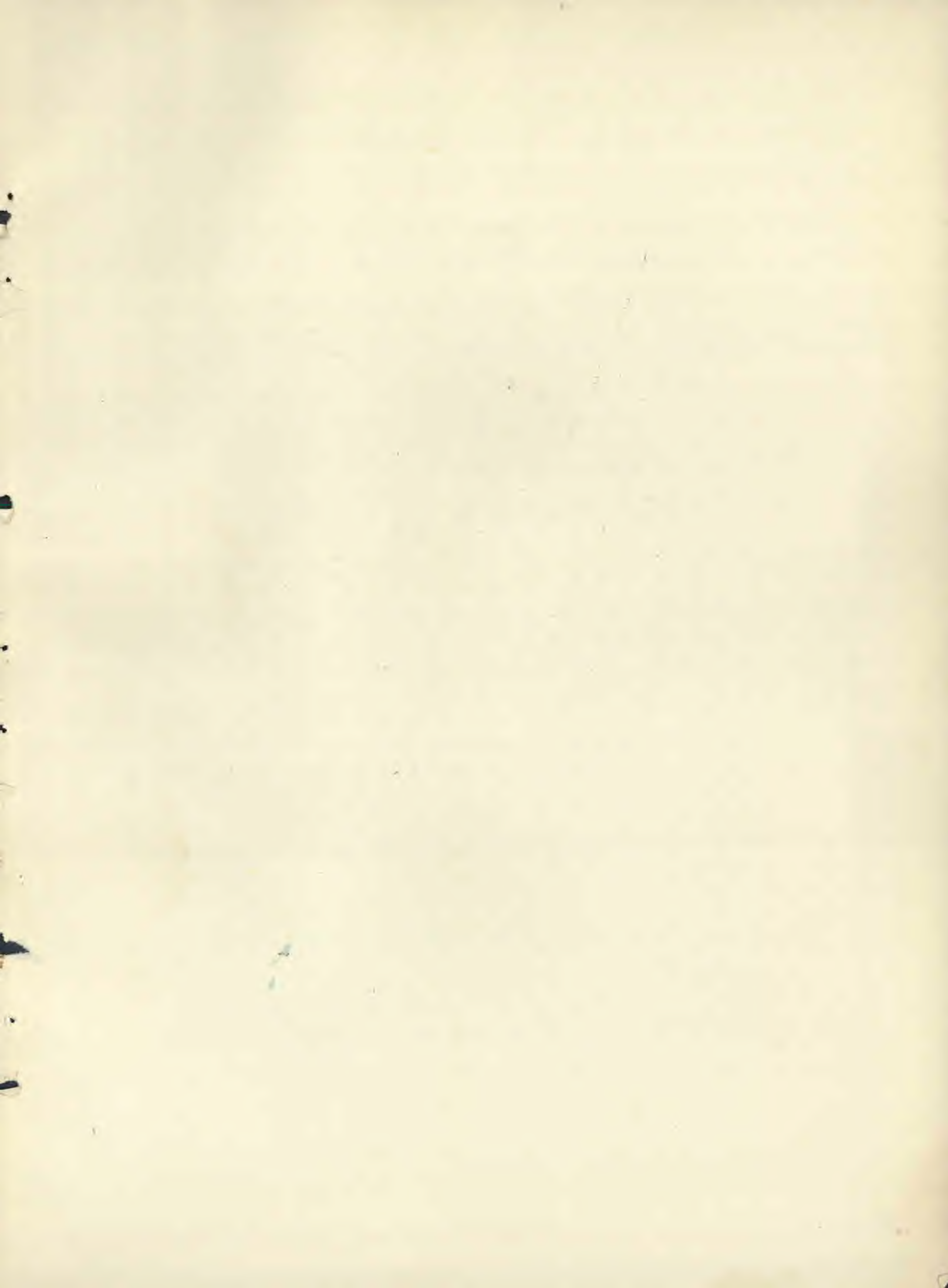
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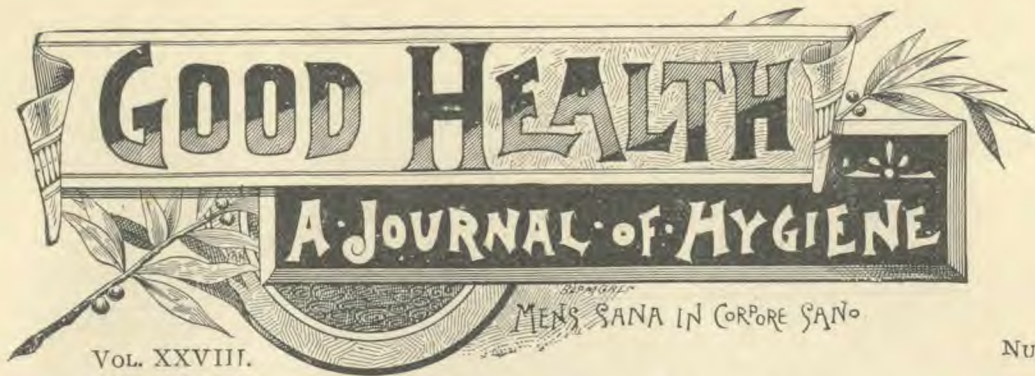
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AN INDIAN FAMILY.



Vol. XXVIII.

NUMBER I.

BATTLE CREEK MICHIGAN

JANUARY, 1893.

INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

Author of "Physical Education," "The Bible of Nature," Etc.

45.—Upper Canada.

THERE is a story of a laborer who was promised "steady employment" if he would apply to the captain of a leaky old steamer, and who found that he was required to work at the pumps steadily for twelve hours a day.

It might be questioned if the "steady frosts" of Upper Canada are much more pleasant than the variable climate of the coast-lands, and on the Red River prairies there are migratory farmers who get homesick for their native woods on the coast of New Brunswick, where weeks of mild weather in the middle of January are nothing exceptional.

But "Canada West," in its present extent, is quite as large as European Russia, and, like the dominions of the Czar, comprises all sorts of territories, including a warm-weather strip along the coast of lakes Erie and Ontario. That lake region is indeed the Goshen of Canada, and at one point reaches down to the forty-second degree of northern latitude—the parallel of Naples and Madrid. From Kingston West, the lake shore is studded with towns and prosperous farmsteads. Their growth is less rapid than that of their south-shore rivals, but if colossal fortunes are not made in a day, abject poverty is equally rare. Brooklyn has been called a city of churches, but Toronto can found as proud a claim on the negative distinction of being a city without slums. Her workmen's cottages form a pleasing contrast to the tenement coliseums of our seaport towns, and her charitable institutions are models of cleanliness and comfort. Hamilton, some forty

miles farther west, realizes William Penn's ideal of a "green country town," public and private parks alternating with business streets, garden suburbs gradually blending with the wooded uplands. The lake shore here is flanked by picturesque ridges, and tourists who enter Canada at Niagara Falls are as agreeably surprised as travelers who get their first impression of the Russian Empire at Sevastopol,—sunny, pine-crowned heights at the border of the boundless steppes.

That garden belt continues along the coast of Lake Erie. Prettier farms cannot easily be found anywhere on this side the Atlantic. Their management forms the extreme antithesis to the wolf tenure of the prairie squatter, who exhausts the fertility of his ranch with the premeditation of moving farther west in a couple of years. The Ontario farmer has come to stay, and his homestead proclaims that fact by a massive stone wall and stately fruit trees. Water so near the base of the drainage slope, can be struck almost anywhere at a depth of twenty feet, and there is a good well at the house, and another at the stable, and perhaps a third in the pasture. Good roads lead down to the lake landing on one side, and on the other, up to the primitive wilderness of the hills, with their abundant supply of cheap fuel.

"What lacks this knave,  
That a king should have?"

the sovereign visitor from the south side of the lake may ask himself, but the loyal granger who celebrates the birthday of the Queen, is at heart a freeman, and

can challenge the record of the stoutest republicans in the defense of personal liberty and the prompt repression of bureaucratic insolence. The farmers of southwestern Ontario are too well contented to offer an inviting field to the emigrant agent, and in the ardor of their patriotism, go so far as to prefer their climate to that of the opposite lake shore,—a frequently repeated assertion, defended on the ground of the two following, rather plausible, arguments: The Canadian shore of the two lakes (Erie and Ontario) slopes due southeast, and then gets the full benefit of the morning sun (the afternoons being warm enough anywhere to take care of themselves); and



TRADING-POST ON LAKE WINNIPEG.

the trend of the shore hills shelters the valley farms against the sweep of the fierce northwest winds that strike with full force against Uncle Sam's side of the lakes.

The apples shipped from Fort Stanley are indeed hard to beat, and the grapes of the Chatham district are not easily distinguished from the best Kelly Island varieties; but as a rule, the soil of the north shore is a little shallow, and a couple of miles from the lake beach the hills are seamed with the cliffs of the Laurentian strata, the oldest rocks of our planet, as hard as flint, and forming continuous ledges, hundreds of feet wide. Abundance of good springs and freedom from insect plagues compensate for the sterility of the uplands (which, after all, produce

grain crops sufficient for home consumption), and the farmers, as a class, are thrifty and temperate. The Montreal *Messenger*, a fortnightly temperance journal, has a considerable circulation in the rural districts of the Province of Ontario.

The steamers starting from Collingwood, a hundred miles north of Toronto, cross an archipelago fully matching the charms of the Thousand Islands, and lacking nothing but a milder climate to make Georgian Bay the most attractive aquatic pleasure ground of this continent. Not a thousand, but tens of thousands of islands, from the size of a bench to that of a principality, rise from the depth of the deep blue bay, all the larger ones densely wooded and abounding with waterfowl. On Manitoulin Island (sixty miles long) there are rabbits and squirrels, and good fishing can be had in all of the deeper channels of the east island labyrinth; but the fun ends in October, when the frost blizzards come howling from the plains of the frozen Northwest, and a few weeks later navigation closes, and does not open again before May, when the frost king at last relaxes his vigor, and whole landscapes of drift-ice crunch their way through the straits.

In winter, snow falls sometimes to a depth of three feet, and at the rather sudden advent of spring, turns the woods into a chilly quagmire; but that very time of the year is the harvest season of the backwoodsmen, who move *en masse* to the "sugar-camps," manufacturing syrup and brown sugar as long as the sap of the maple trees can be made to run. A family with three stout boys can collect from two to three hundred gallons of syrup in a season, and the profits of the business would be considerable, if the manufacture of artificial maple sugar had not become a regular industry of scandalous proportions. In Chicago alone a million gallons of the vile compound are turned out every year, and shipped in dainty cans, with a label representing a maple grove and a gang of industrious backwoods dwellers. The contents of the can are less attractive: a watery treacle with an unmistakable drug taste, but the difference in the price bribes thousands of grocers to connive at the fraud. Some forty American firms are said to be engaged in the ugly business, nearly every one of them with a trade-secret recipe of its own, though the more deleterious methods of adulteration have been discontinued since the discovery of the curious fact that the semi-medicinal taste of genuine maple syrup can be closely imitated with a decoction of young hickory leaves.

After the steamer has passed the strait of St. Marie,—the *Sault*, as the Canadians call it,—the

change of climate asserts itself in a dryer and keener breeze, and a greater transparency of the atmosphere. The water, too, becomes clearer, as the lake deepens. That depth, at some points, exceeds a thousand feet, and the superficial area of the lake is 32,000 miles—more than the entire Russian monarchy at the time when the great Frederick defied the armies of a world. The basin of that inland ocean is computed to contain 750,000,000,000 gallons of water, every drop of it pure, cold drinking water. Together with the four lower lakes, the Canadian Sea is nearly as large as the Caspian, but the marine character of the great Asiatic lake is established, not only by its salti-

front room with the parlor, and big mosquito bars over every bed. The buzz of the little vampires is heard by night and day, the countless myriads of competitors evidently obliging individuals to change the program of their eastern relatives, who limit their enterprise to a special time of the twenty-four hours.

If it is true that malaria and the contagious principle of yellow fever can be communicated by a mosquito bite, the frost of the lake shore region may be a blessing—though a blessing in a pretty effectual disguise. In clear winter nights the thermometer sinks to forty-five degrees below the Fahrenheit zero, and the backwoodsman, buried under an eighteen-inch stratum of blankets, may often hear the rafters of his roof snap with the noise of a pistol-shot. The hardest frosts are recorded during a dead calm, but the cold is felt much more severely when a temperature of twenty or twenty-five below zero coincides with a blizzard,—a northwest gale, raging with unabated fury for three days and three nights. If such gales come in the form of a snowstorm, the roads get almost impassable, and the old residents of the Sault still remember the time before the completion of the Minneapolis railway line, when rich and poor had to content themselves with two mails a month, brought on dog-sledges by Indian runners from Pere Marquette.

Sanitarians are agreed on the general proposition that bedroom

stoves should be permitted to cool before night, but such rules are modified by the change of circumstances, and in northwestern Canada the detrimental tendency of that sin against the health laws of nature is pretty sure to be neutralized in five out of ten winter nights. The fierce cold expurgates the atmosphere of the bedroom in spite of double walls and double-heated stoves, and the sleeper (if not awakened by the bursting of his water-pitcher) may enjoy a good night's rest under a stack of Mackinaw blankets, reinforced by a French-Canadian feather quilt.

Some forty miles west of Lake Superior the woods open, and the Canadian Pacific Railway crosses a thousand-mile stretch of dreary plains, redeemed only here and there by a fringe of timber along the banks



MANITOBA INDIANS.

ness, but by the fact that it swarms with seal, a circumstance indicating its former connection with the Mediterranean, while Lake Superior may have burst the barriers of the eastern straits at a comparatively recent geological period.

The rainfall is not excessive, and it is strange that the shores of the clear, cold sweet-water ocean should be lined on both sides by an almost continuous mosquito haunts. Winter frosts, evidently, do not affect the vitality of gnat eggs. About the end of May the forests near Sault Ste. Marie begin to resound with the hum of tipular insects, and gnats are more and more troublesome till the middle of July, when their increase obliges the natives to turn every house into a mosquito fort, with double doors, closely screened windows, special screens for the door connecting the

of a shallow stream. But wherever a number of such streams unite to form a perennial river, the summer heat ripens enormous wheat crops, which during the last two years almost overtaxed the transporting capacity of the railroad.

In the combination of heat and moisture that form the basis of all vegetable life, moisture would almost seem to be the more essential factor, at least south of the sixtieth parallel of the northern hemisphere, and several hundred miles north of the Canadian Pacific, the hills are once more covered with a dense growth of forest trees, wherever the trails approach the shores of Lake Winnipeg.

The wheat belt here borders the territory of the fur trade, where hunters and trappers still eke out an existence not much more precarious than that of the

farmer on some of the drought-cursed uplands. A good many Indian tribes have here likewise solved the problem of survival more successfully than their southern brethren.

The quiet firmness that makes the Anglo-Saxon a model manager of colonies has benefited the poor aborigines by protecting them against the greed of unscrupulous traders and landsharks, as well as against the curse of the liquor traffic. In their management of domestic animals, many farmers act upon the principle of health laws which they ignore in the education of their own children, and a similar wisdom by proxy has induced many bibulous agents of the Hudson Bay Fur Company consistently to oppose the sale of fire-water to the Indian trappers visiting their trading-posts.

(To be continued.)

NIGHT AIR.—Before we can hope to fight consumption with any chance of success, we have to get rid of the *night-air superstition*. Like the dread of cold water, raw fruit, etc., it is founded on mistrust of our instincts. It is probably the most prolific single cause of impaired health, even among the civilized nations of our enlightened age, though its absurdity rivals the grossest delusions of the witchcraft era. The subjection of holy reason to hearsays could hardly go farther. "Beware of the night-wind; be sure and close your windows after dark!" In other words, Beware of God's free air; be sure and infect your lungs with the stagnant, azotized, and offensive atmosphere of your bedroom. In other words, Beware of the rock-spring; stick to sewage.

Is night air injurious? Since the day of creation, that air has been breathed with impunity by millions of different animals—tender, delicate creatures, some of them—fawns, lambs, and young birds. The moist night air of the tropical forests is breathed with impunity by our next relatives, the anthropoid apes—the same apes that soon perish with consumption in the close though generally well-warmed atmosphere of our northern menageries. Thousands of soldiers, hunters, and lumbermen sleep every night in tents and open sheds without the least injurious consequences. Men in the last stage of consumption have recovered by adopting a semi-savage mode of life, and camping outdoors in all but the stormiest nights. Is it the draught you fear, or the contrast of temperature? Blacksmiths and railroad conductors seem to thrive under such influences.

Draught? Have you never seen boys skating in the teeth of a snowstorm at the rate of fifteen miles an hour? "They counteract the effect of the cold air by vigorous exercise." Is there no other way of keeping warm? Does the north wind damage the fine lady sitting motionless in her sleigh, or the helmsman of a storm-tossed vessel? It cannot be the inclemency of the open air, for even in sweltering summer nights the sweet south wind, blessed by all creatures that draw the breath of life, brings no relief to the victim of *aërophobia*. There is no doubt that families who have freed themselves from the curse of that superstition can live out and out healthier in the heart of a great city than its slaves on the airiest highland of the southern Apennines.—*Popular Science Monthly*.

IT CREATES A DEMAND.—"That's a mighty poor circular you have to advertise your eye-wash."

"Why?"

"It is so illegible, it gives a man sore eyes to read it."

"Well, is n't that good for the eye-wash?"—*Harper's Bazaar*.

"YOUR husband is troubled with rheumatism, I believe."

"Yes."

"Have n't you tried to get anything to help him?"

"I intend to, but I've kept putting it off. You see, the pains are so handy in letting us know when a storm is coming on. In fact, John is more reliable than the Farmers' Almanac itself."



## HOW TO GET THE BEST.

NOT writing metaphysically, but with an immediate practical purpose, it is easy to regard the mind and the body as two slaves trained to obey the imperial soul, and in such advice as I am to give here, it is convenient to speak thus. It is true that, in this trinity of soul, mind, and body, it is sometimes hard to tell which of the three is at work; and the personality of each of the three parties interferes a good deal with that of each of the others. But if you who read will remember that you are an infinite child of God, and can partake of his nature, and that you have given to you the management and direction of your mind and your body, you will be saved many failures. You will take short steps, often, where else you might take long ones.

For the body, first, sleep, and enough of it, is the prime necessity. Enough exercise, and good food and enough, are other necessities. But sleep—good sleep, and enough of it—this is a necessity without which you cannot have the exercise of use, nor the food. The old proverbs about sleep are all misleading, except indeed, that which says that “a woman who has a young child should get all the sleep that she can.” I am told that different people need different amounts of sleep. Perhaps they do. On the other hand, I know that the average night of the world is about eleven twenty-fourths of the average day. For myself, I long since settled down on ten hours’ sleep in the twenty-four as good for me; and in this, as in all things, I get the best. An hour after lunch or dinner, and nine hours between half-past nine in the evening and half-past six in the morning, make a good division. Strike out the “half-past” if you like; we will not be particular over trifles.

I am told that Napoleon I “got along” with four hours’ sleep out of twenty-four. Perhaps he did; what is certain is that he died at the age of fifty-two, and that his constitution was broken at least five years before that time.

If you lose sleep in any twenty-four hours, make it up as soon as you can.

About food, you will find out soon what you digest and what you do not. The less you think of it the better. Take time enough for your meals, and eat them in company whenever you can. There is no need for hurry in life, least of all when we are eating. . . .

If you mean to sleep, you should not . . . go into any hard brain work after three or four o’clock

in the afternoon. Most people say they want to sleep, but also want to do everything else conceivable, up to the moment of taking off their clothes. But this is absurd.

The open air, and enough of it, every day, rain or shine,—this is another necessity for sleep and for digestion, and for any brain work which shall be good for anything. I have never made any rules for exercise, however, excepting this general demand for the open air. A man in health ought to be able to walk six miles a day without feeling tired. But I fancy that it is rather a matter of time in the air than of physical exercise. Thus ten miles in an open horse-car or a wagon seems to answer as well as six miles on foot.

For body or mind, I do not believe in getting tired for the sake of resting, like the negro boy who stubbed his toe because it felt so good when the pain ceased. Of course a man has to get tired sometimes in the line of his duty. But work of a tired brain is useless, and it is a pity to overstrain a tired body if you can help it.

You should never sit down to the table to eat when you come in from work dead tired. Lie down for ten minutes first. . . . But, before you eat, wait till the machine is a little rested or refreshed.

So much for the physical machine. Of mental operations we know less of the methods, but we do know some results.

For literary men, the same rule is laid down by Walter Scott and by Bulwer-Lytton, both, as to the daily maximum of real work. They were very different men, yet each of them says that three hours’ work is all that is good for anything. An English commission of high authority says that a child’s capacity for learning is at an end after three hours. I believe this is quite true. That is one reason for saying that you need not hurry about anything.

While you work, stick steadily to what you have in hand, if you can. Nothing is more fatiguing than a change of subjects. It is horrible to have to write twenty letters, on twenty subjects, at one sitting. Yet this is what modern barbarism, with its invention of the post, demands of us.

As above, never work the brain when it is tired, if you mean to do good work.

As above, again, never work the brain on intricate work after three in the afternoon, if you mean to sleep.

Reduced to practice, these rules would come out,

in a vigorous life, somewhat thus: You rise and bathe and dress so as to be at work about half-past six, or a little later. . . . Thus you will have one happy hour or nearly that, undisturbed by bores.

For breakfast, take a full hour. After breakfast, an hour's loafing. You must not work the brain till the digestion has well begun. Read the newspaper, or go out in the garden, or hang the picture which Mark gave you yesterday. Most men have to go to their business at this time, so they get an hour of air and exercise without much brain work.

Thus you come to 9:30 or thereabout. Now you may go to work with a will. If, as I say, you are a man of literary occupation, shut yourself in with your amanuensis, and begin to dictate. The best work of the day is done before breakfast or now. Fortunate for you if you have a sympathetic amanuensis, who knows more than you do, and can follow your dictation without asking how to spell "Seringapatam." At the end of three hours you have done all you can do to any purpose in that day. Now you may unlock the door and let the wildcats, or the tame, rush in. Now you may see the Parsee gentleman with the note of introduction from the English Consul; you may see the Armenian professor; you may see the Koordish pilgrim, the Queen's inspector of education, the returned missionary from Micronesia, your wife's aunt's cousin from Valparaiso, and the rest of them. You may do anything which is

entertaining. But you will not work that brave old brain of yours any more to-day.

Lunch at one, or, if you prefer, dinner at two. . . . Then, a nap for an hour. You must be refused to all these people named above, or their cousins. You will train yourself, in a little while, to kick off the rug and jump up just when the hour has ended.

So we are at three or four o'clock. Now you may walk, or ride, or drive, or row, or stay at home, so you only contrive some way for the hour or two in the open air. And you may read,—read, if you choose, for next day's work, but no figures, no accounts with your tenants, nothing to be called work. Go and see people, if you like. It is a good time to meet for these terrible bored meetings which have taken the name of *Board*. "Boards are made of wood; they are long and narrow." Some people go to afternoon concerts, some to afternoon *tease*.

And so we are at supper—or at dinner, if you called the *prandium* "lunch." For the evening, no work. Not too much reading. Lie on the sofa, and let Rob play to you. Let somebody read aloud Adam's history or Howell's last. Or the door bell may ring, and here are the Pages. How nice! Or the Volksees are at the Tremont. Rest, perturbed spirit, rest! And then you will be ready for bed at nine, or nine-fifteen, or nine-thirty, and hard work to-morrow.—*Edward Everett Hale, in Christian Union.*

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#### VEGETABLE DIET FAVORABLE TO LONGEVITY.

LONGEVITY does not mean decrepitude: decrepitude cannot be sensibly prolonged, but years of sensitive vigor may be added before it. This, says Dr. Southwood Smith, is a fact of deep interest. Indeed, the exact age cannot be fixed at which a man becomes old. Some are older at fifty than others at seventy, and there are cases in which a man who has reached his hundredth year is sensibly no older than most men at eighty. To add ten or twenty years to life does not add this term to the time of decrepitude, but to the time of mature manhood—the time in which the human being is capable of receiving and communicating the largest measure of the noblest kind of enjoyment.

We must assume that there is some normal age at which death is natural to man; an age, therefore, which all might attain, if all lived naturally and were born robust. What, then, hinders the attainment of the full period, besides accidents and violence, and disease from external causes? Among

evil habits we here give prominence to exhausting diet. There is a certain normal rate at which the decay of tissue ought to go on in the body. When decay is more rapid than is normal, the man is *living too fast*, which must necessarily tend to shorten life.

Liebig infers, from a comparison of the secretions of animals, that the decay of tissues is more rapid in the *carnivora* than in the *herbivora*. The experiments of Dr. Fife on human respiration led to the same inference concerning a man fed on animal as compared to a man fed on vegetable food. His conclusion is corroborated by the experience of Mr. Spalding, a professional diver, who noted his consumption of oxygen in his diving-bell, and learned practically that it was his wisdom to avoid flesh meat and spirituous liquors, which caused him to need more oxygen. From another quarter we have casual confirmation. Drs. Marcett, Oliver, and other physiologists attest that chyle elaborated from animal food putrefies more rapidly than chyle from vegetable

food. The general result that we deduce is, that under the more stimulating diet, the human machine is worked beyond its normal rapidity,—a fact which must bring on earlier the time at which the solids become dry, inelastic, rigid, and finally are ossified. This is the term of natural death.

“The more slowly man grows,” says Professor Hufeland, “the later he attains to maturity, and the longer his powers are in expanding, so much the longer will be the duration of his life; as the existence of a creature is lengthened by the proportion of the time required for expansion. Everything therefore that hastens vital consumption shortens life; and consequently the more intense the vital action, the shorter the life. If you would live long, live moderately, and avoid a stimulating, heating diet, such as a good deal of fish, flesh, eggs, chocolate, wine, and spices.” Animal food and all other stimulating diet, particularly in youth, does incalculable mischief, though by such slow degrees that in general the evil is neither perceived nor suspected. The stream of life is hurried on precipitately, the passions are prematurely developed, and, like a plant that has been forced too rapidly by artificial heat and stimulating composts, the organism is exhausted, and it becomes diseased and old when it would, under a more appropriate diet, have been in its perfection.

“It has been established on the best grounds,” says Hufeland, “that our nourishment should be used in form rather coarse, securing full mastication and insalivation, and a longer retention in the stomach. Plain, simple food only, promotes moderation and longevity, while compounded and luxurious food shortens life. The most extraordinary instances of longevity are to be found among those classes of mankind, who, amidst bodily labor and the open air, lead a simple life, agreeable to nature, such as farmers, gardeners, hunters, etc. The more man follows nature, and is obedient to her laws, the longer will he live; the farther he deviates from these, the shorter will be his existence. Rich and non-nourishing food, and an immoderate use of flesh, do not prolong life. Instances of the greatest longevity are to be found among men, who, from their youth, lived principally on vegetables, and who

perhaps never tasted flesh.” “It seems,” says Lord Bacon, in his “Treatise on Life and Death,” “to be approved by experience that a spare and almost Pythagorean diet, such as is prescribed by the strictest monastic life, or practiced by hermits, is most favorable to long life.”

It is said that in no part of the world (in proportion to its population) are there more instances of extreme longevity than among the Norwegian peasantry, who scarcely ever taste animal food. In the severe climate of Russia, also, where the inhabitants live on a coarse vegetable diet, there are a great many instances of advanced age. The late returns of the Greek Church population of the Russian empire give (in the table of the deaths of the male sex) more than one thousand above a hundred years of age, many between one hundred and a hundred and forty, and four between one hundred and forty and one hundred and fifty. It is stated that to whatever age the Mexican Indians live, they never become gray-haired. They are represented as peaceable cultivators of the soil, subsisting constantly on vegetable food, often attaining a hundred years of age, yet still green and vigorous. Of the South American Indians, Ulloa says: “I myself have known several, who, at the age of a hundred, were still very robust and active, which unquestionably must in some measure be attributed to the constant sameness and simplicity of their food.” Both the Peruvian Indians and the Creoles are remarkably long-lived, and retain their faculties and vigor to a very advanced age. Slaves in the West Indies are recorded from one hundred and thirty to one hundred and fifty years of age.

We cannot bring the argument to a scientific demonstration unless we could compare vegetable feeders with the feeders on animal food, in regard to longevity, *with all the other circumstances the same*. Nevertheless, it is clear that eminent physiologists and able, impartial inquirers have been impressed with the belief that a vegetable diet *tends* to longevity. Flesh eaters—nay, intemperate eaters and drinkers—are sometimes long-lived; but we are justified in saying that they would have lived *longer still* on a wise diet.—*Prof. Francis Newman.*

TEMPERANCE FOOTBALL PLAYERS.—At the presentation of the Yorkshire Challenge Cup, at Huddersfield, England, recently, in the presence of 25,000 people, eight of the Hunslet football team refused to drink out of the cup which was filled with champagne.

*Dr. Magnus* (prescribing for an infectious case)—“You must at once see that the patient is completely isolated, nurse.”

*Nurse* (old school, stumbling over the word *isolated*)—“Yes, sir. But about how much ice would you advise me to get, sir?”

## OVERWORK AND ITS GREAT OBJECT LESSON.

THE many recent deaths among public men, due apparently to overwork, have been the subject of a good deal of discussion among physicians in this country. According to some physicians who have made a life study of nervous diseases, the extent to which mental overwork is undermining the health and understanding of public, professional, and business men, is worthy of the most careful consideration.

The cases of overwork are so numerous that societies have recently been formed in cities for the purpose of inducing men to pledge to take more recreation. No later than last month, a society was formed in Boston for this purpose, and a trip was arranged by steamer to New York. One of the members failed to appear at the appointed hour, and the entire society marched down to his business place in a body, and despite his protests, carried him bodily to the steamboat and made him pay a heavy fine, which was used to hire an orchestra to entertain the members on the trip. Such a society would be a lasting benefit in every city in the land, and it would be a good thing for the national health if every professional, public, and business man in a community was compelled to join such a society.

The number of cases where men break down from overwork is increasing to an alarming extent. I attended a case yesterday where a man collapsed because he had insisted on overworking himself. Take, for instance, the case of a certain railroad man I saw the other day. He told me he only ate two meals a day, and when I asked him if he never felt hungry, he replied that he did sometimes, but he really had no time to eat. Here was a man who, instead of taking a rest at midday, and a good square meal—which, by the way, is the proper time to eat a big meal—worked his hardest. Most business men go out and hastily eat a lunch. Here is where a newspaper is one of the greatest blessings on earth. When a man reads his newspaper at breakfast, he can be sure that he is eating slowly enough.

The first evidence that a man is overworking himself is lack of concentration. He will find that he cannot think connectedly, and that he cannot sleep. After this, if the warnings are not heeded, comes the complete collapse; and the man who persists in his unwise course, dies at a time when he should be at his prime.

Men may live for many years in comparative comfort, and be able to do a reasonable amount of work,

with diseases of the liver, heart, or other organs, as long as they are not subject to any unusual mental or physical strain. One of America's most distinguished physicians died a few years ago at the age of 82, and was found after death to have advanced disease of the kidneys, which had not been suspected, but the last twenty years of his life were free from strain.

It is almost impossible to present in orderly array all the symptoms which may be regarded as the indications of nervous exhaustion, and the probable precaution of premature disease, from brain strain and overwork. These symptoms, indeed, will vary somewhat with the individual—with his hereditary tendencies, habits, and surroundings. There are, however, certain common and positive evidences of existing or coming evil, which are present in many cases. The most prominent of these early warnings, which are at the same time symptoms of the affections or conditions most conveniently termed acute neurasthenia, are as follows: 1. Certain physical symptoms, such as excessive irritability of temper, depression of spirits; morbid impulses and fears; constantly recurring thoughts, phrases, or suspicions; sense of effort; impairment of memory and attention; and change in habits and methods of mental work. 2. Laxity or immobility of countenance. 3. Diminution or loss of physical resisting power. 4. Heart failure. 5. Sleeplessness. 6. Pain or distress in back of the head and neck. 7. Nervous dyspepsia.

Intellectual work of itself does not injure health or shorten life, but mental overwork, particularly when associated with emotional strain, is a frequent cause of nervous break-down and premature disease.

The average longevity of men in the higher walks of public life is less in this country than in England. Politics here is not, as there, in the best sense a vocation; and our public men in many cases succumb in health, or fail to attain long life, because they go into careers when they are unprepared by inheritance, education, and training for the severe demands to be made upon their powers.

Health and life are sometimes lost through forgetfulness of the fact that mental strain and overwork are particularly dangerous to those in middle life or advanced in years who attempt brain work and responsibilities to which they have not been accustomed. The effect of suddenly imposed mental strain on these classes is especially disastrous.—*Set.*

## MENTAL DYSPEPSIA.

BY J. H. KELLOGG, M. D.

It is doubtless true that very many people read too much. Not that they devote too many hours to the perusal of books and newspapers, but that they endeavor to cover too much space in a given time. While they read, they do not "mark, learn, and inwardly digest," but bolt their mental food much as the glutton devours the material provision set before him. They rapidly skim over the matter in hand, gathering, as they think, the salient points thereof, though, in reality, they miss and reject many sweet morsels that lie between the more sensational portions. They are great—indeed omnivorous—readers, and are always ready to resort to a book or newspaper for recreation, or to "pass away the time," but rarely, or never, for securing information, except upon the current events of the day. They have "heard of" almost everything; but ask them to impart some definite knowledge concerning some subject, and it will be found that they have only heard of it.

Of real solid ideas they have but few; of glimmerings of ideas, many. They hold in their minds a brief and unsatisfactory epitome of the most important events in the world's history, and some of the arts and sciences; but they would be utterly unfit to teach even a child the story of our own national struggles for freedom and existence, or to tell why the days are long in summer or short in winter. The natural consequence of this irrational mode of reading—or rather, cramming—is mental dyspepsia. The facts and arguments and illustrations that should be stored and retained in the memory, to furnish mental brawn, muscle, and blood, are forced through the brain, and leave but little trace behind,

save remembrance of an interminable string of words, the power and meaning of which have been lost.

This continued, the mind becomes more and more diseased, and the result is mental marasmus, which, in extreme cases, may end in extinction of the reason.

As dyspepsia is one of the most prevalent of the disorders to which the human frame is subject, so is this mental disorder the most frequent that attacks the human brain. It prevails in all classes of the reading community, though most frequently found among that semi-literary class whose education raises them a little above the ordinary level, while it does not fit them to be leaders among the world's workers and thinkers. They have learned enough to give them a great craving for more, and fancy they are adding to their stock of knowledge by taking into their brain, through the eye, the mere forms of words on the printed page.

As in the physical ailments, so in the mental, the best remedy is temperance, or abstinence, and robust exercise. If one finds himself afflicted with the complaint, he should at once begin a course of severe discipline. Let him eschew those things that have been most tempting,—read the daily newspapers in moderation only, and begin to study whatever he reads. With his eye upon the printed page, let him master every word he sees there, and not trust to the context "to give the sense of it." Aside from that which may be his special object of study, let him choose only the best authors, who will give him well-cooked food, instead of the fantasies of disordered imaginations. A few months' steady regimen of this sort will afford great relief, and go far toward effecting a permanent cure.

## CHEAP DOCTORS.

A CORRESPONDENT sends us the following clipping from the *Fairfield (Maine) Journal*, describing a very remarkable case, and desires that we shall make a prescription for the benefit of those who are similarly afflicted:—

"One of our physicians received the following letter from a country physician: 'Dear dock I have a pashunt whose phisicol sines shoes that the wind-pipe has ulcerated of, and his lungs have drop into his stumick, he is onable to swoller and I feer his stumick tube is gone. I have giv hym everything

without efeckt, his father is welthy onerable and inffienshal, he is an active member of the church and God nose I do n't want to loos hym, what shal I due ans. by return male, yours in need.'"

In this case, it seems to be the doctor who needs the prescription quite as much as the patient. Our prescription would be, ten years in a public school, five years in a college, four years in a medical school, and then retirement to a secluded place in some vast wilderness. The case reminds us of an article we read in the *Medical Journal* a little time ago, written

by a doctor who was complaining of the lack of intelligence upon medical subjects manifested by the laity, and of the great number of superstitions held respecting medical matters entertained by the common people. Rising to an eloquent pitch in dealing with this subject, the doctor exclaimed, "For example, the *vox populi* believe," etc., expressing subsequently his disgust that any intelligent being could be so ignorant as to entertain such an absurd notion. Another doctor complained of "hifalutin" physicians who use Latin in writing their prescriptions, and exclaimed with great unction, "Let the dead languages remain with dead people; modern medical science has no use for them. Some of these

outlandish terms are enough to frighten a sick man to death; for example, there is '*E Pluribus Unum*,' which sounds like 'A Sure Killer Every Time,' and I have cured many a case under the simple name of 'pleurisy.'"

There are quite too many of this class of medical men in this country, which seems, of all countries in the world, to be the paradise of quacks and ignorant medical pretenders; but so long as "people like their doctors musty, like their cheese," as the "Autocrat of the Breakfast Table" puts it, this class of men who are wholly unworthy to bear the name of doctors or physicians will have abundant opportunity to gain a livelihood.

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### HOW TO REST.

It is strange that one of the most difficult things to understand is the needs of our physical natures and the relations of mind and body. Bound together by the most mysterious, the most intimate and controlling ties, there is yet nothing more common than an utter ignorance and disregard of their mutual needs. As one has remarked: "It takes the better part of a lifetime to get acquainted with ourselves, and happy and fortunate are we if we do not kill ourselves in making the acquaintance." Under the ordinary conditions of life, mere existence ought to be a pleasure, while the amount of labor required from each in order to earn his living ought to be only a pleasurable exercise of our faculties. But instead of finding life generally conforming to these conditions, we find that the majority of people groan beneath the yoke of toil and care. Our bodies break down from being driven and overtaxed by the mind; our brains become disordered and insane from the incessant anxiety and effort of keeping the body at work. And when the human frame finally succumbs to the effect of all this mismanagement, how few there are who know how to place themselves in conditions of recuperation. How few know how to rest.

Real, effective rest comes through the brain. Rest of body will be of small effect if the brain does not concur. We all know that nothing is more fatiguing than the condition where the body is unable to fulfill the mandates of the brain, when the anxiety to do is not responded to and accomplished by the body. We often hear a man of business complain that things have gone wrong, his efforts have been fruitless, and that consequently he is overcome by fatigue; we often hear the housekeeper declare that she has worked so hard at nothing, that is, she has

accomplished nothing, and that she is tired to death. No condition could be more fatiguing than that of the person who wants to do something but is prevented by physical inability. The muscles and nerves feel more fatigue under such circumstances than they would after performing the actual toil. This is the condition called worry, and nothing wears out the strength so rapidly. This may be the condition of the mind when the body is compulsorily idle, but it is the farthest possible removed from the condition of rest.

As one of the most imperative conditions of rest, must come a mental acknowledgment of its need and contentment in taking it. Many people are not certain whether they are tired or lazy; they cannot tell whether it is lack of energy or real fatigue that indisposes them to exertion. Such a state of doubt should be solved at once, and the conduct regulated accordingly. A most fatiguing day may result from the mere absence of stimulus to work; a day of lounging is also fatiguing; neither of these conditions gives rest, and this should be understood. On the contrary, a most restful condition is compatible with the performance of light, entertaining employment. No mistake is more frequently made in regard to the convalescing sick than to require of them the absolute non-employment of hand or brain on the supposition that this is rest, when, in fact, it produces the most trying condition of fatigue. Before a person can rest, he must understand whether his fatigue comes from doing nothing or from doing too much; and he must regulate his condition and actions accordingly. He may need a rest from doing nothing.

Having ascertained that too great activity or care

in any direction causes overfatigue, the next thing necessary is the acquiescence and approval of the mind to the taking of rest. No one can rest who allows the feeling that he ought to be at work to predominate in his mind. Let reason come to the aid in this; if rest is needed, one should compel one's self to take it in some way. Do whatever you like, or do nothing, only do n't drive yourself;

exact nothing of your energy, or will, or vivacity even. Relax every tension of both body and mind. Do what you want to, whether it be to laugh, sing, lounge, muse, sleep, or sit on a rail fence and see how green the grass is and how blue the sky. As a last injunction, let me beg you to suffer things to go undone, and do n't fret; cultivate repose; learn how to rest.—*Union Signal*.

SATAN'S SHARE.—There is an ancient fable which tells us that while Noah was planting the vineyard, the devil approached him, and inquired what he was doing. "Planting a vineyard," replied Noah. "Hum!" grunted Satan, "what's the use of a vineyard?" To which Noah gave answer that "its fruit is sweet and good, and its wine gladdens the taste." Whereupon Satan, seeing here a good chance for speculation, proposed that they work it on shares, which was agreed upon, and immediately the devil brought a lion, a hog, and a monkey, and mingled their blood with the soil. Therefore, if a man eats only of the fruit of the vineyard, he is as innocent as a lamb; if he drinks wine, he imagines himself a lion, and falls into mischief; if he drinks habitually, he becomes as selfish and unmannerly as a hog; if he gets drunk, he jabbars and jumps about, and is silly and nasty, like a monkey.

HOME-MADE SICKNESS.—Were it not that the human constitution has an enduring quality compared with which the toughness of the mule is sweet, infantile tenderness, the atmosphere of the city home in cold weather would make the city lively with funeral processions. A visitor needs merely to pass the front door of most houses to discover odors that do not seem traceable to any particular article, yet which have an oppressive effect upon respiration; sometimes a similar effect is experienced where no odor is perceptible. Occasionally the residents of a house, returning from church, theater, or party, notice this peculiarity of the atmosphere, and promptly say all sorts of bad things about the plumber, who probably deserves them all; but no one seems to think that the air of the house should be changed once in a while during the winter.

The air of an unoccupied house, with no connection whatever with the sewers or other sources of disease, is utterly unfit to breathe; for it is continually being robbed of its oxygen by carpets, furniture, floors, walls, and everything else that is sus-

ceptible of decay. What, then, must be the condition of the atmosphere of a house where half a dozen people and an equal number of gas-burners or lamps are daily assisting at the work of de-oxygenating the air and loading it with impurities?

There are many houses in which people who are cold would be warmed quicker by having a window open for two minutes than by hugging the fire; for impure air greatly lessens physical warmth. But who ever sees a window open in New York, even for a minute, unless for the purpose of being washed? Continuous ventilation is never thought of by more than one builder in a hundred, so but few people can hope always to breathe pure air indoors in cold weather. An occasional opening of doors and windows throughout the day, however, the work being done most thoroughly just before bedtime, would put an end to thousands of cases of sickness and debility that come from no cause but impure air.—*New York Herald*.

QUACK ANATOMY.—A quack doctor stood on his wagon at the street-corner, selling his cure-all. A group of people gathered about him, and he undertook to explain to them the anatomy of the throat. "My dear friends," he began, "perhaps you do n't know it, but there are two passages that go from the back of the mouth to the stomach. One is called the œsophagus and the other œsophagi. Now, the solid victuals go down the œsophagus, and the liquids down the œsophagi. Over the top of the holes is a cover with a hinge in the middle, and when you swallow beefsteak the little door over the œsophagus flies open, and the little door over the œsophagi drops down, and *vice versa*, when you take a drink."

The description proved too much for a farmer who stood on the edge of the crowd. Shaking with laughter, he remarked, "Oh my! but those doors must go flipper-flopper when a fellow eats bread and milk!"

MANV dishes make many diseases.—*Pliny*.



# THE HOME GYMNASIUM

## BICYCLE RIDING.

BY J. H. KELLOGG, M. D.

THE rapidity with which the bicycle has won its way into popularity, even in this country of bad roads, is quite unparalleled in the history of any other previous innovation in methods of travel or locomotion.

Bicycle riding is doubtless made by some a dissipation, but that it is one of the most healthful forms of physical exercise will not be disputed by any one who has any practical knowledge of the art. There is something exhilarating and enticing in the ease with which one glides along over a road of reasonable smoothness, which leads one to muscular exertion to an extent that would be quite impossible in ordinary walking, or almost any other form of exercise not accompanied with the excitements of a game, such as lawn tennis or football. The machine constitutes a sort of companion to the individual, and relieves the hour of exercise of the unbearable tedium attached to the simple constitutional walk taken for health's sake.

If you possess the amount of moral stamina necessary to take, regularly and systematically, each day, the requisite amount of exercise in the form of walking, or set exercises to be executed in the chamber or in a gymnasium, such a mode of exercising may be maintained with reasonable regularity for a few weeks, or even months, but the monotony of the task becomes unendurable, and one ceases to appreciate the benefit from the exercise which was at first easily recognizable. Mounted upon a good bicycle, however, especially one of the latest pattern, suited for ordinary rides by means of the pneumatic tire, one heartily enjoys a ride of six or eight, or possibly a dozen miles or more, even after a hard day's work ;

he comes back exhilarant, with pure blood, cleaner tissues, and a clearer brain, in consequence of the greatly increased activity of the lungs and skin, and prepared for a few hours' evening work if necessary, or for the soundest possible sleep, and through it, rest, the most complete recuperation and preparation for another day of effort.

One great advantage in bicycle riding as a means of exercise, of which we do not recall having seen mention, is the physiological relation between the movements of the legs and the activities of the lungs and heart. Violent effort of all kinds results in excitement of the lungs and heart. The excessive amount of blood brought to these organs during violent exercise, is one of the causes which give rise to the hurried respiration, rapid pulse, and often urgent and unpleasant demands for air.

In making a violent effort, there is always a disposition to hold the breath during the height of the effort, thus affording opportunity for an additional increase in the blood and tissues of the poisons which nature is endeavoring to hasten out of the body through the increased activity of the heart and lungs.

This fixation of the muscles and chest, technically known as "strain" or "effort," is especially marked when the arms and shoulders are chiefly involved in the exercise performed. The close relation of the bloodvessels of the arms to the heart and chest, together with the fixation of the chest muscles above referred to, tends greatly to increase the effect of the exercise of the arms and shoulders, in causing disturbance of the action of the heart and lungs, in other words, in producing quickened pulse and shortness of breath.



Movements of the legs, on the contrary, while producing greatly quickened heart activity and labored breathing when executed with great force and rapidity, cause this influence in a lesser degree than do similar movements of the arms.

A further point, which is of the greatest importance, is this: It has long been known that slow movements of the legs have the contrary effect, viz., a quieting influence upon the movements of the heart and lungs. This is due to the fact that the legs are so remote from the lungs and heart that the increased amount of blood brought into the muscles as the result of movement, relieves the pulmonary congestion; and at the same time, such movements, owing to the fact that the muscles of the legs are attached to the bones of the pelvis and not to those of the chest, leave the lungs and heart perfectly free to act; while movements of the arms, when of any considerable degree of violence, hamper the movements of the lungs and heart, owing to two important facts; viz.,—

1. That the large muscles of the upper arm are connected with the chest, and require fixation of the chest walls in efforts in which their full power is exerted.

2. That when the breath is held, the compression of the air within the chest cavity reacts upon the heart, compressing it, and thus seriously interfering with the natural course of the circulating blood.

This influence of slow leg movements in quieting the heart and lungs when unduly excited, is constantly employed in the admirable system of exercises known as Swedish gymnastics, in both educational and medical forms. The daily program of exercises in Swedish educational gymnastics, is purposely so arranged that the movements of the legs follow those of the upper extremities, especially movements calculated to excite violent activity of the heart and lungs; and in Swedish medical gymnastics, the slow leg movements are often depended upon as a means of quieting an irritable or excited heart, and relieving the congestion and other functional embarrassments of the lungs.

Except when riding very rapidly, the movements of the legs in bicycle riding are slow and regular, and do not require a sufficient amount of effort to necessitate holding the breath, especially when the rider has become sufficiently accustomed to the exercise to be able to dispense very largely with the use of the arms in controlling the machine, so that, although the heart and lungs are now and then thrown into violent activity by short spurts from a ride up a steep grade or through a section of sandy

road, the violent activity is quickly quieted by the slow leg movements which follow while riding over a down-grade, or slowly rolling on a smooth surface. It is this fact which accounts for the observation that a person in riding a bicycle may put forth an amount of effort which would leave him completely exhausted if the outlay of force had been expended from the muscles of the arms and shoulders, and yet finds himself fresh and ready for a considerable additional amount of exercise, if desired or required.

Another conspicuous advantage gained in bicycle riding, is the exercise in balancing, which is necessitated by this form of exercise. The beginner recognizes at once the little control which he possesses over his balancing muscles. He may understand perfectly well the theory of bicycle riding, and yet not be able to keep his seat upon the saddle more than half a minute, because of his inability to command instantly and automatically the muscular activities necessary for the constant readjustment of the balance involved in maintaining a perpendicular position upon so narrow a base as that afforded by a bicycle wheel. This ability can only be acquired by actual practice. The muscles may be strong and willing and ready for instantaneous action, but the nerve centers which command them are quite incompetent to execute the necessary orders, until after they have been trained by practice.

No bicycle rider can fail to remember the great fatigue, and even exhaustion, which followed his first attempts at bicycle riding. This exhaustion was not by any means wholly due to the muscular effort made, as the same amount of effort might have been expended in some other way without experiencing a tenth part of the exhaustion realized. The chief cause of the extraordinary fatigue which accompanies the first efforts at bicycle riding is the unaccustomed labor required of the nervous system in the efforts to preserve the balance in an unaccustomed position and under unusual circumstances.

The amount of effort required when standing upon the feet, although considerable, is very small compared with that demanded for balancing upon a wheel. The unconscious ease with which the balancing is performed after a person has become accustomed to riding is wholly the result of training, and is an evidence of the advantage of bicycle riding as a means of training or educating the nerve centers.

Difficult exercises, that is, those requiring the execution of the balancing movements, are always far more exhausting than those which require nothing more than an expenditure of muscular energy. A person tires much more quickly in walking upon a

narrow surface than in walking upon a broad, level path. The difference is simply in the amount of work required of the nerve centers. This is one of the great advantages of bicycle riding, especially for sedentary persons, as it sets in operation a portion of the brain and central nerve system which is not ordinarily employed in business or intellectual work,

and thus draws away the surplus blood from the overworked and congested brain areas, and affords relief and an opportunity for quick recuperation. So that, altogether, we consider bicycle riding one of the most healthful of exercises, and one to be most highly commended, especially to business and professional men, and all whose habits are sedentary.

A MOMENTOUS TIME.—When Mrs. Spudkins called on her friend, Mrs. Dinsmore, the other evening, she could see at once that something unusual was about to transpire. The latter was dressed in her very best gown, and she bravely tried to repress the tears that came involuntarily as she smiled upon her little daughter, and tried to make the tot happy in a hundred ways that only a mother knows.

"I want her to remember me as she sees me now," said Mrs. Dinsmore. "I want her always to think of her mamma as handsome and sweet. For this reason I have arrayed myself in my very best before I change my clothes and go away from her."

And the mother wept again: but wiped away the tears before the child saw them.

"Mercy!" cried Mrs. Spudkins, as the nurse carried away Mrs. Dinsmore's daughter, "what is going to happen? Are you going to India as a missionary and leave your family here?"

"Oh, no!"

"Are you going to a hospital to die of an incurable disease?"

"No."

"You have n't—you have n't—got a divorce, with child given to the father?"

"Oh, no!"

"Then why all this solemnity of farewell?"

"I am going to take my first lesson on the bicycle!"—*Scz.*

THE EVILS OF SITTING STILL.—Burgerstein refers to the evil results of enforced bodily inactivity in the schoolroom as follows:—

"Dangers of injury arise from too long continued sitting still. The lessening of the respiratory movements has a tendency to produce weakness of the muscles which elevate the upper thoracic segment, and this result has an intimate relation to the beginning of tuberculosis of the apex of the lungs. Bearing in mind the posture of our school population as it sits bent over more or less at its work, the lack of muscular movement, the tension of the mind, the diminished action of the heart and lungs, and remembering also, that these same conditions are almost

exactly repeated in the school work done at home, we can believe that we have here a serious cause in the forwarding of a tendency to lung tuberculosis in our school children, particularly in those who have spent on the school benches the whole period of their growth, until the age of eighteen or more. The evil results of sedentary occupations are well known, even to the laity, and it is more than probable that the first unfavorable impulse is given by the schools.

"As evil results of too long continued sitting still, may be mentioned congestion of the brain, which is particularly favored by the bowed position of the pupil's head, compression of the abdominal region, and diminished action of the respiratory movements. Cerebral congestion thus produced is often accompanied by sluggish action of the mental faculties,—an unfortunate result for successful instruction. Dangerous consequences may result from a continuation of these unfavorable conditions. From their action we may have an active congestion,—an accelerated movement of the blood to the overtaxed brain. These congestions may again be the cause of headache and nosebleed."

WHAT BICYCLE RIDING HAS DONE.—The following is from the editor of the *L. A. W. Bulletin*:—

"What a lesson of to-day was taught the world by the appearance of the wheelwomen at the late L. A. W. meet. The languid airs and graces of a few years ago found no place with them. The dainty bit of femininity that was afraid of a cow and looked at you with appealing eyes if a spider crossed her path, has vanished, and in her place stands a sturdy, magnificently developed wheelwoman, who has perfected her muscles by a course of riding. Her shoulders are broad, her cheeks sunburned, and her grasp strong and firm. She does n't care for anything, defies dampness, and laughs at ailments that she cannot realize, as her frame, strengthened by life in the open air induced by riding, knows no ache or pain. She is not sentimental, yet she is fond of admiration, proving that she is after all only a woman, despite the health and hardihood cycling has conferred upon her."

## BREATH GYMNASTICS.

THE importance of breathing plentifully of fresh air as an essential of health is generally admitted. Well-ventilated rooms, open-air exercises, and excursions into the country are appreciated to some extent by all classes. But the art of breathing is very much overlooked. Being a process not dependent on the will for its exercise, it is too much left to the mere call of nature. It is, however, an act which can be influenced very materially by the will. Properly trained singers are taught to attend very carefully to their breathing.

When brisk muscular exercise is taken, breathing is naturally active without any special effort. But when the body is at rest or engaged in occupation requiring a confined posture, and especially when the mind is absorbed in thought, the breathing naturally becomes diminished, and the action of the lungs slow and feeble. The consequence is that the oxygenation of the blood is imperfectly carried on. Even in taking a constitutional walk the full benefit is not obtained for want of thorough breathing.

As a remedy for this it has been suggested that there is room for what might be fitly termed *breath gymnastics*, to draw in long and full breaths, filling the lungs full at every inspiration, and emptying them as completely as possible at every expiration, and to acquire the habit of full breathing at all times. This mode of breathing has a direct effect in supplying the largest possible amount of oxygen to the blood, and more thoroughly consuming the carbon, and so producing animal heat. It has also the very important effect of expanding the chest, and so contributing to the vigor of the system.

The breath should be inhaled by the nostrils, more especially while out-of-doors in cold weather. This has partly the effect of a respirator, in so far as warming the air in its passage to the delicate air cells and also in rendering one less liable to catch cold.

This full respiration is of so much importance

that no proper substitute for it is to be found in shorter though more rapid breathing. In short breathing, a large portion of the air cells remain nearly stationary, only the upper portion of the lungs being engaged in receiving and discharging a small portion of air.

Profound thought, intense grief, and other similar mental manifestations have a depressing effect on respiration. The blood unduly accumulates in the brain, and the circulation in both heart and lungs becomes diminished, unless, indeed, there be feverishness present. An occasional long breath or deep-drawn sigh is the natural relief in such a case, nature making an effort to provide a remedy. This hint should be acted on and followed up. Brisk muscular exercise in the open air, even during inclement weather, is an excellent antidote of a physical kind for a "rooted sorrow." And the earnest student, instead of tying himself continuously to his desk, might imitate a friend of the writer of this, who studied and wrote while on his feet. Pacing his room, he stopped, as occasion required, to pen a sentence or a paragraph.

Breathing is the first and last act of man, and is of the most vital necessity all through life. Persons with full, broad, deep chests naturally breathe freely and slowly, and large nostrils generally accompany large chests. Such persons rarely take cold, and when they do, they throw it off easily. The opposite build of chests is more predisposed to lung diseases. The pallid complexion and conspicuous blue veins show that oxygen is wanted, and that every means should be used to obtain it. Deep breathing also promotes perspiration, by increasing the circulation and the animal warmth. Waste is more rapidly repaired, and the skin is put into requisition to use the waste materials. Many forms of disease may thus be prevented, and more vigorous health enjoyed. — *Chambers' Journal*.

As a rule, the length of the face is the same as the length of the hand.

THERE is very little doubt but that a large majority of ailments would be removed, or rather, would never have come at all, had the lungs and also the muscles of the man had vigorous daily action to the extent that frequent trials had shown best suited to the man's wants. — *Wm. Blaikie*.

"Who won that long-distance walking match?"  
"Spriggins." "He did; who was his trainer?"  
"His ten-months-old baby."

WHEN God would secure to man the highest, best balanced, most long-continued action of mental and moral power, he does it by giving him a sound physique. — *Mark Hopkins*.



# Home-Culture

## RESPONSIBILITY OF MOTHERHOOD.

BY MRS. E. E. KELLOGG.

THERE is an old saying that "mothers make the world," and in a very great measure this is true. To the mother more than to any other is accorded the power to lead, guide, train, and develop human bodies, hearts, and minds. She it is to whom is given the first opportunity for influencing the man or woman that is to be, the privilege of laying the very foundation stones of its character; and although others may aid in fashioning and moulding its life, it is the mother's blessed privilege to hold the first and highest place.

We sometimes gaze with wonder and admiration upon the creations of the artist or the sculptor as portrayed upon the canvas or chiseled in marble, but how insignificant are these achievements, although the most superior in all the realm of art, in comparison with the work of mothers! The beautiful painting may fade, the lovely statue crumble into dust, but the mother works not upon material which the ravages of time may despoil, but upon the mind, upon the soul which is to bear for good or for evil throughout life the impress of her plastic hand.

There is no prerogative that can compare with that of the mother; and how great, how important, are her responsibilities! How beautiful may be the results, if she but use her power rightly; and on the other hand, what marred and useless lives may result from her failure faithfully to fulfill her high and holy mission! The Scotch have an old proverb that "an ounce of mother is worth more than a pound of clergy." A writer offering a tribute to true motherhood says: "Who can think of the influence a mother wields in the home, and not be impressed with its far-reaching results! What revolutions would take place in our families and communities if that

strange magnetic power were fully consecrated to the welfare of the child and the glory of God!"

There are doubtless few mothers who do not feel something of the solemn responsibility of their position, but many do not appreciate the full extent of it. The children all around us, growing up to manhood and womanhood in idleness and indifference, unrestrained and lawless, attest that there is something wrong with the mothers of this generation,—that they are neglecting their God-given trust.

As I have pondered these things, I have come to believe that one of the chiefest reasons why mothers fail, is that they do not awake to their responsibilities early enough in the life of their children; they think, as they watch their little ones in the cradle, as they hold them in their arms or guide their first footsteps, "When my child grows older, I shall then need to give more attention to him. If for the present he is well fed and clothed, that is enough." But in this she is mistaken. The golden opportunity of every mother lies, as did that of the mother of Moses, in the very first year of her child's existence. We all know that a moment's work upon clay tells more than an hour's work upon marble, and little children are like clay to receive impressions, but like marble to retain them.

The first seven years of a child's life is the most susceptible period of its entire existence. The brain has then attained one half of its entire growth. Yet the majority of mothers seem to think that to pass away time is about the only thing to be done for a child during this period. All the child's thoughts and tendencies are left to chance. If heredity, environment, and all other circumstances are favorable, the results may sometimes prove good; but in the ma-

majority of instances, when this most important period of life is left unimproved, the character of the child becomes marred and scarred in ways which no amount of after-training can efface. In the first year of babyhood a look, a touch, a word, may influence the bent of the child's whole life; and from the age of two to the age of seven, the possibilities which may be drawn out, unfolded, and developed by the judicious mother are wonderful, almost beyond belief.

Too many mothers amuse themselves with their children, seeking their own diversion, as do girls in their play with their dolls, never dreaming that their children are being educated by every look and tone. "It is impossible," as has been said by one of the wisest of teachers, "to correct in the second year the wrong-doings of the first, thereby heaping the shortcomings of one year on those of the next. Mothers will say, As soon as my child understands more, I will endeavor to teach it to control its will and to do right. What a mistake! Then the most important time will have been lost. If good habits and inclinations, obedience, order, and other similar virtues have not been rooted in the first years of its life, it will be a most difficult task to uproot bad habits and implant new ones."

Mothers must begin early and continue late; there must be no cessation of their efforts until character is firmly fixed. Although the early years are the mother's golden opportunity, there is seldom a period when the care of children is more frequently delegated to others than at this very impressionable one. Hired girls, nurses, any one, in fact, who can look after the physical needs of the child, is intrusted with its care, while the mother devotes herself to pleasure, society, or some similar object. I have even known mothers who would hire their children cared for that they might spend their time in fashioning dainty garments for those same children or in doing their housework, preferring to trust their children in unskilled hands rather than their fine china and bric-a-brac. Such mothers certainly have no realizing sense of their responsibilities.

But you ask, Shall mothers seek no assistance in their work?—Certainly, have all the help you can, but give up to no one the privilege of moulding and developing your child. Let housework, sewing, and mending be done by hired help, but keep the little ones by you, and devote your best energies to them. Sacrifice personal pleasure when need be, but never sacrifice the children.

But the mother's responsibilities do not end with

childhood. Through all the years, even till manhood or womanhood, eternal vigilance alone is the price of safety. Continued watchcare and guidance, advice and counsel, must be given, but happy is the mother, who, having planted and cultivated the seeds of good thoughts and actions in the early years, has need only to prune and trim and watch as the child grows older. With every step in life the child's moral horizon enlarges, and opportunities for good and temptations to evil increase.

It is not enough that mothers endeavor to keep their children from contamination by contact with evil; they must do a twofold work, and keep their young minds filled with high aims and pure, elevating, ennobling thoughts. A lady, president of a temporary home for erring girls, once wrote me that out of the hundreds of girls who have been sheltered in the home during the twelve years of her connection with it, not a single girl had a mother who had been true to her duty.

There are hundreds of daughters yearly growing up in idleness and aimlessness. There are hundreds of sons started on the path of ruin because their appetites and passions are allowed to go uncontrolled. A child's appetite is quite as susceptible of education, both in a right and a wrong direction, as are its mental and moral faculties; and mothers, in whose hands this education mainly lies, should give the subject careful consideration, since upon it health and usefulness so largely depend. Many a loving mother, by thoughtless indulgence of her child in season and out of season, in dainties that simply gratify the palate, has fostered a love of appetite which has caused her deepest sorrow in after years.

Mothers must begin with themselves. They cannot give what they have not. They must awake to a realization of the great work in their hands, and then to the need of fitness for that work. For every other vocation of life there is required a special preparation. The one who builds our houses, cuts our clothes, manufactures our watches, takes care of our cattle, and works our garden, must know how, must have been especially prepared for his calling; but as has been truly said, "of all specialists on earth, the mother brings to her work the poorest training." This ought not so to be. Mothers must live not only for but with their children, for only in so doing can they hope to keep that precious birthright, their children's confidence, which is one of the strongest barriers that can be interposed between the child and sin.

## THE IMPROVED DIVIDED SKIRT.

MISS ANNE E. TABOR, a trained nurse of the Battle Creek Sanitarium, has recently remodeled and greatly improved the always popular divided skirt, and has thus rendered it a still more convenient and comfortable garment. A cut showing ordinary proportions, and a description of its many excellencies, are given herewith.

In this style of divided skirt, the waist, yoke, and skirt are united in one garment, and the divide does not show even through the thinnest of dress fabrics. The waist has six seams and two darts, and is allowed to run down over the hips, thus giving a better form, and also reducing the weight of the garment. The skirt is simply straight breadths, and in order to hang well must have five widths of goods that is one yard wide. It is in two parts, the upper portion of each being shaped like drawers, and as short in the body as can be worn with comfort, as, if cut too long here, the skirt has a tendency to wrap about the limbs. Leave the skirt open down the front only so far as is necessary for convenience in getting on and off. The inner side of the leg must be about one and one half inches longer than the outer, to make it hang properly. The divide is hidden in this way: When the skirt is sewed on the yoke, there are three inches left out on each side of the front and back. This is folded back on the inside, and being gathered a little, is caught to the yoke with the rest. Thus two folds meet in front and two in the back, and being gathered quite full, they hang closely together, while the inside of the leg fits exactly like a pair of drawers. An ordinary stocking supporter with two attachments at the top will fasten to the waist of the skirt at the first dart, and the second seam. Six and one half yards of 36-inch goods makes this garment for an adult.

This convenient garment answers the purpose of waist, skirt, and drawers, and when made of woolen material and worn over a union suit, is warm and comfortable for winter; and when made of summer skirting and worn over gauze underwear, it is correspondingly light and cool in the summer season.

To those who have been in the habit of wearing the old style divided skirt, we feel sure that the improvements named will commend themselves as comfortable, hygienic, and economical.

MORAL INSTRUCTION IN SCHOOLS.—Miss Ellice Hopkins, of England, founder of the White Cross movement, whose life for many years has been devoted to the cause of social purity, says: "The thing

in my ten years' work that has filled me with the darkness of despair, has not been the facts about our dark streets, but about our public and private schools, where we send our boys and girls to be educated. It is a painful fact that at the present day innocence and childhood are not synonymous terms. But it is to the young we must look as the heart of the world. If the youth and the little children are becoming corrupt, what hope or what light is there ahead of us? We must make an effort to remedy this evil; 'for death is come up into our windows, and is entered into our palaces, to cut off the children from without, and the young men from the streets.'"

Parents can seldom be brought to see the corrupt morals of *their own* children, therefore few corrupt children are either admonished or punished by parents. But the teacher, who stands second parent to the child, has an opportunity and authority not vested in any other individual in the community. We ask that school

children may be guarded as far as possible by the teacher's vigilant eye against the obscene books and pictures now so freely circulated. We feel the need of careful oversight of children on the playground during recess, after school hours, and in the dormitory. We do not think that it would be amiss if our teachers, taking children of each sex by themselves, should give them a few serious, pointed lessons on the sacredness of the human body, "the temple of the living God," and admonish them against the impure story and the immodest act of any kind. This can be guardedly done without instructing children in any unknown vices.—*The Philanthropist.*



THE IMPROVED DIVIDED SKIRT.

## SLOYD WITHIN A CIRCLE.

BY MRS. M. F. STEARNS.

A FEW hours in a toy-shop will do much to reveal a child's life. There we see the "grown up" world in miniature, only with the aches and pains left out. The tiny washtub and scrubbing board has no tired-faced mother behind it, and the group of sweet French dollies near by would never suggest the sad, half-starved faces of the many *real* children in the great *real* world outside. The engineer of one small tin train does not meet with any dire accident, nor does the carpenter of the small tool chest fall from his house, in building, and become crippled. The toy piano sounds no minor notes for disappointed musicians. The small merchants do a driving business over toy counters, without a thought of "hard times." Little ships come sailing home without disaster. The little cook in the toy kitchen never complains of her hard lot, and never has too much work. In fact, the sun usually shines in this toy world, and the clouds, if any, are of toy size.

The child's pleasure in all this is proportionate to the nearness with which his play approaches real life. The toys that yield the most pleasure are those that most closely resemble the things of real life, and that require the greatest skill in the using. Of what unending delight are the little tool chests, although they are an imposition on the patience of any child, for certainly nothing but the undaunted courage and hope of childhood could make ambition possible,

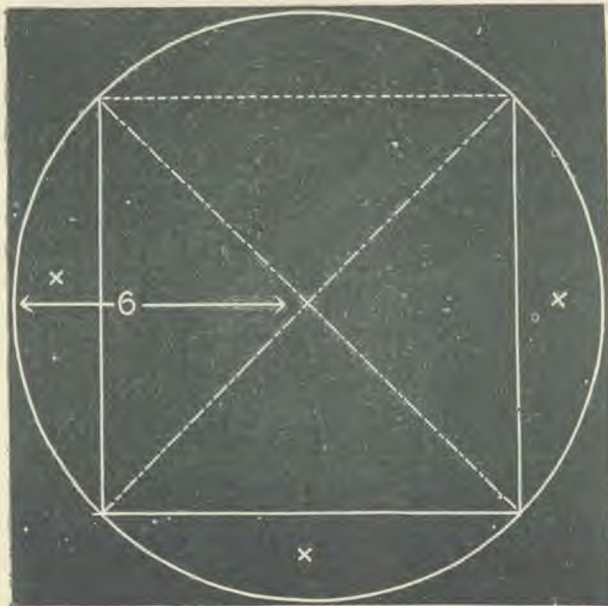


FIG. 1.—PAPER WRAPPER MODEL NO. 1.  
THE WORKING DRAWING.

where poor tools cause repeated failures, yet little hands will work away trying their best to make something with nothing, trying to do with poor material

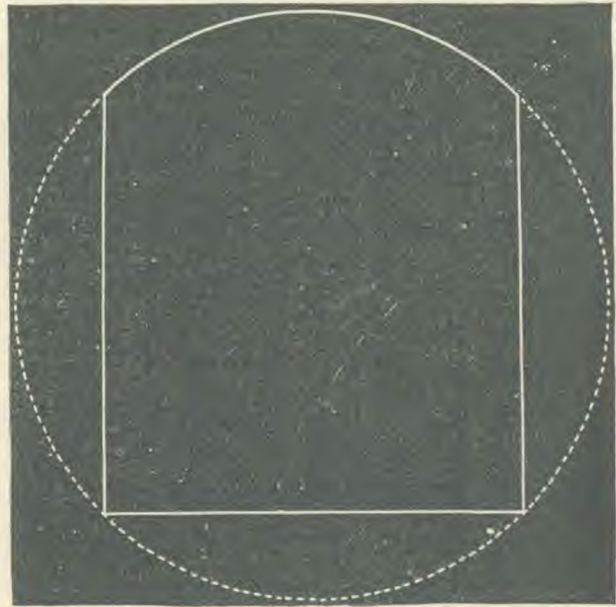


FIG. 2.—PAPER WRAPPER, MODEL NO. 1.  
READY TO BE CUT OUT.

and poor tools, what hands old in skill would fail to accomplish.

Now is it not too bad to impose on the children so? Why not give them good tools, and so help them to do good work?

They are happier when doing small *real* things in the great *real* world around them, than in playing do "great things" in the little toy world, in which most children are kept.

Who of us cannot recall the pleasure in our own childish days of being enlisted to help the "big people" during some particularly busy day? Children gain a self-respect and dignity that they can get in no other way, by being allowed a place, be it ever so small, in the work of older people; and little hands can be made as useful as larger ones in work adapted for them. We have seen Sloyd models as well executed by children as by normal students. All the children want is a fair chance, and manual training gives it to them. It gives them first-class material, first-class tools, and requires first-class work; and it can be made a greater source of pleasure to a child than any amusements to be derived from toys.

Some branches of Sloyd training are perfectly adapted for the home, if care is given to see that the children produce only good work, by correct methods of working. They must understand that a thing is to be made until it can be well made.

The circle always contains such a worldful of possibilities, that we have taken it as a base from which to make our Home Sloyd models, all of which will lie within a twelve-inch circle.

To make the first model, a simple paper folder, place a thirteen-inch square of paper smoothly on the drawing board, press in the thumb tacks in each corner, spread the arms of the compasses two inches, by the rule, and place the needle point in the center of the paper. Describe a twelve-inch circle; lay the rule on center; point, and draw a line to the circumference. By use of the T-square, bisect this diameter at right angles; connect the points by lines where

the diameters touch the circumference; cross out three of the arcs, and the form of the paper wrapper remains to be cut out. After cutting, brush the lap with mucilage, and the folder is ready for use, making a convenient wrapper for several papers.

Very likely young America will think that it is a great deal of work to put on a small penny affair, but if he is made to understand that the simplest thing well done is beautiful, and that nothing short of "well done" *will do*, even for a penny wrapper, he will soon gain an education beyond the value of many pennies.

Materials needed for Sloyd Model No. 1 are, drawing board, T-square, four thumb tacks, foot rule, pencil, scissors, pencil-compasses, mucilage, and one sheet of manila paper, medium weight. With the exception of a few trifles besides the paper, this is all the outfit needed for a course in paper Sloyd.

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A CODE BY GAIL HAMILTON.—Wildness is a thing which girls cannot afford. Delicacy is a thing which cannot be lost or found. No art can restore the grape its bloom. Familiarity without confidence, without regard, is destructive to all that makes woman exalting and ennobling. It is the first duty of a woman to be a lady. Good breeding is good sense. Bad manners in a woman are immorality. Awkwardness may be ineradicable; bashfulness is constitutional; ignorance of etiquette is the result of circumstances. All can be condoned, and not banish men and women from the amenities of their kind. But self-possessed, unshrinking, and aggressive coarseness of demeanor may be reckoned as a

State-prison offense, and certainly merits that mild form of restraint called imprisonment for life.

It is a shame for women to be lectured on their manners. It is a bitter shame that they need it. Carry yourself so loftily that men will look up to you for reward, not at you in rebuke.

The natural sentiment of man toward woman is reverence. He loses a large means of grace when he is obliged to account her a being to be trained in propriety. A man's ideal is not wounded when woman fails in worldly wisdom; but if in grace, in tact, in sentiment, in delicacy, in kindness, she should be found wanting, he receives an inward hurt.

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### PALATABLE DISHES WITHOUT MILK.

At this season of the year, when milk is scarce, housekeepers are often perplexed to know how to provide a variety of palatable dishes without milk or its products, cream or butter. As an aid to such, and also to another class who are unable at any time to make use of these food materials, we offer a week's menus not requiring milk, cream, or butter. Recipes for some of the dishes will be found in the preceding number, others are given below.

#### FIRST DAY.

*Breakfast.*—Apples; Graham Crisps; Rice with Lemon; Poached Egg on Toast; Graham Bread; Stewed Fruit.

*Dinner.*—Lima Bean Soup; Macaroni with Tomato Sauce; Savory Hash; Zwieback; Graham Gems; Farina with Grape Sauce; Stewed or Fresh Fruits.

#### SECOND DAY.

*Breakfast.*—Oranges; Boiled Wheat with Lemon Sauce; Hoe Cake; Strawberry Toast; Stewed Fruit.

*Dinner.*—Celery Soup; Baked Sweet Potato with Tomato Gravy; Succotash of equal parts Split Peas and Dried Corn; Graham Grits with Dressing of Nut Meal; Graham Bread; Stewed Fruit; Roasted Almonds.



## THIRD DAY.

*Breakfast.*—Bananas; Cracked Wheat with Fruit Sauce; Hickory Nut Crisps; Apple Macaroni; Graham Bread; Stewed Fruit.

*Dinner.*—Swiss Lentil Soup; Stewed Corn and Tomato; Mashed Potato, seasoned with the beaten Yolk of Egg (one egg to about five medium potatoes); Granola Grape Mush; Graham Gems; Apple Pie with Nut Crust.

## FOURTH DAY.

*Breakfast.*—Apples; Rice with Fig Sauce; Nut Sticks; Graham Gems; Grape Toast.

*Dinner.*—Oatmeal Soup; Cooked Peanuts; Canned Green Peas; Pearl Barley with Lemon Sauce; Graham Crisps; Whole-wheat Bread; Stewed Fruit; Peach Tapioca with Peach Pudding Sauce.

## FIFTH DAY.

*Breakfast.*—Bananas; Lemon Oatmeal Gruel with Zwieback; Hoe Cake; Lentil Toast; Celery.

*Dinner.*—Pease, Tomato, and Pecan Puree; Mashed Potato; Baked Beans; Grape Mush; Graham Gems; Nut Sticks; Plain Fruit Pudding; Stewed Fruit; Baked Apples.

## SIXTH DAY.

*Breakfast.*—Apples; Nut Crisps; Rice cooked in Tomato; Blueberry Toast; Graham Bread; Stewed Fruit.

*Dinner.*—Bean and Brazil Nut Puree; Baked Sweet Potato; Stewed Split Peas; Sliced Beets with Lemon Juice; Boiled Wheat with Fruit Sauce; Whole-wheat Bread; Stewed Fruit; Baked Chestnuts.

## SEVENTH DAY.

*Breakfast.*—Oranges; Pearl Barley with Lemon Sauce; Prune Toast; Graham Crisps; Raised Graham Biscuit; Stewed Fruit; Baked Sweet Apples.

*Dinner.*—Tomato and Vermicelli Soup; Mashed Potato; Stewed Lima Beans; Graham Biscuit; Graham Apple Mush; Lemon Apples with Nut Cakes.

*Graham Crisps.*—Into one half cup of ice-cold water, stir slowly so as to incorporate as much air as possible, enough good Graham flour to make a dough stiff enough to knead. A tablespoonful of sugar may be added to the water before stirring in the flour, if desired. After kneading fifteen minutes, divide the dough into six portions; roll each as thin as brown paper, prick with a fork, and bake on perforated tins, turning often until both sides are a light, even brown. Break into irregular pieces and serve.

*Rice with Lemon.*—Boil or steam the rice until tender. Just before serving turn over it a syrup made by previously cutting two fresh lemons in thin, wafer-like slices, sprinkling each thickly with sugar, and allowing it to stand for an hour or more until a syrup is formed. When the rice is ready to serve, arrange the slices of lemon over the top so that one or two may be served with each dish, and turn the syrup evenly over all.

*Fruit Sauces for Grains.*—Strain the juice from well-kept canned fruit, dilute if desired with one third water, heat to boiling, and thicken with cornstarch, a scant tablespoonful to the pint of liquid.

*Lemon Sauce.*—Flavor two thirds of a cup of sugar by rubbing it thoroughly over the rind of a lemon which has been freely scored with a silver fork. Heat a pint of water to boiling, and thicken with a dessertspoonful of cornstarch. When well cooked, add the juice of a large lemon and the flavored sugar. Beat well and serve.

*Celery Soup.*—Cook in a double boiler a cupful of cracked wheat in three pints of water for three or four hours. Rub the wheat through a colander, add more water if needed, and a small head of celery cut in finger lengths. Boil all together for fifteen or twenty minutes until well flavored, remove the celery with a fork, add salt, and serve with or without the hard-boiled yolk of an egg in each soup plate. Oatmeal soup may be prepared in a similar manner, and flavored with onion or celery as preferred.

*Swiss Lentil Soup.*—Cook a pint of brown lentils in a small quantity of boiling water. Add to the lentils when about half done, one medium sized onion cut in halves or quarters. When the lentils are tender, rub all through a colander, and add sufficient boiling water to make three pints in all. Season with salt, reheat to boiling, and thicken with five tablespoonfuls of flour which has been well browned in the oven.

*Savory Hash.*—Take equal quantities of brown lentils which have been cooked and rubbed through a colander (they should be quite dry) and chopped cold potato. Season with salt and a very little powdered sage. Pour a little boiling water in a stewpan, add the potato and lentil, and reheat, stirring so as thoroughly to mix the whole.

*Granola Grape Mush.*—Heat a quart of the juice from canned grapes (the pure juice may be diluted with one third water) to boiling, and sprinkle into it about one pint of granola. Cook for two or three minutes and serve hot. Grape juice, pure or diluted, may be used instead of water to cook Graham flour, making another grape mush.

# GOOD HEALTH

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BATTLE CREEK, MICHIGAN.

## A VISIT TO MEXICO.

IN company with Mrs. Kellogg, the writer recently visited the city of Mexico to attend a meeting of the American Public Health Association, the annual session for 1892 being held in that city, beginning November 28. The meeting was the most largely attended of any meeting of the Association ever held. The members of the Association were most cordially received by the people and the profession, from President Diaz down to the humblest official.

The sessions of the Association were both interesting and profitable, but the writer found the people themselves still more interesting, and spent considerable time in a careful study of the customs and habits of the people, of their modes of living, trades and occupations, diet, clothing, manners, morals, etc. To say that the observations made were a revelation, is but a very meager expression of the wonderment and surprise occasioned by the novel sights and sounds encountered at almost every turn from the moment the territory of Old Mexico was entered. The average resident of the United States is certainly unconscious of the fact that so vast an extent of uncivilized and unsubdued territory lies so close to his native land. It was an astonishment to us to learn that a large proportion of the natives of Mexico must be considered as living in an uncivilized state. Outside of the cities and towns, which certainly cannot be said to be numerous in Mexico, the civilization met with is quite inferior to that of China and Japan; and the poverty which reigns everywhere, in cities as well as in the country, can scarcely be equaled on the face of the earth. A very small proportion of the natives of Mexico are able to read and write. By far the great majority of the natives are un-Christianized as well as uncivilized. The Spaniards, who destroyed the ancient civilization of the Aztecs and the Toltecs, seem to have done little in the way of substituting anything better for the civilization which

they demolished almost to complete obliteration. In the mountainous districts, native Indians still retain, as the only mode of worship and their only religion, the few fragments of the idolatrous customs of their forefathers which tradition has brought down to them.

Judging from such observations as a transient visitor can make, one would seem to be justified in asserting that the term morality, or its equivalent, must have a different meaning in Mexico from that connected with it in other countries. Fanaticism seems to abound, especially among the women, but infidelity in religion, and in social relations as well, seems to be the special characteristic of the men.

The government is ostensibly republican, but republicanism means a different thing in Mexico from what it means in the United States. A country with but one political party, and that entrenched behind and enriched by many years of power and possession of the offices, can scarcely be considered as presenting a typical illustration of a democratic government. Nevertheless, the people seem to be well satisfied with their government, and President Diaz seems to enjoy the confidence of all classes. He is a ruler of great intelligence, great force, great capacity, and of liberal sentiments. Under his administration his country has made more progress than under the rule of any of his predecessors in the same length of time. Many abuses have been suppressed, and measures looking toward the improvement of the masses have been introduced.

Nevertheless, there still remains a vast work to be done. One cannot look about him in Mexico, without being led to exclaim to himself, "Poor Mexico!" Devastated by revolutions, often blighted by drought, and, worst of all, suffering from a sort of moral paralysis as the result of the domination for centuries of a religious hierarchy, Mexico is certainly to be

pitied. There is no field in the world which calls more loudly for missionary effort than does Mexico.

But to be helpful, the purpose of the missionary must be of a practical character. His purpose must be, not to propagate a religion or a creed, but to lift the people up upon a higher plane of living. The people of Mexico have had religion for many centuries, perhaps thousands of years. The religion of the Aztecs was succeeded by a religion little less cruel, and scarcely less idolatrous, which has left the people, after several centuries of control, in

a condition little if at all better morally than that in which it found them. What Mexico calls for is, not religion, but the gospel, which will bring with it every good thing they need; not simply evangelization, using the term in its technical sense, but the gospel of health and of better living. A missionary enterprise started in Mexico upon this basis will be a grand success, and will accomplish more in half a score of years than can be accomplished by the propagation of sectarianism by all the creeds in Christendom in a century.

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### THE TEA AND COFFEE HABIT.

THE facility with which intelligent human beings acquire poison habits is one of the anomalous physiological problems presented by modern civilization. Wherever the human race exists, if there is to be found in the same portion of the earth a drug capable of producing artificial felicity, it is certain to have votaries more or less numerous, each of which will be loud in the praise of the marvelous virtues and the innocuous properties of the particular drug to which he is attached. The Chinaman finds his soporific heaven in smoking the inspissated juice of the poppy; the native of the Orient undertakes to lift himself to a higher level of artificial bliss by means of Indian hemp; the Siberian chews his mushroom; while the North American, with his imitators in almost every land, in the mystic rites of smoking, chewing, snuffing, and dipping, figuratively bows down to the god, *Nicotiana Tabacum*.

Every leaf, bark, root, and seed, capable of producing a temporary nerve tickle, has been hunted out, experimented with, and utilized as a source of artificial exhilaration. So universal is this disposition that some have even been led to suppose it a physiological demand, the gratification of which is as necessary as eating and drinking, or the supply of any natural want. The untruth of this popular notion is clearly shown, however, by the fact that the gratification of a physiological appetite is not attended by the production of disease, while a narcotic or stimulated appetite brings in its train a multitude of maladies and miseries each peculiar to the special drug by which it has been produced. Healthful foods taken in quantities sufficient to satisfy the normal appetite, are never productive of disease. This cannot be said of a single one of the felicity-producing drugs, to the use of which the human race or any portion of it is addicted.

But the purpose of this article is not to portray the

evils arising from the long category of poison habits which human beings cultivate in different parts of the world, nor even to treat exhaustively the mischiefs arising from a single one of the deceptive drugs which hold and enslave so many millions of the human race, but rather to call attention to the fact that some commonly used and little suspected drugs, notwithstanding their apparent harmlessness, carry, under the cloak of the brain-soothing, nerve-tickling power which they possess, a poison-laden dart which strikes deep into the vitals of those who seek to hide behind the care-effacing, nerve-exciting agent, their true state of mind or body.

A fact which is pressing itself more and more emphatically upon observing physicians in all civilized countries, is that the indefinable disease called "nervousness" is increasing in prevalence at a most alarming rate. This is a matter of common observation and remark. There is a decreasing number of physicians who do not believe that the apparently harmless practice of tea and coffee drinking is, in part at least, responsible for this growing depravity of nerve-cell and fiber. To prove this beyond any possibility of cavil to the satisfaction of every man, is a task which no one will attempt to undertake, since the complexity of the forces in operation which tend to modify or deteriorate the human constitution under the artificial conditions of civilization, renders every problem relating to the physiological or pathological influence of habits most difficult of solution. That tea and coffee have a decided influence in the direction suggested, will, we think, not be disputed by any intelligent observing medical man, since evidence of a very positive character is afforded in the fact that while the influence of moderate doses, even though long continued, may be inappreciable or undiscoverable in the midst of a multitude of other possible causes, and without any morbid manifesta-

tion, it only requires a slight excess to develop the toxic properties of theine or caffeine. And furthermore, it is well enough known that what may be for one person a moderate dose, that is, a dose so small that its effects are not immediately observable, may be for another person sufficient to be capable of producing toxic effects. The toxic effects of the "cup that cheers but not inebriates" are familiar to every one as the sleep-banishing property of a strong cup of tea. No one would dispute for a moment that a drug capable of producing drowsiness or sleep in a person who is not fatigued or in a condition to require sleep, must be possessed of a toxic property. Is it not quite clear that a drug which is capable of producing temporarily the most obstinate insomnia, even in a person whose physiological state is

such as to demand recuperation by sleep, must be possessed of poisonous properties of a very positive kind?

Lehman, the eminent German physiological chemist, unhesitatingly pronounced caffeine to be a poison, notwithstanding the claim that even at that day had made its appearance as an apology for the use of a mild narcotic, that it was a food; and the evidence which he presented was based upon the results of experiments upon himself and others, as well as upon the observation of the close relation between the chemical constituents of caffeine and those of well-known alkaloidal poisons. This view has been constantly affirmed by the evidence accumulated through the experimental researches of physiologists and physiological chemists.

COLOR-BLINDNESS.—In a recent report published by the Marine Department of the British Board of Trade, it was stated that during the previous year nearly 5000 captains had been examined for certificates. Of this number 31 were rejected on account of their inability to distinguish colors, of whom 21 insisted that red was green, the others saying that red was drab, or some other color than either red or green; 205 of the entire number mistook drab for green, while 106 persons insisted that pink was green; 32 persons pronounced green to be white, 42 thought it to be pink, while 28 thought it to be red. From these facts, it appears that color-blindness is much more common than is generally supposed. It is doubtless not infrequently the cause of railroad and steamboat accidents, persons affected with color-blindness being unable to distinguish the difference in the colored-light signals of the road.

In connection with the above facts, it is of interest to recall that the use of tobacco is unquestionably one of the most common causes of color-blindness. One of the first symptoms of tobacco amaurosis is lessened ability to distinguish colors. This symptom is present before any evidence of impaired sight makes its appearance. This doubtless explains the reason why color-blindness is so much more frequent in men than in women. It is very singular, indeed, that this explanation has not before been offered. The writer called attention to tobacco as a cause of color-blindness several years ago, but no specialist upon this subject has, so far as he knows, ever advanced this view.

The explanation usually given is that women inherit acute color perception from their mothers, but, unfortunately for this theory, the study of the sub-

ject of heredity shows most conclusively that women inherit equally from their fathers and mothers, and the same with men.

ADULTERATIONS OF COFFEE.—The lovers of Mocha or Cordova coffee will be interested in knowing that, according to the most recent authorities, the adulteration of coffee is a very common thing. Among the most common methods employed are the admixture of coloring matters; polishing and burnishing of cheap grades to give them a better appearance; the admixture of Swedish beans, which look exactly like the genuine article; and, in the case of roasted and ground coffee, the addition of chicory, beans, pease, corn, rye, acorns, the shells of almonds and other nuts, burnt sugar, pea hulls, and steaming to increase weight.

POISONOUS CANNED FRUIT.—The extensive use of canned fruit at the present time renders important every item of information respecting the character of food products presented for consumption when preserved in this way. The *British Medical Journal*, in a recent number, publishes an account of an outbreak of diarrhoea of a very severe type, in which the symptoms so closely resembled those of cholera that at first it was supposed that the patients were suffering from this deadly disorder; but a further investigation revealed the fact that the preserved fruit which had been partaken of by the various persons affected, contained copper. How this metal found its way into the fruit is not stated. Not infrequently it is used as a coloring matter, as it imparts a beautiful green color to fruits, and has frequently been used for this purpose.

THE MIGHTY FALLEN.—John L. Sullivan is said to be a paralytic. For many years, until recently, he has been the champion pugilist of the world. His herculean frame and enormous muscles have been long thought to be invincible, and he himself has had such confidence in his constitutional powers that he has not hesitated to plunge into every possible form of dissipation, in the intervals between the periods of training to which he has now and then subjected himself in preparation for a contest with some rival. This perpetual soaking of his body in alcohol, however, has not failed to do its work of insidious mischief, even upon the iron frame of the great champion; and to-day, while a giant in appearance, and with his muscles as large as ever, his strength has departed, never to return. The muscular fibers, under the influence of the alcohol, have taken on that peculiar form of degeneration by which the fibrillæ are displaced by the connective tissue elements, so that while they are as large and hard as ever, perhaps even more dense, they are almost powerless. In his last contest, Sullivan found himself so thoroughly unable to command the ponderous muscle which had won for him so many victories, that he insisted that he had been drugged. In this he was entirely correct,—he had been drugged, not by his antagonist, however, or by an enemy, but by himself.

For many years the foes of temperance have pointed to Sullivan as an evidence of the harmlessness of the alcoholic beverage and the falsity of the statements made by the temperance agitators respecting the influence of alcohol upon the muscles. To-day Sullivan stands before the world a pitiful object lesson of the dreadful effects of alcohol, and a complete demonstration of the ability of this poisonous drug to break down the most vigorous constitution, paralyze the strongest muscles, and break down the most magnificent physique.

ALCOHOL IN MEDICINE.—The popular idea that alcohol is strengthening, or that it is a wholesome stimulant, is unquestionably the foundation for the habit of intemperance in a large proportion of cases. That the use of alcohol is in the highest degree pernicious in its effects upon the human system, and that its influence is to lower vitality and to lessen the resistance of the body to disease, is well shown by the testimony of Dr. Treves, which we quote as follows, from the *Journal of Inebriety*:—

“Mr. Frederick Treves, the well-known surgeon of the London Hospital, in his ‘Manual of Operative Surgery,’ has some striking remarks on the risks at-

tending operations on the bodies of drunkards. He says: ‘A scarcely worse subject for an operation can be found than is provided by the habitual drunkard. The condition contra-indicates any but the most necessary and urgent procedures, such as amputation for severe crush, herniotomy, and the like. The mortality of these operations among alcoholics is, it is needless to say, enormous. Many individuals who state that they do not drink, and who, although perhaps never drunk, are yet always taking a little stimulant in the form of “nips,” and “an occasional glass,” are often as bad subjects for surgical treatment as are the acknowledged drunkards. Of the secret drinkers the surgeon has to be indeed aware. In his account of “Calamities of Surgery,” Sir James Paget mentions the case of a person who was a drunkard on the sly, and yet not so much on the sly but that it was well known to his more intimate friends. His habits were not asked after, and one of his fingers was removed because joint disease had spoiled it. He died in a week or ten days with spreading cellular inflammation such as was far from unlikely to occur in a habitual drunkard. Even abstinence from alcohol for a week or two before an operation, does not seem greatly to modify the result. Dwelling on the immense importance, to an operator, of cultivating “a surgical hand,” the same writer points out that “a shaky hand” may be developed by irregular modes of living, by the moderate use of alcohol, and by smoking.’”

PAPER MONEY AND BACTERIA.—Two physicians of Cuba, Drs. Acosta and Rossi, have lately made a series of careful examinations under the microscope, of the paper money issued by the Bank of Spain, and have found the smaller denominations of bills to be filthy in the extreme, two of the notes containing more than 19,000 germs. Cultures, when made from these and injected into the veins of rabbits and guinea-pigs, caused their death within twenty-four hours.

THE KEELEY BUBBLE BURST.—According to the *Medical Standard*, the Keeley bubble at Dwight has finally burst; the hotels, boarding houses, and other places for draining the pocket-book of the luckless inebriate being largely closed up as the result of the enormous decrease in patients. There is a loud outcry against the great philanthropist, Keeley, who led the simple inhabitants of Dwight to suppose that his business was a permanent one, and persuaded them to invest their dollars in lodging houses, which are now deserted and not likely to be again occupied for the purpose for which they were built.



### THE CAUSE AND CURE OF SLEEPLESSNESS.

Most people who stay awake nights, do so in consequence of a guilty conscience. It is not meant by this that they have committed any outbreaking crime, but they have been committing a crime of some sort, and sleeplessness is the upbraiding of a physical conscience. A Sanitarium patient said to me the other day, "Doctor, I believe I have had the dyspepsia since I came here,—I believe your food has given me dyspepsia." Before coming here, his stomach had been so abused that it did not notice that anything was wrong; but now it is regaining its sensibility, so that when he abuses it, it recognizes the fact, and upbraids him, and then he feels as though he was growing worse instead of better.

A gentleman who had been at the Sanitarium some time, and had become used to a hygienic diet, and whose stomach was nearly normal, went outside and took a meal that was highly seasoned. In consequence he had a severe attack of indigestion. His stomach was sore, and he just escaped having inflammation in it. I told him he was suffering for his sins, and that it was good for him. He had violated principles which he recognized as being true, and he ought to be punished. "Well now," said he, "if my stomach is going to get so sensitive that I can't eat pepper, salt, and such things, I think I'd better stop. If I can't transgress your laws without suffering like this, I think I'll go back to my old ways again. I could eat anything awhile ago, and it didn't hurt me a bit."

That is the way with a man who has recently embraced religion. Perhaps he has been a thief or robber, and appreciating the fact that he has been wicked, begins to lead a better life. Now if he falls into temptation, and violates some moral law, he feels bad. "Now," says he to himself, "I am not as happy as I used to be. In fact, I feel miser-

able. I used to think, when I had a chance to steal something, that I was in luck, but now I feel only wretched." True, he is not so happy now, but he is a better man, because his moral conscience has been awakened. It is just so with a man's physical conscience.

I met a man who had put a blister on his back so many times that his back was completely paralyzed, and the blister did him no good. Now some persons' stomachs are in such a condition that a mustard plaster would not affect them any more than it did that man's back.

A person who cannot sleep suffers from the upbraidings of his stomach. In a majority of such cases we shall find that the stomach has been abused, and has become dilated. In such a case place your finger about two inches on one side of the umbilicus, and press in till you get clear back to the spine; then bend down a little, or draw away your knees so as to relax the abdominal muscles, then press two or three fingers in, and there you will find a sore spot. The sympathetic nerve is affected. This is one of the most important nerves of the body, because it has control of the bloodvessels. When the sympathetic nerve is affected by indigestion or disease, it is weakened, and the bloodvessels of the brain become relaxed. When the man goes to bed and wants to sleep, his brain won't stop; and in the morning, when he wants to keep awake, his brain won't go.

Another reason why people cannot sleep is because a dilated stomach cannot empty itself of food. The relaxed stomach cannot absorb, with proper rapidity, the food that has been taken into it, and hence millions of microbes are developed, and poisons are generated. We know the unpleasant odor which sometimes accompanies eructations from the stomach. Now imagine the effect of a quart of this fer-

menting substance in the stomach, irritating and poisoning the brain. An extra strong cup of tea will keep persons awake. It is the poison in the tea—the theine—that does this. By the action of microbes along the alimentary canal, poisonous substances are formed, which are nearly allied to the theine of the tea; and they irritate the brain so that one cannot get to sleep, no matter how tired he is. So there are two things which cause sleeplessness; an irritation of the nervous system and contraction of the bloodvessels, and the production of poisonous substances which irritate the brain, just as would a strong cup of tea.

As a remedy for sleeplessness, the first thing is to quiet a guilty conscience; turn over a new leaf; behave better; treat your stomach kindly; treat yourself kindly. The stomach demands that you shall not put into it beefsteak, mutton chop, ham, and other abominations. Why?—Because a dilated stomach cannot digest meats well. Some meats are digestible by the stomach, but we must take only such things as can be digested by the dilated stomach. The stomach is not the most important organ of the body; it is only a sort of ante-chamber of the digestive organs. We have only nine or ten inches of stomach, whereas we have some twenty-five feet of intestines; consequently they are the more important. We must take the kind of food that allows the stomach to rest as much as possible, such as fruits,

grains, farinaceous foods, etc., which constitute the best diet for a person who cannot sleep.

The fact is, flesh meats contain the most deadly poisons known, and these poisonous substances are what keep a person awake. A man subject to nervous dyspepsia should avoid meats, because of the effect upon his alimentary canal.

Diet is important, but you must not eat just before going to bed; because, if you go to bed without food in the alimentary canal, no poisons can be produced; for there is no material out of which poison can be manufactured.

Another reason: while the digestion of food is going on, the sympathetic nerve is in a state of constant excitement and irritation; consequently, your brain is kept awake and irritated through the reflex action upon it. These nervous attacks will affect you as poisons do,—bring on nervous headache.

Persons who are anæmic, and troubled with sleeplessness, should take pains to have the alimentary canal thoroughly emptied every day, washing out the stomach by the use of quantities of hot water. In case of special trouble on account of sleeplessness, one should drink a large quantity of water just before going to bed. After each evacuation of the bowels a quantity of water may be taken, and this will be carried out into the kidneys and eliminated, thus carrying the poison out of the brain,—washing out the poisons, and getting rid of them.

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FOR EARACHE AND THROAT AFFECTIONS.—A Swiss doctor claims to have found by experience a novel mode of relief in some affections of the throat and in case of earache. By making the patient yawn two or three times a day, the pains, he states, become distinctly lessened. In catarrh of the Eustachian tube, the yawning by distending the muscles is said to act as a massage, and by this treatment the affection is frequently cut short. The possibility of so simple a cure should be known to all sufferers from earache. In any case, if no relief is obtained, no harm is done, nor would there be any delay in adopting any other treatment.

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IMPURE ICE.—This is the season of the year when the year's supply of ice is harvested, hence it is an appropriate time for calling attention to the fact that there is no scientific soundness in the old theory that freezing will render impure water pure. Freezing does not destroy the germs, neither does it exclude them. The investigations of Dr. Prudden, of New York, have shown that typhoid-fever germs and

other malignant microbes are frequently found in the interior of solid blocks of ice. Ice should never be taken from rivers, lakes, or other bodies of water into which sewers or drains empty, or which is polluted by surface drainage, garbage, or other sources of impurity. River ice is, as a rule, entirely unfit for human consumption. A large part of the ice annually harvested in the winter season, and distributed for consumption during the warm months following, is unfit for use without being thoroughly sterilized. But, unfortunately, ice cannot be subjected to a temperature of  $212^{\circ}$  for any length of time without disappearing as ice, hence there is no means by which impure ice can be made pure without destroying it, and the only practicable method is to use only such ice as has been collected from pure sources.

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NUTRITIVE VALUE OF POTATOES.—A German chemist has recently been investigating the nutritive value of potatoes, and finds that it varies considerably, according to the age of the potato. The amount of starch that the potato contains varies from month to

month, as follows, beginning with the tuber when not yet fully developed: August, 10 per cent; September, 14 per cent; October and November, 15 per cent; December, 17 per cent; January, 17 per cent; February, 16 per cent; March 15 per cent; April, 12 per cent; May, 10 per cent. Potatoes are therefore most nutritious in the winter, when their food value is of greatest service.

THE MEDICAL VALUE OF YAWNING.—A writer in *Unsere Zeit*, a Berlin journal, advocates yawning as a valuable remedy, quoting as authority, Dr. Naegeli:—

“In yawning, not only the muscles which move the lower jaw are used, but also the breathing muscles of the chest, and he who yawns to his heart's content also raises and extends the arms. In the deepest inspiration the chest remains extended for a short time, the eyes are almost or entirely closed, the ears somewhat raised, the nostrils dilated. Inside the mouth, the tongue becomes round and arched, the palate stiffly stretched, and the uvula is raised, almost entirely closing the space between the nose and throat. At the beginning of the inspiration a cracking noise is heard in the ears, a proof that the duct leading to the hearing also succumbs to this stretching.

“If the yawning has reached the deepest point, it will require from one to one and a half seconds for it to become noticeable to the hearing. In order to observe this, let one place himself at sufficient distance from a clock, so that its ticking will not be easily heard, and yawn deeply. During this deep breathing the sound of the clock is not perceptible to the most careful listening. All this simply goes to show that yawning sets a number of muscles to work, and particularly those which are not directly subject to the will.

“Although one yawning does not present a very agreeable appearance, it is very agreeable to himself, for the stretching of the muscles causes a feeling of comfort; it acts like massage, and is the most natural gymnastics of the lungs imaginable. Dr. Naegeli, therefore, advises people not to concern themselves with so-called decency, but every morning and evening, and as often as possible, to exercise the lungs and all the muscles of respiration by yawning and stretching, as many chronic lung troubles may thus be prevented.

“Dr. Naegeli orders the patient troubled with too much wax in the ear, accompanied with pain, to yawn often and deeply. The pain will soon disappear. He also, in case of nasal catarrh, inflamma-

tion of the palate, sore throat, and earache, orders the patient as often as possible during each day to yawn from six to ten times successively, and immediately afterward to swallow. The result will be surprising. If one looks upon yawning as a natural massage for certain organs, he will reach a satisfactory explanation of its curative properties.”

The above notions may be somewhat extreme, but yawning is certainly an excellent means of aëration of the lungs, and exercise of the respiratory muscles.

SIMPLE TREATMENT FOR CHAFING IN CHILDREN.—An English physician recommends washing with soap and water, then, after carefully drying, applying a lotion of white of egg, leaving wet. This treatment he had used twenty-five years with uniform success. Putting on powder, as usually practiced, often does harm, as it is frequently put on when the surface is moist, when it will form lumps and produce irritation and galling by getting in the creases of the flesh.

GERMS IN OLEOMARGARINE.—Two eminent physicians of Rome have been studying oleomargarine with reference to the discovery of germs from abscesses, malignant pustule, and glanders, and other germs which have been derived from diseased animals, the fat of which was used in the production of this artificial substitute for butter. It was found that some of the most deadly of these germs readily survive the process by which the ordinary fats are converted into oleomargarine, and that some of these survived for more than thirty days after the product had been prepared for the market. This important fact should be widely known, since it completely negatives the claim which has heretofore been made by the manufacturers of this product, that its use is safer than the use of butter on account of the sterilization to which they claim it to be subjected during the process of manufacture. These processes are found to be so imperfect as to allow germs to escape destruction, and remain sufficiently active to induce infection in those who make use of the product within several weeks after it leaves the factory.

NEW WAY OF RELIEVING HICCOUGH.—Hiccough is due to the spasmodic contraction of the diaphragm. This is the result of the irritation of the ends of the phrenic and pneumogastric nerves in the stomach acting reflexly upon the diaphragm. The exciting condition of the nerve can be overcome by a simple pressure of the index finger, just above the upper end of the sternum.



## ANSWERS TO CORRESPONDENTS.

A GERM-PROOF FILTER—CATARRH.—T. L. L., Oregon, inquires: "1. Is it possible to have a germ-proof filter? 2. If so, is Pasteur's filter germ-proof? 3. What is the best treatment for catarrh? and where can I get your book?"

*Ans.*—1. No. 2. No. The Pasteur filter, which is one of the best filters made, must be thoroughly cleansed and sterilized by baking in an oven at a temperature of 300° or 400° at least once a week, to keep it in a safe condition. 3. There is no panacea for nasal catarrh, and no specific treatment for it. The most useful remedies are described in a little work on this subject, which can be purchased of the Good Health Publishing Company.

INDIGESTION, ETC.—Mrs. C. S., Penn., asks the following questions: "1. What is good for indigestion and wind on the stomach? 2. Please give a recipe for making unfermented wine. 3. What is your opinion of Dowd's Complete Gymnasium?"

*Ans.*—1. Proper diet.

2. See "Science in the Kitchen," by Mrs. Kellogg, published by Good Health Pub. Co., for full directions for making unfermented wine.

3. "Charity covereth a multitude of sins," is a good motto. We prefer not to answer this question.

VEGETARIANISM.—G. W. S., Conn., asks the following questions: "1. Do you advise your readers to discontinue eating meat and become vegetarians? 2. How is it demonstrable to a layman that one pound of the Sanitarium Food Company's granola 'equals in nutrient value nearly three pounds of the best beef or mutton'?"

*Ans.*—1. We give no general advice on this subject. We only present facts, and leave our readers to act according to their own best judgment.

2. It is only necessary to refer to the table of nutritive values of different foods found in many standard works on dietetics, to obtain all the evidence necessary to convince any intelligent person as to the truth of the statement made respecting granola, it being recollected, of course, that granola is wholly composed of wheat, corn, and oats. The nutritive value of these grains averages more than 85 per cent. The total nutritive value of lean beef or mutton is 28 per cent. (See table of nutritive values in "Science in the Kitchen" or the "Home Hand-Book," published by the Good Health Pub. Co.)

QUININE IN MALARIA, ETC.—The question is asked, "Is quinine useful in malaria, and to break up a cold?"

*Ans.*—If any medicine is to be taken to lower the temperature, quinine is as good as anything; but it is a bad plan to lower the temperature by means of drugs; they lower the whole vitality. Why is the temperature high when the patient has a fever?—It is not because the patient is making too much heat, but because he has lost the ability to eliminate heat. The heat-making and the heat-dispersing functions are disturbed, and the heat is not dispersed as rapidly as it is made. The surplus heat of the body should be removed by natural means. The best way to cool off a patient suffering with typhoid fever is to give him a cool bath in water with temperature about one degree lower than his own; for example, if his temperature be 103°, the temperature of the bath should be 102°. Now bring the temperature of the bath down one or two degrees every five minutes, until it is down to 80° or 85°, which will require about an hour and a half. At the expiration of that time the patient is ready to be removed to his bed, and the temperature will continue to go down. The important thing is to get the patient to sweating.

NIGHTMARE.—A correspondent wishes to know the cause of nightmare.

*Ans.*—The cause of the peculiar condition known as nightmare is probably the pressure of a distended stomach upon the bloodvessels and nerves lying just back of the stomach; the large bloodvessels and the nerve ganglia known as the solar plexus lie just back of the stomach. When the stomach becomes filled with gas, the pressure upon these muscles and bloodvessels produces a sort of paresis or paralysis, and a consequent disturbance of the brain, and bad dreams are the result.

ORANGE PULP—APPLE PARINGS.—The following question is asked by a friend: "Is the pulp of the orange or the paring of an apple injurious to a healthy stomach?"

*Ans.*—The pulp of an orange may be beneficial in some cases, in which a bulk of food is needed, but ordinarily it should be rejected, as it is simply wood, and has no nutrient value whatever. Apples should be pared, unless they are cooked, because the skins contain microbes.

# RELIEF DEPARTMENT.

[This department has been organized in the interest of two classes:—

1. Young orphan children.
2. The worthy sick poor.

The purposes of this department, as regards these two classes, are as follows:—

1. To obtain intelligence respecting young and friendless orphan children, and to find suitable homes for them.
2. To obtain information respecting persons in indigent or very limited circumstances who are suffering from serious, though curable, maladies, but are unable to obtain the skilled medical attention which their cases may require, and to secure for them an opportunity to obtain relief by visiting the Sanitarium Hospital. The generous policy of the managers of the Medical and Surgical Sanitarium has provided in the Hospital connected with this institution a number of beds, in which suitable cases are treated without charge for the medical services rendered. Hundreds have already enjoyed the advantages of this beneficent work, and it is hoped that many thousands more may participate in these advantages. Cases belonging to either class may be reported in writing to the editor of this journal.

The following list contains the names and addresses of persons who have kindly consented to act as agents for us in this work, and who have been duly authorized to do so. Facts communicated to any of our local agents in person will be duly forwarded to us.

It should be plainly stated and clearly understood that neither orphan children nor sick persons should be sent to the Sanitarium or to Battle Creek with the expectation of being received by us, unless previous arrangement has been made by correspondence or otherwise; as it is not infrequently the case that our accommodations are filled to their utmost capacity, and hence additional cases cannot be received until special provision has been made.

Persons desiring further information concerning cases mentioned in this department, or wishing to present cases for notice in these columns, should address their communications to the editor, Dr. J. H. Kellogg, Battle Creek, Mich.]

## HEALTH AND TEMPERANCE AGENTS.

### COLORADO.

Barraclough, Mrs. Tillie E., Trinidad.  
Shaw, S. B., Colorado City.  
States, Geo. O., Eckert.  
Wilson, J. B., 1019 E. Ash St., Pueblo.

### ILLINOIS.

Smith, Wm. B., care 28 College Place, Chicago.

### IOWA.

Frederickson, C., Sioux City.  
Jacobs, Mrs. Mariette, Fontanelle.

### MASSACHUSETTS.

Comins, J. S., Holyoke.  
Jernegan, S. B., 7 George St., Lynn.  
Lays, James, Brockton.  
Merry, E. L., Vineyard Haven.  
Payne, W. L., Charlemont.  
Smith, A. W., Worcester.

### MICHIGAN.

Bailey, G. P., Bunker Hill.  
Baker, Leonard, Fife Lake  
Carman, G. F., Potterville.  
Carpenter, Marcus L., Fremont.  
Dennis, Mrs. J. D., Williamston.  
Ferris, James F., Meauwataka.  
Ford, Augustus, 39 State St., Hillsdale.  
Hall, John, Akron.  
Hanson, H. E., Shelby.  
Hatch, J. A., Watrousville.  
Heckert, D. B., Ogden Center.  
Hempstead, G. L., Flint.  
Irwin, John, Jr., Pomona.  
Kneeland, L. B., Orleans.  
Malin, D., Vassar.  
Mc Connell, Robert, Memphis.  
Mc Cormick, Mrs. E. L., North Branch.  
Mc Farland, G., Montague.  
Mc Neil, Francis, Imlay City.  
Mc Omer, Maggie, Fenton.  
Perrine, Geo. C., Eaton Rapids.  
Roberts, J. C., Parma.  
Snyder, Anthony, Pittsford.  
Stringer, Mrs. Carrie, Lapeer.  
Sweet, J. W., Ypsilanti.  
Thompson, J. H., Quincy.  
Trotman, John, Traverse City.  
Tyler, D. S., N. Muskegon.  
Westphal, Mrs. G. C., Brighton.  
Young, S., Ionia.

### MISSOURI.

Beasley, N. H., Poplar Bluff.  
Chapin, J. S., Bolivar.  
Clarke, Joseph, Lowry City.  
Davis, James W., Sedalia.  
Duxbury, Robert, Pacific.  
Evans, Wm., Hamilton.  
Flower, A. E., 3211 Salisbury St., St. Johns.  
Hobb, Josephus, Kingsville.  
Hollingsworth, O. S., Antler.  
Hoover, H. T., Memphis.  
Hoover, T. A., Nevada.  
Moore, J. Scott, Henderson.  
Rice, F. J., Appleton City.  
Santee, C., Carthage.  
Tovey, W. B., 1411 E. 16th St., Kansas City.  
Willis, H. K., Pleasant Hill.

### NEW HAMPSHIRE.

Farnsworth, Ellen G., Washington.

### NEW YORK.

Bowe, E. A., Batavia.  
Eaton, W. C., Jeddo.  
Evans, David, Black Creek.  
Gleason, Alex., 1201 Niagara St., Buffalo.  
Hicks, F. H., Salamanca.

Lindsay, C. W., Coomer Sta.  
 Raymond, N. S., Wheeler.  
 Simkin, Wm., Wellsville.  
 Thurston, S., 214 Winsor St., Jamestown.  
 Treadwell, Wm., Pennelville.  
 Tuttle, A. E., Watertown.  
 Tyrel, M. S., North Creek.  
 Vanduzer, A. J., Newburg.  
 Willson, J. V., 317 W. Bloomfield St., Rome.

## OHIO.

Van Horn, E. J., 74 Kinsman St., Cleveland.

## OREGON.

Burden, Warren J., Montavilla.  
 Hurlburt, E. D., St. Johns.  
 Johnson, C., Marquam.  
 Logan, L. A., Elk City.  
 Morrison, Isaac, Talent.  
 Tabor, B. L., 163 Winter St., Salem.  
 Wait, V. O., Albany.

## PENNSYLVANIA.

Barron, Wm., Montrose.  
 Bowersox, A. S., New Columbia.  
 Matteson, Mrs. A. J., Mill Village.  
 Parker, J. M., Mexico.  
 Spencer, Anthony, Canton.  
 Voorhees, L. W., Shinglehouse.  
 Williams, I. N., Washington.  
 Williamson, C. H., Washington.  
 Zeidler, W. H., 23rd Ward, Pittsburg.

## PROVINCE OF QUEBEC.

Dingman, Darwin, So. Bolton.  
 Hammond, Mrs. D. H., So. Stukely.  
 Rickard, H. E., Fitch Bay.

## WASHINGTON.

Barber, O. W., Carrollton.  
 Barrett, T. H., Box 113, Wilkeson.  
 Nellis, S. W., 309 Poplar st., Seattle.

## WEST VIRGINIA.

Bowen, Mrs. G. L., Newburg.

## WYOMING.

Worth Mrs. Prudie, Buffalo.

TWO BOYS WHO NEED A HOME.—A friend writes of the case of a poor German lady, whose husband is a drunkard, and makes the life of the poor woman and her children almost unendurable. She wishes to find homes for her two boys, aged respectively fourteen and fifteen years, where they will have Christian care and education. The family is in great poverty in consequence of the drunken habits of the father. Who will offer these boys a home?

A YOUNG GIRL WHO NEEDS A MOTHER'S CARE.—A girl of thirteen, bright, with many good qualities, has no home except in a family where the husband is intemperate, and the woman, though kind, cannot give her the care which she needs. She is thus drifting into evil associations. She sorely needs a home where influences will be thrown around her that will serve to keep her in the path of purity and honor. What mother heart answers to this appeal?

A SAD CASE.—We have just received a letter from Mrs. J. H., a poor lady living in a far distant State, who, although but twenty-three years of age, has already endured far more than usually falls to the lot of a human being during a life three times as long. From the description given of her case, she seems to have suffered almost every disease and distress possible for a woman to suffer. She doubtless requires a surgical operation, and having no opportunity to receive the treatment she requires at home, and no means with which to pay for treatment in a hospital, we shall try to arrange for her to occupy one of the free beds in the Sanitarium Hospital at the earliest possible date.

ANOTHER DISTRESSING CASE.—Mrs. C. S., residing in a distant western State, sends a description of her case, together with a diagnosis by her physician, which indicates a most distressing condition of the bladder and other pelvic organs, in consequence of which the patient is barely able to stand upon her feet, though with great pain and suffering. From the physician's account of the case, it is evident that she requires an operation for the relief of her maladies. She is in very reduced circumstances financially, on account of a failure in crops, and the amount of assistance which her husband and friends can give her is scarcely enough to pay her fare to the Hospital and back again. Nevertheless, the case is evidently a worthy one, and word has already gone to the poor woman that she may come, and we hope a few weeks here will establish her on the road to a rapid recovery.

A LITTLE GIRL WHO NEEDS A HOME.—A little girl of eight years, said by those who know her to be of "an exceptionally good disposition, sunny, even tempered, and in quite good health," is in need of a home. As the Haskell Home for Orphan Children is not yet completed, and the present accommodations are filled to their utmost capacity, it would be a blessing to this little girl if some Christian family can receive her.

## LITERARY NOTICES.

"BEAUTY OF FORM AND GRACE OF VESTURE," by Frances Mary Steele and Elizabeth Steele Adams. New York; Dodd, Mead & Co.

The authors say respecting the purpose of this work: "We have chosen to win, if possible, pilgrims into the right way by offering ideals, the successful imitation of which necessarily includes health. The evils of conventional dress, the bad conditions it induces, the diseases it entails, the abnormal growths it causes, the horrors of surgery and dyspepsia,— these have been ably and persistently presented by scientific medical practitioners and benevolent reformers."

This beautiful volume certainly fits in a most admirable manner into a niche which has never before been adequately filled. While giving proper attention to the relation of dress to health, it deals especially with the æsthetic side of the dress question, as indicated by the title. To give a better idea of the contents, we name a few of the chapter heads. Not a single chapter is dull, unpractical, or uninteresting. The following impress us as being especially helpful: "True Standards of Beauty;" "Muscular Symmetry and Fine Condition;" "Grace of Design;" "Art Principles Applied to Custom;" "Beauty of Material;" "Models."

The great obstacles in the way of rational reform in woman's dress are two:—

1. Wrong ideals—the result of a vitiated taste which has been cultivated among women by the caricatures of the fashion plate and the modiste's show window; and—

2. The failure of dress reformers in most instances to recognize in the construction of the new costumes, which they have presented as substitutes for the old, the established principles of art and beauty in color and form. Thousands of women who have been anxious to conform in their mode of dress to the requirements of hygiene, have been prevented from so doing by the fact that their personal attempts in this direction, or those of their friends, did such violence to their native sense of beauty and grace as to render them willing to endure the physical injuries of the conventional dress, rather than do violence to that instinctive love of beauty which is so characteristic of the feminine sex.

For the first time, perhaps, this question has been studied by persons thoroughly competent to deal with it from the artistic standpoint, and it is fortunate for those who have the privilege of perusing this volume, that its authors have carefully studied the hygienic as well as the æsthetic side of their subject. It is also interesting to note that a perfect har-

mony is found to exist between what is true in art respecting dress and all that common sense and experience have shown to be truly fundamental in the hygiene of dress. Of course it could not be otherwise, since the principles of art and the laws of hygiene are from the same great Source of wisdom. It is however a matter of interest and importance that a ground for perfect harmony can be found between the recognized principles of art and hygiene as pertaining to dress; and the women of the present generation owe a debt of gratitude to the accomplished women who have in the beautiful volume before us so clearly shown that this harmony must and does exist.

One characteristic thought in this work, and one which will perhaps be accepted with some hesitancy by those who have given this subject little thought, is that the so-called "waist line" does not exist. Of course a woman has a waist, but our authors maintain, and we quite agree with them, that naturally there is no such thing as a waist *line*. If a woman finds upon her body a waist line, it is due to the pressure of constricting bands, and is indubitable evidence of the injury which she has done herself. Boys and girls and men, with the exception of those military "dudes" who wear corsets, and occasional individuals who foolishly and harmfully sustain their lower garments with a belt, are without a waist line. And the same is true of natural women, or at least primitive women whom we find among the Indian tribes in the Southwest, and of Chinese women, who wear loose garments which exert no baneful constriction upon the trunk, however much their feet may sometimes suffer. Upon this point the writer is able to speak with assurance, having made a careful study of the Indian women of various tribes in Mexico, and of Chinese women. The same is also true of the French and Italian models who pose for the students in the art schools of Paris, a fact to which he can testify from personal observation.

The work consists of 227 pages, not one of which will be skipped by any one who comes in possession of the book. It is beautifully printed on heavy, highly-finished paper, and is illustrated by eighty cuts, a large number of which are original studies by Mrs. Adams. The work will certainly have a wide circulation, and we feel sure it will exert a large and certainly most wholesome influence in aiding women to escape from the fetters of fashion, and in making plain to them a better way. Of all the books which we have read upon the subject of "dress reform," not one has afforded us so much pleasure and satisfaction.

## PUBLISHERS DEPARTMENT.

PRIZE ESSAYS ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.—The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes:—

1st. One hundred dollars for the best essay on "The Physical Action of Alcohol, Based on Original Research and Experiment."

2d. One hundred dollars for the best essay on "The Non-Alcoholic Treatment of Disease."

These essays must be sent to the Secretary of the Committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be in type writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read. These essays will be the property of the Association, and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and limited to physicians of this country, and to receive a prize must be possessed of sufficient merit to be considered worthy of publication by the Association. Address all inquiries to T. D. CROTHERS, M. D., *Secretary of Committee*, Hartford, Conn.

\* \* \*

WINTER AT THE BATTLE CREEK SANITARIUM.—The Sanitarium is full of patients this winter, and a more contented lot of sick people could not be found on earth. It is not intimated that the invalids at the Sanitarium are content with being sick, but, seeing that they are sick, they are more than contented to find themselves in a place which affords such magnificent facilities for the repair of worn-out and broken-down constitutions, and where the life of the invalid can be relieved of so much of its inconvenience, and the road to recovery made so plain and straight.

The method pursued at this institution is unique. Sick people are not encouraged to believe that their maladies can be cured by simply treating the disease, whether by internal or external applications of any sort, but are taught that recovery, to be permanent and thorough-going, must be secured by treating the patient, not his disease; by the cultivation of health through the removal of all the causes of disease, and the acquirement of correct habits. Health is as much a matter of growth and development, as is the growth of a tree. Disease is cultivated by means of bad habits and disease-producing causes. Health must be obtained through cultivation, by a reverse process.

Life at the Sanitarium is made cheerful and agreeable by frequent evening entertainments, lectures, exercises of various sorts at the gymnasium and elsewhere during the day. The mild weather, with just snow enough for good sleighing, gives ample opportunity for outdoor exercise of the most enjoyable character. Patients are not allowed to have any idle time on their hands, except in cases where enforced idleness is necessary for rest. Everybody is kept busy in getting well, the physicians constantly inculcating the doctrine that each patient must work out his own salvation. There is no place in the United States, and probably none in the world, where sick people have a better opportunity for getting well than at this institution, which presents to the invalid public a variety and extent of facilities for the treatment of all curable maladies, which is truly astonishing to those who visit it for the first time. The perfect systems of heating and ventilation, and the profusion of flowering plants scattered about the house

from the dining-room to the top story, almost completely relieve the winter season of its asperity, while the opportunities for indoor exercise and recreation entirely overcome the disadvantages of indoor life; so that the winter season, with its pure, tonic air, is generally considered by the faculty of this institution as on the whole the most favorable for the treatment of a large class of chronic disorders. The rapid growth and astonishing development of the Sanitarium within the last dozen years, has been a surprise even to its most sanguine friends and supporters.

\* \* \*

THE publishers are sorry to be obliged to announce to the readers of GOOD HEALTH the death of an old and distinguished friend of this journal, Capt. Sanderson, of India. The Captain had for many years been in charge of the Elephant Service of the British army in India. One of his duties consisted in the planning and direction of annual expeditions for the capture of wild elephants. In February of each year, with an army of men, he penetrated the remotest jungles of the interior, and began extensive preparations for the capture of whole herds of these monster beasts, of whom he once, as he informed the writer, entrapped a herd of 130 by a single effort. The capture of wild animals on such a gigantic scale, was probably never before attempted by any human being, and will perhaps never be duplicated. Mr. Sanderson's long residence in India, and his remarkable experience as a hunter there, which has been recorded in a graphic and thrilling manner in his work entitled, "Fourteen Years among the Wild Beasts of India," prepared him for this work in a peculiar manner; and it was in recognition of his special fitness for the work, and confidence in his plans, which led the English government to encourage him to undertake the first experiments which resulted in the organization of the department of which he had charge.

Our acquaintance with Capt. Sanderson was the result of a singular circumstance. A sea captain at Liverpool by some means obtained a copy of Dr. Kellogg's "Home Hand-Book of Domestic Hygiene and Rational Medicine," which he carried with him to India, and subsequently sold to Capt. Sanderson, who accidentally saw the book. On reading this work, this Nimrod of the forest, singular as it may seem, became a vegetarian, and renounced the life of bloodshed which he had previously led, having probably killed more animals than any other sportsman who ever visited India. Thenceforth, until his death, he entirely discarded flesh foods of every description. One thing which led to this course on the part of Capt. Sanderson, was the fact that he found himself broken down by long exposures to the pestilential atmosphere of the Indian jungles, so that he suffered for months at a time from jungle fever, his life often being despaired of. A study of the principles of vegetarianism convinced him that the large use of flesh foods, spirits, the use of tobacco, etc., really had more to do with his ill health than the malaria of the swamps. He had observed that notwithstanding the unhealthy atmosphere of the jungle, the monkeys inhabiting those regions, as well as the human vegetarian inhabitants, enjoyed excellent health; and it occurred to him that by the adoption of the same simplicity in diet and other habits of life, he might also escape injury from the miasmatic poison to which he was necessarily exposed in his elephant-capturing expeditions. He accordingly determined, as he expressed himself to the writer, to "follow the monkey in diet," and he found, to his great satis-

## PUBLISHERS' DEPARTMENT.

faction, that when subsisting upon monkey-diet, he could live and maintain health wherever the monkey could live in health. The improvement in his health was so remarkable that he desired to learn more of hygienic ways and principles, and accordingly, obtaining a leave of absence, made a pilgrimage to the Sanitarium at Battle Creek, Mich., where he spent the summer, and a few years ago returned home with a substantial addition to his store of hygienic facts and a supply of Sanitarium health foods, which he afterward kept good by frequent orders of new supplies. Mr. Sanderson's death was sudden, being the result of inflammation of the lungs. He had been married ten days previously, and was just starting for a trip to the Riviera. GOOD HEALTH and all interested in the propagation of the principles to which this journal is devoted, have lost a warm friend in Mr. Sanderson. His widow and other bereaved friends have our most sincere sympathies.

\* \*

A UNIQUE RECEPTION.—Dr. and Mrs. Kellogg, in returning from the meeting of the American Public Health Association in Mexico City, a short time since, brought with them a large collection of curios, photographs, etc., and that the Sanitarium guests might enjoy them, a formal reception was given in the parlors, where everything was as thoroughly "Mexican" as it could be made. Mexican fruits and prepared foods were exhibited, and the practical work of making and baking tortillas. An awning under a palm simulated a street scene, and here the two little Mexican children whom Dr. and Mrs. Kellogg brought home with them, dressed in quaint Mexican costume, worked hard all the evening, making this kind of bread. These children, aged five and seven respectively, are very bright and interesting, as was also a Mexican youth who posed as a street vendor of fruits, during the evening, robed in a gay *serape*, a sombrero on his head, and sandals on his feet. All three are here for an English education. The guests were greatly delighted with every feature of this novel reception.

\* \*

THERE is no better means of reaching St. Louis, Minneapolis, Omaha, and Sioux City from Chicago, than via. the Chicago, Milwaukee & St. Paul R. R. Its elegant sleepers and dining-room cars, with every possible modern improvement for securing the comfort and safety of passengers, makes a traveler over this road feel perfectly at home, or perhaps feel as secure and comfortable as though at home or resting in the luxurious parlor of a metropolitan hotel. Passengers by this route may leave Chicago at 6 p. m. and arrive at their destination in the morning, ready for breakfast and business. For further particulars, address Harry Mercer, Western Pass. Agt., Detroit, Mich.

\* \*

A SANITARIUM MUSICAL.—The Sanitarium managers provided their guests with a musical entertainment of superior excellence on the evening of the 30th ult. Prof. John B. Martin of this city, the well-known orchestral director, was in charge, and played first violin and flute; Mrs. Martin, second violin and piano; Mr. Gus. B. Bell, viola; and Mr. Frank H. Boos, the violincello. The selections were entirely classical, and their rendering full and sympathetic. De Seve's "Slumber song," by the string quartet, held the audience almost breathless in its spell, while one could fancy that the next selection, "Loin du Bal," was Milton's "L'Allegro," turned into music. Several encores were graciously responded to, and throughout, the audience manifested its approval very warmly, and it must be remembered that a Sanitarium audience is always critical because of the culture which it represents. The following day the guests returned to

the managers a hearty vote of thanks in token of their appreciation of being so highly favored in the way of entertainment.

\* \*

THE managers for the Battle Creek Sanitarium have taken steps toward the establishment of a branch institution close to the World's Fair Grounds, to be carried on during the World's Fair and probably to be maintained after the World's Fair. The enterprise will probably become a permanent one, as the large patronage from the city of Chicago and the great demand for an institution of this sort in the vicinity of the great Western metropolis amply justify such an expectation.

\* \*

LOOK out for cold weather, but ride inside of the Electric Lighted and Steam Heated Vestibule Apartment trains of the Chicago, Milwaukee & St. Paul Railway, and you will be as warm, comfortable, and cheerful as in your own library or boudoir. To travel between Chicago, St. Paul, and Minneapolis, or between Chicago, Omaha, and Sioux City, in these luxuriously appointed trains, is a supreme satisfaction; and, as the somewhat ancient advertisement used to read, "for further particulars, see small bills." Small bills (and large ones too) will be accepted for passage and sleeping car tickets. For detailed information, address Harry Mercer, Michigan Passenger Agent, Detroit, Mich.

\* \*

SANITARIUM FREE DISPENSARY.—For many years the physicians of the Sanitarium have done a large amount of indoor and outdoor gratuitous medical work. The managers of the institution have recently given this work a more complete and organized form, by establishing a regular dispensary department, in which the worthy sick poor will receive, gratis, medical advice, treatment, baths, and when necessary, such surgical treatment as their cases may require. The dispensary has an indoor and an outdoor department. The hours for seeing patients in the indoor department are 1: P. M. on Sunday, Tuesday, and Thursday, at which time persons unable to pay for medical attention may visit the dispensary and receive gratuitous advice and treatment. The dispensary is located in the Sanitarium Hospital. Persons unable to visit the dispensary will be seen at their homes by one of the physicians connected with the dispensary. Cases of contagious diseases, such as scarlet fever, measles, diphtheria, etc., will not be received at the indoor department, but must be seen at their homes, if at all.

Arrangements have also been made for opening a free bath department in the Sanitarium Hospital bath-rooms. The hours at which free baths can be received,—on the presentation of special tickets, which are issued for the purpose,—are as follows: 1 to 2:30 P. M. daily except Saturday; 6:30 to 8: P. M. daily except Thursday and Friday.

\* \*

### WHERE TO LOCATE NEW FACTORIES.

THIS is the title of a 150-page pamphlet recently published by the Passenger Department of the Illinois Central Railroad, and should be read by every mechanic, capitalist, and manufacturer. It describes in detail the manufacturing advantages of the principal cities and towns on the line of the Southern Division of the Illinois Central, and the Louisville, New Orleans, and Texas Railroads, and indicates the character and amount of substantial aid each city or town is willing to contribute. It furnishes conclusive proof that the South possesses advantages for the establishment of every kind of factory, working wool, cotton, wood, or clay. For a free copy of this illustrated pamphlet, address C. C. Power, Foreign Representative, 58 Michigan Ave., Chicago, Ill.



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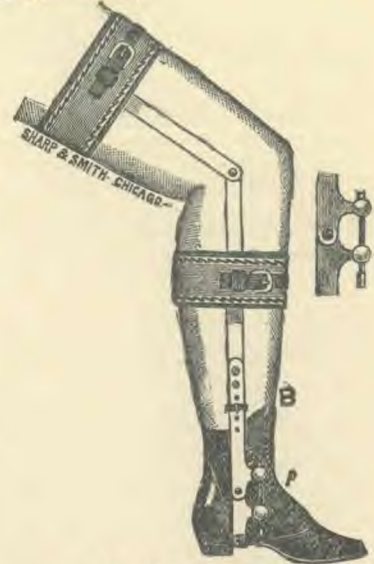
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Robert Grant will relate the further experiences of Fred and Josephine in "A SEQUEL TO THE REFLECTIONS OF A MARRIED MAN," Illustrated.

Harold Frederic will contribute a political novel of great power, entitled "THE COPPERHEAD."

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# MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected Nov. 20, 1892.

EAST.	† Day Express.	*N. Shore Limited.	*N. Y. Express.	*N. Fall & Buffalo Special.	† Night Express.	† Detroit Accom'n	*Atlantic Express
STATIONS.							
Chicago.....	am 9.00	pm 12.20	pm 3.10	pm 4.55	pm 9.30		pm 11.45
Michigan City	10.58	2.05	4.56	6.39	11.25		am 1.42
Niles.....	pm 12.40	2.57	5.48	7.31	am 12.30		2.50
Kalamazoo....	2.05	4.00	7.04	8.57	1.57	am 7.10	4.28
Battle Creek...	2.45	4.30	7.37	9.8	2.35	7.52	5.20
Jackson.....	4.30	5.38	8.52	10.42	4.05	9.40	6.15
Ann Arbor.....	5.30	6.27	9.45	11.27	5.38	10.10	8.05
Detroit.....	6.45	7.25	10.45	am 12.30	7.10	11.52	9.35
Buffalo.....		am 8.00	am 6.25	7.35		pm 7.40	pm 5.00
Rochester.....		5.50	9.55	11.20			8.20
Syracuse.....		7.50	pm 12.15	pm 2.10			10.20
New York.....		pm 3.45	8.50			am 8.45	am 7.00
Boston.....		6.05	11.05	am 6.15			10.50
WEST.	† Mail.	† Day Express.	*N. Shore Limited.	*Chicago Express.	†Kat. Accom'n	*Pacific Express.	*Chic. Special.
STATIONS.							
Boston.....		am 8.30	pm 2.00	pm 3.00			pm 6.45
New York.....		10.30	4.30	6.00	pm 8.00		9.15
Syracuse.....		pm 7.31	11.35	am 2.10	am 3.50		am 7.20
Rochester.....			am 1.25	4.20			9.55
Buffalo.....		11.00	2.20	5.30	9.04		11.50
Detroit.....	am 8.20	am 7.30	9.05	pm 1.25	pm 4.40	pm 9.00	am 2.15
Ann Arbor.....	9.37	8.27	9.59	2.19	5.48	10.27	3.08
Jackson.....	11.35	9.45	10.58	3.17	7.15	am 12.01	4.10
Battle Creek...	pm 1.18	10.43	pm 12.02	4.31	8.47	1.20	5.20
Kalamazoo....	2.05	11.30	12.59	5.05	9.45	2.18	5.50
Niles.....	4.00	pm 12.40	1.48	5.17		4.15	7.15
Michigan City	5.20	2.03	2.45	7.20		5.35	8.29
Chicago.....	7.35	3.55	4.30	9.00		7.55	10.15

\*Daily. †Daily except Sunday. ‡Except Saturday.  
 Accommodation Mail train goes East at 1.15 p. m. daily except Sunday.  
 Night Express goes West at 12.05 a. m. daily except Monday.  
 Trains on Battle Creek Division depart at 8.03 a. m. and 4.35 p. m., and arrive at 11.40 a. m. and 6.45 p. m. daily except Sunday.  
**O. W. RUGGLES,** General Pass. & Ticket Agent, Chicago.  
**GEO. J. SADLER,** Ticket Agent, Battle Creek.

## CHICAGO & GRAND TRUNK R. R.

Time Table, in Effect June 26, 1892.

GOING WEST.				STATIONS.	GOING EAST.			
pm	pm	am	pm	Boston.....	am	pm	pm	am
7.15	3.00	1.00	7.00	New York.....	9.55	7.40	5.07	.....
am	pm	pm	pm	Buffalo.....	am	pm	am	.....
9.45	5.00	6.30	8.00	Niagara Falls....	am	pm	am	.....
am	am	am	pm	Boston.....	8.05	9.50	.....	.....
12.10	6.20	6.25	1.00	Montreal.....	pm	am	.....	.....
am	am	pm	pm	Toronto.....	am	pm	.....	.....
1.35	7.45	8.00	2.45	Detroit.....	8.35	5.25	.....	.....
am	pm	noon	.....	.....	pm	am	.....	.....
8.30	am	8.00	12.00	.....	9.25	7.45	9.25	.....
am	pm	.....	.....	Dep.	am	am	pm	am
9.30	8.40	.....	.....	Port Huron.....	10.01	.....	.....	.....
pm	.....	.....	.....	Port Huron Tunnel.	8.55	12.35	7.30	8.50
11.30	.....	.....	.....	Lapeer.....	8.15	11.20	5.15	7.35
Day Exp.	B. C. Pass	Limit Exp	Pacific Exp.	Flint.....	7.30	10.47	5.40	7.05
Exp.	Pass	Exp	Exp.	Detroit.....	9.25	7.45	9.25	11.50
.....	.....	.....	.....	Bay City.....	8.37	7.15	8.37	11.30
am	pm	pm	pm	Saginaw.....	8.00	5.40	8.00	10.43
8.44	.....	.....	.....	Durand.....	5.50	10.20	5.00	6.35
6.50	8.49	12.25	8.40	Lansing.....	5.10	9.30	4.00	5.40
8.05	5.10	1.37	10.07	Charlotte.....	4.44	9.01	3.25	5.11
8.35	5.47	1.55	10.47	BATTLE CREEK.....	3.40	8.20	2.40	4.30
4.05	.....	8.00	6.50	Vicksburg.....	2.33	7.40	1.48	.....
7.15	4.40	.....	8.25	Schoolcraft.....	2.21	.....	.....	.....
7.50	5.17	.....	9.00	Cassopolis.....	1.20	6.50	12.45	9.07
9.05	6.50	2.22	11.20	South Bend.....	12.45	6.20	12.00	2.35
10.02	7.55	3.07	12.20	Valparaiso.....	11.10	5.00	10.30	1.20
10.28	8.34	3.34	12.52	Chicago.....	8.40	3.00	8.15	11.25
11.15	9.25	4.15	1.50	.....	.....	.....	.....	.....
11.53	pm	.....	2.35	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
12.40	.....	5.45	3.30	.....	.....	.....	.....	.....
1.20	.....	6.20	4.10	.....	.....	.....	.....	.....
2.45	.....	7.35	5.45	.....	.....	.....	.....	.....
4.50	.....	9.30	8.00	.....	.....	.....	.....	.....
pm	.....	pm	am	.....	.....	.....	.....	.....
.....	.....	pm	Arr.	.....	.....	.....	.....	.....

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