

FEBRUARY, 1896.

GOOD



DEEDS

CONDUCTED
BY

J. H. KELLOGG M. D.

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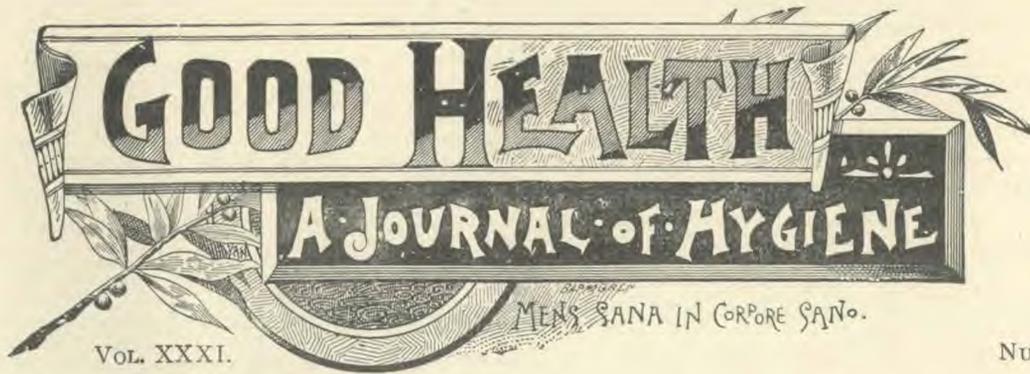
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BATTLE CREEK MICHIGAN

FEBRUARY, 1896.

ZOOLOGICAL HEALTH-STUDIES.

BY F. L. OSWALD, M. D.,

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

2. Our Four-Handed Cousins.

THE Russian liberal Stepniak remarks that the captivity of the Circassian patriots was not an un-mixed evil, since it led to the result of modifying the prevalent prejudices against the Mohammedan religion ; and considerations of a similar philosophy might reconcile humanitarians to the martyrdom of our menagerie monkeys.

About fifty per cent. of such captives succumb to the effects of indoor life within the first three years, but their fate has at least helped to demolish a delusion that has done more to shorten human life than war and intemperance taken together ; viz., the idea that the causes of catarrh and consumption have anything to do with the influence of a low temperature.

It must not be supposed that the natural habitat of our Darwinian relatives is limited to climes of a uniform hothouse heat. The entellus ape (the sacred hanuman of the Hindus) inhabits the foothills of the Himalayas up to a height of eight thousand feet above the sea-level. The monkey-haunted rock of Gibraltar is visited by occasional sleet storms, and the mane-baboon (Cynocephalus Gelada) digs for roots among the icicled summit-cliffs of the Abyssinian Alps. During the storms of the rainy season the temperature of the East Indian and Brazilian hill forests often falls forty degrees in half as many minutes ; pelting showers drench the foliage of the primeval woods from the top tassels of the tallest palm to the shrubs of the underbrush, but the same creatures that brave the climatic

vicissitudes of those countries for long years with perfect impunity, die like sheep-rot victims in the foul, though well-warmed, atmosphere of their north-land prisons. And, moreover, it can be proved that the rate of that mortality bears a close proportion to the completeness of the precautions against the risk of "drafts." The occupants of veranda cages out-live the indoor prisoners.

Pat Rooney, Esq., and his wife cost the Cincinnati Zoo more than a thousand dollars, and within a week after their arrival the managers had surrounded their cage with double sheets of plate glass. Pat's prison, as a correspondent of the Popular Science Monthly describes it, "was in many respects a model of comfort. He had a rocking-chair and a variety of gymnastic contrivances, a bench and a dinner-table of his own, and could rely on a liberal allowance of well-selected food, served daily at convenient hours. The glass walls prevented the introduction of improper comestibles"—but also of fresh air, and during the warm summer of 1893 the tenant of the glass castle began to cough and crouch in the darkest corner of his lunch-counter with the perversity of a four-handed Schopenhauer. At first the symptoms of distress were ascribed to digestive troubles. It must be dyspepsia ; for with such precautions against cold it seemed impossible that he could have contracted a disorder of the lungs. Were not the glass plates fitted tight all around, almost like the walls of an aquarium ? And were they not double ? That question was debated even by

the prosectors of the autopsy, but the first slit through the pleura set all controversies at rest. "Gentlemen, I was mistaken," said the officiating surgeon; "I'm no monkey-doctor; Pat Rooney is just a mass of tubercles."

But was it not possible that, in the course of the first winter, currents of cold air had penetrated the glass prison? and would its tenant not perhaps have died sooner if he had been confined in a less weather-proof cage?

That question, too, was answered by a practical experiment in the cool highland climate of Western North Carolina. At Old Fort, near Asheville, in the land of the sky, the thermometer now and then drops below zero, and the Yankee visitors of the depot-hotel must often be reminded of Heinrich Heine's Laplander, who "came to St. Petersburg to enjoy the benefits of the mild climate." Old Fort overlooks the headwaters of the Catawba River from a spur of the same ridge that culminates in the pinnacle of Mitchell's Peak; and in that playground of all the mountain winds a pet-loving railway official has caged two mangabey apes in a lattice-work pavilion. The broad roof affords protection from all but the gustiest rainstorms, but the only refuge from blizzards is a pile of hay at the bottom of the cage; yet the prisoners of Tannhäusers' mountain-palace cannot have enjoyed existence more than the occupants of that airy garden house. From dawn to dusk they sport about like hawks in a tower-roost, darting to and fro with flying leaps, or tossing up the remnants of their meals, and then playing at hide-and-seek in the hay tangle. At the approach of a visitor they whoop in concert, with a vigor that attests the soundness of their respiratory organs; and have never betrayed a symptom of the sniffles and croaking coughs that afflict menagerie monkeys almost the year round.

My pet baboon, Polly, once enacted a declaration of independence in the neighborhood of Tallulah Falls, Georgia, and survived the winter of that considerable altitude by camping *al fresco*, and feeding on service-berries and crawfish. When she was finally recaptured, her lungs were as sound as a mountain buck's, but during her confinement in the basement of "Rembert Place" (a dilapidated old plantation-house on a hill with the grandest mountain view of the southern Alleghanies) she sometimes paid the penalty of her popularity with the numerous visitors by catching colds, that stuck to her longer than to their original proprietors, and only yielded to a week's romp on the airy terrace lands. I have, indeed, long ceased to doubt that consump-

tion and catarrh can be communicated by contagion, and with results proving often more ruinous to the children of the wilderness than to habitués in the centers of civilization, just as alcohol manifests its deadliest virulence in its effect on unprepared races. Captain Cook's sailors communicated catarrhs to the natives of islands where lung complaints had not been previously known even from hearsay; and Professor Bates, in his description of the rambles of a naturalist on the river Amazon, mentions a precisely analogous phenomenon, observed in the neighborhood of Ega, where the aborigines dread the approach of Caucasian visitors. A few minutes passed in the company of white strangers, the distinguished traveler tells us, often suffices to afflict a family of natives with a complaint known as *defluxo*, with symptoms closely resembling those of catarrh, and often resulting in pulmonary consumption. "Do you bring *defluxo*?" ask the poor Indians when a foreigner appears in their wigwams.

Chamisso's traveling companions had a similar experience on the coast of Unalaska, but catarrh microbes succumb to the climate of that latitude, and after a few weeks' sniffing, the red-nosed natives were generally able to resume their walrus-hunts.

For while a high temperature, especially sultry heat, tends to make lung complaints more incurable, cold, in every form, is their most effective antidote; whence the beneficial effect of the "mountain cure" and the heroic application of hydropathy. On the coldest morning of the last Christmas week, a reporter of the New York *World* saw a man jump into a hole, cut through the thick ice of the East River, and emerge refreshed, like a dandy after a good shampoo. The bather confessed to having taken a plunge every morning of the last seven years, and assured the reporter that the cold-water habit had grown on him like dram-drinking on a toper. "I have never been sick," he added, "since I took to daily bathing, and if I chance to contract a cold, it succumbs to the plunge." (Quoted in the *Louisville Times* of Jan. 8, 1896.)

My favorite sanitary thesis, however, is that the same result can be attained with far less trouble by the direct application of refrigerants to the lungs; viz., by the breathing of cold, pure air while the body is enjoying the warmth of a comfortable bed. Catarrh microbes cannot stand cold drafts, and if the four-handed pets of the South American planters ever contract lung complaints, they recover because of—not in spite of—the rain-storms that often lower the temperature to the verge of chilliness.

The bite of the Tsetse fly, which proves fatal to dogs and horses, produces only a slight irritation of the human skin; and vice versa, consumption microbes that kill creatures of our species at the rate of a million a year, do not seem to affect dogs at all. The lungs of dogs, bears, and foxes have possibly become microbe-proof during the long cave-dwelling experience of their ancestors; and it is not improbable that the respiratory organs of tenement dwellers are undergoing a similar process of adaptation. Hence the survival of Captain Cook's mariners in cock-pits that almost killed visitors from the genial atmosphere of the Southern Islands.

Pet monkeys that learn to value warm bedclothing generally insist on keeping their heads uncovered—a hint against the frequent custom of spreading shawls (or even quilts) over the faces of sleeping children. But the hygienic instincts of our four-handed kinsmen seem to fail them at sight of a glowing stove. On cold winter days they appear to consider a blazing fire an acceptable substitute for sun-heat, and crowd around a stove till their fur begins to smoke, as if the "flame of contemplation" was bursting from their breasts, as in the closing scene of Seybel's life of Buddha. They sit and sit, till they collapse with the unmistakable symptoms of sick-headache, or drop asleep, though, as a rule, they object to daylight naps. It would, indeed, seem as if sanitary intuitions had been developed by the experience of a long series of generations, and applied only to facts that came within the scope of ancestral cognizance. Thus ages of rambles in the sylvan wilderness of the tropics have evolved a faculty for recognizing vegetable poisons almost at sight, and nearly always at the first smell or nibble; but the same pets that reject the berries of the belladonna plant after a cursory inspection, would have no hesitation in accepting a lunch of porridge and arsenic, or swallowing sugar of lead like cream candy. The explanation can be found in the circumstance that arsenious acid and acetate of lead are not often found on the surface of this planet, so that Nature thought it superfluous to warn her children against out-of-the-way substances, or, biologically speaking, there was no opportunity for the development of an instinct of admonition against unknown perils.

The nasty sweetness of glucose treacle, too, attracts our unsophisticated cousins, and they will hang about a glass of adulterated jelly, communing in mysterious whispers. But within the sphere of their specialty we can trust their intuitions as we would trust the agricultural verdicts of a veteran

granger, though he might come to grief by blowing out the gas of a city hotel. Monkeys detest clabber, and no deference to public opinion constrains them to the pretense of liking buttermilk, though they will risk an indictment on the habitual criminal act to procure a sweet article. They shudder at the mere smell of vinegar pickles, and the unanimous verdict of their instinct on the value of comestibles pickled in brine, inclines me to suspect the correctness of the popular ideas concerning the sanitary importance of salt. Many tribes of intertropical savages reject it altogether, like Dean Swift's nature-abiding Houghimns; and even starving apes will hesitate at the taste of a salt-sprinkled egg-pie. Their objection to a slight admixture of ground pepper is less decided, and I have seen them munch sandwiches plastered pretty thick with a sweetish variety of fluid mustard. Their vegetarian principles do not prevent them from enjoying an occasional clam bake, but the trick of mixing tidbits of that kind with thin slices of bacon does not deceive their instinct for a moment; they drop the unsavory fragments before they have passed their lips, and then proceed to scrape their hands, as if trying to obliterate the traces of an odious defilement. If the objectionable admixture should, moreover, have been served with salt, they will reject the whole dish; and I cannot help thinking that a mess of salt pork is about the hardest task that could be imposed upon our digestive organs. Monkeys of all species will cram themselves with peanuts till their-cheek pouches bulge; but, as a rule, they do not think hickory-nuts worth the trouble of cracking, and waste no time in trying to get at the inside facts of a coconut, though I cannot disprove Winwood Reade's statement that some species of apes belabor them with hammer-shaped stones.

Between raw and baked fruits, tubers, etc., our instinct-guided cousins appear to recognize no essential sanitary difference. I have seen them scrutinize a boiled pear with gleams of suspicion, but the test of smell seemed to reassure them; and in selecting his share of lunch from a basketful of mixed apples my young rhesus monkey generally picks out the baked ones,—probably to lessen the risk of being robbed before he can put himself outside of a sufficient quantity.

Some of my pets prefer a tomato-stew to its raw ingredients, but they all shrink from smoking-hot dishes, often watching the ascending steam with grunts of amazement, and awaiting the complete subsidence of the portent before risking another finger-tip sample. Ice-cream they tackle without a

moment's hesitation, and rarely fail to apply for a second instalment, as a hint that the laboratory of the stomach finds it far easier to raise the temperature of chilled comestibles than to reduce that of superheated ones. I have often seen a domesticated spider monkey suck an icicle like a Brazilian cigar; but he would as soon have toyed with live coals as with steaming-hot chestnuts, though after the abatement of the thermal grievance he preferred them to all other tidbits.

"Oh, what a pretty thing, a pretty little thing!" cried the descendants of the Pitcairn colonists when they saw a spaniel on board of the British frigate; and with similar emotions African baboons hail the first glimpse of our northland crawfish—and then proceed to devour the charming novelty, which probably reminds them of the Abyssinian scorpions. In the extremely dry regions of Western Abyssinia, several species of scorpions contrive to eke out an existence, and the unanimous testimony of intelligent travelers seems to establish the astounding fact that the baboons of that drought-land turn over the stones of whole hillsides in quest of the venomous little wrigglers, which they swallow with chuckles of delight, after breaking off their poison stings with the success of lifelong practice. It is a curious instance of sagacious creatures' utilizing their natural enemies, but it also proves that the instincts guiding the actions of our near relatives prefer the most desperate expedients to the alternative of a purely vegetable diet. In regions abounding with eggs, the primates of the animal kingdom would leave rock scorpions strictly alone; but the Abyssinian compromise diet is probably as digestible as shrimps, and there is not much doubt that vegetarians of the

watercress school treat themselves a little worse than famine itself treats their four-handed kinsmen.

The ape-god Hanuman, whom the heroes of Hindu mythology used to consult in stress of misfortune, would probably have advised a movement-cure in lieu of the Brahman drug-specifics; and some of his American relatives follow that prescription with a zeal not safely imitable without the possession of a ring-tail. They go through the high-school manual of the flying trapeze even after rheumatism has handicapped the prehensile power of their hind feet, and the long-armed gibbon apes would solve the perpetuum mobile problem, if the climate of our wintry latitude did not oblige them to devote an occasional half hour to fire-worship.

Some varieties of the lemurs, or night-apes, are rather sluggish creatures, but all the numerous tribes of daylight monkeys ought to be able to dispense with chemical tonics, if physical exercise is an all-sufficient stimulant. Their very slumber-visions deal with woodland adventures, to judge by the way they grasp their pillows or contract their sinews for a daring spring; and in close confinement they will cling to the light-side bars of their cage, looking wistfully toward the doors that lead to the land of freedom.

I knew a poor little orphan boy who had the same habit of fixing a day-dream gaze upon the window of his city-prison, and listening, as if for the sound of a far-off voice,—

*"Calls the Echo, like a saga
Of past ages from the mountains?"*

—perhaps a half-forgotten tradition of the times when the playgrounds of earth had not yet been closed by Sunday laws.

(To be continued.)

COLD CLIMATES FOR LUNG TROUBLES.

BY O. G. PLACE, M. D.

THE question of where patients with consumption can go and obtain the greatest number of advantages for rapid recovery, has been one that has been very carefully considered by many conscientious physicians during the past few years, since it has been determined that consumption is a curable disease. Our natural feelings incline us to the "Sunny South," from which climate we have expected so much and realized so little. This inclination is not due to a study of the advantages, but usually from a theoretical supposition that this is the place for those

who are weak and have little vitality to resist cold.

Physicians have been too ready to cater to the feelings of their patients in this respect, until from statistics and observations, one after another have been forced to change the direction of the consumption exodus to climates which offer better advantages. It is now well known that warm climates favor the development of the germs of consumption, while cold or cool, dry climates greatly retard their growth. It is also an observable fact that general nutrition is better in winter than in summer. As

the cool, bracing fall days begin, we feel better, our appetite improves, and our usual gain in weight is from five to ten pounds.

It is true that consumptives should have an opportunity of being out of doors very much of their time; in fact, I am convinced that an almost continual outdoor life is very essential to the securing of the best results. But this does not necessarily prove that a warm climate is essential, for the observations of the past few years have proved beyond question that patients cannot stand the hot Southern sun, even in winter, to any great extent, and do well.

It is essential that they have the advantages of highly ozonized air, which is found in those high and dry climates where sunshine abounds, both winter and summer; but climatic advantages cannot be attributable to the heat which the air and soil contain, but to the dryness and cold, both of which favor production of free ozone, found in such abundance in the mountain regions of Northern Colorado. The following from Dr. Boardman

Reed, president of the American Climatological Association, upon the value of cool climates and tonic air, is worthy of our careful consideration before we decide to run away from cold in the hope of bettering our physical condition. He says:—

“The germ-laden air of crowded cities is naturally less curative than that of the country, seashore, or mountains. The purer the air, the better; and, contrary to the prevalent notion, the colder the air, the better, provided only the patient can and will educate himself to be out in it and breathe it freely.”

Consumption is in reality a disease of warm climates, and becomes markedly less prevalent after passing the temperate zone, either north or south. Statistics show that consumption is unknown in Iceland. It is decidedly a mistake for consumptives to seek a warm climate, except in cases in which the disease is so far advanced that there is no hope of recovery. For such, a warm climate secures an easy death, but, it must be added, a speedier one.

BETTER THAN GOLD.

BETTER than grandeur, better than gold,
Than rank and title a thousandfold,
Is a healthy body, a mind at ease,
And simple pleasures that always please;
A heart that can feel for another's woe,
And share his joys with a genial glow,—
With sympathies large enough to enfold
All men as brothers,— is better than gold.

Better than gold is a conscience clear,
Though toiling for bread in an humble sphere:
Doubly blessed with content and health,
Untried by the lust of cares or wealth.

Lowly living and lofty thought
Adorn and ennoble a poor man's cot;
For man and morals, in nature's plan,
Are the genuine test of a gentleman.

Better than gold is the sweet repose
Of the sons of toil when their labors close;
Better than gold is the poor man's sleep,
And the balm that drops on his slumbers deep.
Bring sleeping drafts to the downy bed,
Where luxury pillows the aching head;
His simpler opiate labor deems
A shorter road to the land of dreams.

—Selected.

CENTENARIANS.—The *American Lancet* publishes the following:—

“During the past year, in the obituary column of one of the leading London papers, the deaths of 7129 persons were announced. Of these it is stated that 998 had passed by ten years the age which the psalmist said constitutes the span of human life. There were no fewer than five centenarians in the list—two men and three women. In the news columns of the same journal no fewer than thirty-five centenarians, in addition to the above five names, appeared during the year.

Ireland, particularly County Cork, has furnished the most remarkable instances in the past year of persons having attained an age considerably beyond the 100 years. In July there died near Middleton,

County Cork, a widow whose age was vouched for a 115. At the time of her death she had a daughter living with her aged 85. In the same neighborhood in September a man died at the age of 112. Another, who died at the age of 105, was at work upon his farm within six months of his decease. A woman who died in December, aged 110, had a vivid recollection of the landing of the French at Killala. On the 9th of January, 1894, at Manchester, there took place the death of William Hampson, who claimed to be the queen's oldest subject, and who had seen his 115th New Year's Day in 1894. He had as a boy heard John Wesley preach in Trinity church, Salford. Two of his sons were killed in the Crimea, and four of his uncles fell on the field of Waterloo.”

TREATMENT OF CHOLERA.

DR. ELMER LEE, of Chicago, writes thus respecting the treatment of cholera, in the *Journal of the American Medical Association*, June 22, 1895:—

“The result of prolonged reflection, covering many years, and the observations resulting from personal experience in the cholera epidemic of 1892, in Europe, is the conviction that there is provided in the laboratory of the universe a remedy which surpasses the results of human ingenuity as much as the sun surpasses in brilliancy the light of the artificial lamp. The all-pervading and all-wide remedy, the greatest product of omniscient nature’s laboratory, which alone can cope with this pestilential disease of the human race, is nothing more and nothing less than the unmatched and unmatchable H_2O . Pure water is absolutely the only trustworthy cure for cholera, and if it came at a great price, it would be highly valued. The human organism is so constituted that if it is assisted by H_2O , every morbid element may be eliminated from its domain. The acutely poisoned body quickly recovers its equilibrium and its harmony of action as soon as the processes of elimination can remove the invading poison. In the construction of the mucous lining of all the accessible cavities and channels, it is prepared by an undiscernible law to successfully resist the entrance of every form of organism. The products of organic action alone are able to pass into the blood. If sufficient quantities of pure water, of a suitable temperature, are introduced into the body through the natural channels, it is actually possible to wash morbid products, as well as organic forms of life, out of the human body.

“The mouth gives entrance to the causative germs in Asiatic cholera. This is quite conclusively established. The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine ;

and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that cannot be of the slightest danger to the victim. The amount of water to be used varies in different cases. It is impossible to use too much ; it is possible to use too little. From the earliest moment that the patient is seen, the propositions should be, to first wash the whole alimentary canal with pure water ; then to wash the lower portion by introducing irrigations of warm soapsuds or merely warm water into the colon sufficiently often and sufficient in quantity to cleanse that portion of the bowel effectively. The frequency of washing that portion of the bowel which is accessible from the rectum should be one, two, three, or four times a day, according to circumstances. At the same time, from one to ten quarts of warm, pure water mildly medicated with peroxide of hydrogen or hydrozone should be administered at regular intervals during the day, as the prescribed remedy by the mouth. If the patient vomits, very well. Immediately reintroduce a quantity of water equal to that vomited. No harm can be done in any case, and if it is possible to save life, it may be done through this method. It is the quickest and surest method of exciting the activity of the kidneys, and it is the safest. It is the rational and effective measure for maintaining the volume of the blood. It is the scientific process by which to establish cutaneous circulation in the capillaries.

“The use of simple and useful hygienic measures are the same as in other prostrating diseases. Patients should be fed with regularity at not too frequent intervals, the proper time being given between administrations of simple food for its digestion. The use of appliances for maintaining the heat of the body are not to be neglected.”

TEA-DRUNKENNESS.

DR. JAMES WOOD, M. D., visiting physician of the Brooklyn Dispensary, New York, recently published in the *Quarterly Journal of Inebriety*, an excellent paper on the baneful effects of tea-drinking, a subject which he has very carefully studied for some years. Dr. Wood states that out of one thousand persons applying for treatment at the Brooklyn

Central Dispensary, one hundred gave symptoms pointing directly to tea-drunkenness, while many others were doubtless suffering more or less from the same causes.

The effects of tea, according to Dr. Wood, differ somewhat according to the kind taken, as he finds that the tea of India contains two and one-half

times as much tannin as that of China. The headaches so frequently suffered by tea-tasters, Dr. Wood attributes to the essential oil, of which the tea contains three fourths of one per cent. Tea-tasters drink the infusion immediately after making it.

Dr. Wood notices a great difference in susceptibility to tea-poisoning. He says, "Some people are profoundly intoxicated by indulging in two cups of strong tea per day. . . . We find that an ounce of tea-leaves used daily, will soon produce poisonous symptoms. This amount will contain six grains of thein." Of the one hundred cases of tea-poisoning mentioned by Dr. Wood, sixty-nine were women and thirty-one were men. Fifty-four drank two pints or less; thirty-seven, four pints or less; and nine, ten pints or less. The following table of symptoms shows also the number of persons suffering from each of the symptoms given: Nervous: seventy-two per cent. Bowels: forty per cent., constipation; two per cent., diarrhea; fifteen per cent., irregular. Pains: sixteen per cent., general; ten per cent., heart; nine per cent., back; six per cent., side; seven per cent., chest. Dizziness, twenty per cent.; faintness, eight per cent.; gastric and intestinal indigestion, nineteen per cent.; intestinal catarrh, eight per cent.; dreams, five per cent.; nightmare, five per cent.; depression, ten per cent.; despondent, twenty per cent.; excited, five per cent.; suicide, three per cent.; headache, forty-five per cent.; rheumatism, five per cent.; irregular menses, twelve per cent.; palpitation, nineteen per cent.; muscular tremor, twelve per cent.; insomnia, fifteen per cent.; anemia, six per cent.; dyspnea, five per cent.

Dr. Wood found the following symptoms present in nearly all cases of tea-intoxication: In subsequent cases careful study is being made of the irregular cardiac action, hallucinations, nightmares, successive dreams, obstinate neuralgia, anxiety, a persistent sinking sensation in the epigastrium, prostration and general weakness, excitement, and mental depression.

As the doctor says, "These symptoms bear silent but impressive witness to the terrible injury which is being wrought by this commonly used drug."

Tea-drunkenness is, according to Dr. Wood, responsible for half the headaches, and a large proportion of all the cases of despondency, palpitation of the heart, giddiness, and allied symptoms.

The poison of tea when in a pure state, is known as thein. The effects of this drug, when administered by itself, are, rapid pulse, muscular tremor, desire to empty the bladder, wandering of the mind, hallucinations and visions, peculiar form of intoxication, wakefulness, finally resulting in deep sleep from exhaustion.

The essential oil of tea which gives out its peculiar aroma, is, according to Dr. Wood, a powerfully intoxicating poison. Its injurious effects are so well recognized by the natives of China that they do not use tea until it is a year old, thus allowing this deleterious substance to escape. Green tea contains more of the essential oil than black tea, which accounts for the fact that it is more productive of nervousness.

The writer quotes from a report recently received from institutions for the insane in Ireland, in which great prominence was given to the use of tea as a cause of insanity. In a case recently reported in the Minnesota journals, of insanity in a woman, which was the direct result of tea-drinking, it finally became necessary to confine the poor woman in an asylum.

Dr. Wood very properly calls attention to an evil which, in his opinion, ought to be suppressed, which is, the fact that tea is one of the principal articles given to the poor by many charitable societies. By this means, well-meaning charitable people become the means of increasing sickness and poverty.

Another evil to which attention ought to be called, is the establishment of tea-and-coffee houses as substitutes for saloons. The good women who devote so much time and labor to the development and conducting of these enterprises are doubtless unaware of the fact that tea and coffee are inebriating substances, as well as alcohol, though they produce a different form of intoxication, and one which seldom results in such outbreaking violence as sometimes arises from the use of alcoholic liquors.—*J. H. K., in Modern Medicine.*

A RAILWAY COMPANY AS PROHIBITIONISTS.—It is not generally known that the Canadian Pacific Railway for years past has refused to sell the land immediately adjoining its stations except upon conditions which preclude the sale of liquors thereon. A clause in each deed provides that the title shall become in-

valid, and the property revert to the company, in the event of its being used as a place for the sale of liquors.—*English Paper.*

INFIDELITY, impurity, and intemperance — the trinity of evil.—*Canon Wilberforce.*

LIQUID BREAD.

I REMEMBER once seeing over the door of a public-house in Liverpool, "Good ale is liquid bread." I went into the house, and said, "Give me a quart of liquid bread."

The landlord said, "Ah! first-rate sign, is n't it?"

"Yes," said I, "if it's true."

"Oh, it's true enough; my beer is all right!"

"Well, give me a bottle to take home." He gave me a bottle of this liquid bread. I took it to an analytical chemist, and said to him, "I want you to tell me how much bread there is in this bottle."

He smelled it, and said, "It's beer."

"No, no," said I, "it's liquid bread."

"Well," he said, "if you will come again in a week, I'll tell you all about it." In a week's time I went to learn all about the liquid bread. The first thing about it was that ninety-three per cent. of it was water.

"It's liquid, anyhow," I said; "we'll pass that. Now let us get on to the bread."

"Alcohol, five per cent."

"What's alcohol?" I said.

"There's the dictionary! you can hunt it up for yourself."

I hunted it up, and found alcohol described as a "powerful narcotic poison." "Well," I thought, "this is the queerest description of bread I ever read in my life." Then he gave me a number of small percentages of curious things, which he had carefully put down on each corner of a piece of white paper, and which amounted to about a quarter of a thimbleful of dirty-looking powder. That was the bread—two per cent.

"And there would not be so much as that," said the chemist, "if it were pure beer. That is bad beer."

"So the better the beer the less bread there is in it?"

"Certainly. It is the business of the brewer to get the bread out of it, not to put bread into it."

This is the simple, scientific truth with regard to beer, and the case is stronger with regard to wine and spirits. There is practically no nourishment at all in them.—*ScL.*

TESTIMONY OF SIR JOHN ROSS, THE ARCTIC EXPLORER.—I went to Greenock, and was bound apprentice for four years, during which time I made three voyages to the West Indies and three to the Baltic. I had, therefore, a good opportunity of observing the injurious effects of alcohol in hot climates. My first voyage was to Jamaica, where the captain and several of the crew died. Excepting that I never drank spirits, I took no care of myself. I was exposed to the burning sun, slept on deck in the dew, and ate fruit, without feeling any bad effects. I soon lost my hat and shoes, and ran bareheaded and barefooted, but I never tasted spirits; and to this alone do I attribute the extraordinarily good health I enjoyed. After having spent the summer in hot Jamaica, I spent the winter in cold St. Petersburg, Russia, and with the same hardihood. My next voyage was to the Bay of Honduras; all the common sailors, twelve in number, died, and I was the only person that went out in the ship who came home alive, which I attribute entirely to my abstaining from spirituous liquors.

SALOON-KEEPERS do not like to have fruit-wagons and apple-women any nearer their shops than they can help, the eating of plenty of fruit being famous for obliterating the beer-thirst.

CIGARETTES VERSUS SCHOOL-BOYS.—The school board of Santa Ana, Cal., found that for some reason the boys in the public schools were not nearly so proficient in their studies as the girls, and an investigation was instituted to discover the cause,—whether the boys were being neglected by their teachers, or whether a lack of discipline was chargeable with the fact that the boys were not doing well. The investigation was had, and it was found that ninety per cent. of the boys between the ages of twelve and fifteen years, who attended the public schools, smoke cigarettes. The investigation did not require to be pushed any further. It is sufficiently well known that cigarette smoking blunts the intellect as well as undermines the constitution, and if ninety per cent. of the Santa Ana boys continue the habit, ninety per cent. of the Santa Ana boys will be failures in life, and no help for it.—*Palo (Cal.) Mail.*

EFFECT OF TOBACCO-USING.—It is said that the native Maoris, of New Zealand, who were once a powerful race, and models of physical perfection, have been reduced to a small fraction of their former numbers, and are rapidly dying out, one of the most active causes of this being the use of tobacco, to which they have become greatly addicted since its introduction by Europeans.

DR. SEAVER ON SMOKING.—Dr. Seaver, the eminent professor of physical culture at Yale College, is, we are glad to see, waging an earnest war against the habit of tobacco-using. For a number of years Dr. Seaver has been making observations respecting the physical and mental effects of tobacco-using on students. In the statistics which he recently published, Dr. Seaver shows that among the students at Yale, smokers are found to be inferior to non-smokers, in both mental ability and physical vigor. He found that smokers have less lung capacity and lung power than non-smokers. Their average bodily weight is less, as is also their stature. They have less endurance, both muscular and nervous, and are in every way physically inferior to non-smokers. It is also observed that the smokers are far behind in scholarship. Very few receive honors of any sort, and among those of high standing in scholarship, only five were smokers.

Dr. Seaver's observations are certainly not without influence at Yale, since he reports that only thirty per cent. of the senior class indulge in the use of tobacco, which is certainly a smaller percentage than is found at the average college. The influence of such a man as Dr. Seaver at such an important educational institution as Yale cannot be overestimated. It is only to be regretted that a man of equal capacity and equally advanced reformatory ideas is not connected with every important educational institution in the land.

THE INFLUENCE OF LIQUOR-DRINKING ON THE MORALS.—One of the most distinctive features of habitual and periodic inebriety is an utter disregard for truth on the part of many inebriates. Women lose the sense of truth even more completely than do men. Seen in the very act of setting down the just-emptied glass, lady patients have coolly and solemnly denied to me that they had partaken of the contents. The perception of truth seems to be destroyed by alcoholic indulgence; the consciousness of truth seems lost in the devotee of Bacchus. Even when temporarily sober, the brain may be so dominated by the alcoholic obliquity to truth that no reliance can be placed on any statement made by the man or woman whose sole being has, as it were, been steeped in alcohol.—*Dr. Norman Kerr.*

A METHODICAL man died in Berlin recently, at the age of seventy-three. When eighteen years old, he began keeping a record, which he continued for fifty-two years. His life was not consecrated to a high ideal. The book shows that in fifty-two years

this "natural man" had smoked 628,715 cigars, of which he had received 43,682 as presents, while for the remaining 586,021 he had paid about £2088. In fifty-two years, according to his bookkeeping, he had drunk 28,786 glasses of beer and 36,085 glasses of spirits, for all of which he had spent £1335. The diary closes with these words, "I have tried all things, I have seen many; I have accomplished nothing."

A GENTLEMAN in official life, writing from China, where he has seen the horrors of war, says of wounded Chinese soldiers: "They have generally dragged themselves, horribly mangled, from the battle fields many miles away to Tien-Tsin. They came with frozen feet, in most wretched condition. Their sufferings are terrible. It is simply marvelous that so many recover. Their diet of rice and no alcohol saves them, as inflammation rarely sets in."

TESTIMONY REGARDING ALCOHOL.—I am recording a matter of personal history when I say that I, for one, had once no thought of alcohol except as a food. I thought it gave additional strength. I thought it enabled one to endure mental and bodily fatigue. I thought it cheered the heart, and lifted up the mind into greater activity. I learned, step by step, that the true action of alcohol is to create paralysis of nervous power.—*Sir Benjamin Ward Richardson.*

WHERE THE PROFITS GO.—A bushel of corn makes four gallons of whisky. Of this, the Western farmer gets forty cents, the railroads, \$1, the government, \$3.60, the manufacturer, \$5, the saloon-keeper, \$6, or \$16 in all. The drinker gets delirium tremens and a drunkard's grave.

A LAW in Norway prohibits any one from spending more than five cents for liquor at one visit to a public house, and alcoholic stimulants are supplied only to sober persons.

DURING the teaching of the temperance Sunday-school lesson, an Indian boy ten years old was asked: "What does alcohol do to a man's brain?"

He answered: "It makes him think crooked."

THE trustees of Harvard College have forbidden the use of rum, brandy, or claret at the reunions of classes or at college commencements.



MECHANICAL EXERCISE.*

BY J. H. KELLOGG, M. D.

(Continued.)

MECHANICAL kneading of the arms is executed by means of the apparatus shown in Fig. 9. When the pressure is made sufficient to prevent the rubbers from slipping over the surface, the movement is that of rolling, a form of deep kneading; with lighter pressure, it is that of friction. This is a valuable mode of utilizing mechanical massage. The time of application is from three to five minutes.

The legs may receive mechanical massage by means of a similar apparatus, shown in Fig. 10. This is an excellent means of aiding the circulation in cases in which the legs and feet are habitually cold. The application should be continued from five to eight minutes, or until the extremities are thoroughly warmed.

Mechanical kneading of various parts may be employed, as is also shown in Fig. 9. The apparatus utilized is similar to that used for rotary vibration of the feet. A suitable pad is secured at the end of a bar, which is made to rotate while it rests against any portion of the trunk to which it can be conveniently applied. It is especially useful in making applications to the back, stomach, bowels, shoulders, and the region of the liver. In cases of gall-stones, it is a most excellent means of jostling imbedded calculi down into the bile duct, thereby hastening the emptying of the gall-bladder. It also facilitates the discharge of the fluid contents of the gall-bladder, and is thus a valuable aid to digestion. It will be apparent from these observations that this particular form of apparatus is a very efficient form of vibration, as well as a thorough kneading procedure. The

time of application should be from one to three minutes to each part.

Trunk Rolling.—The apparatus represented in use in Fig. 11 consists of a pair of pulleys moving in alternation and in opposite directions, a fraction of a revolution in each direction. To each pulley is attached one end of a broad strap, which is passed around the trunk in such a manner that, as the strap is pulled first in one direction and then in the opposite, the tissues are acted upon very much as in certain forms of palmar kneading. When applied about the waist, it is a very excellent means of administering a rolling movement to the muscles of the trunk, and a shaking movement to the viscera; when applied across the shoulders, the effect is that of deep kneading. This is a favorite apparatus with patients who are under treatment by mechanical massage. It was devised by the author about ten years ago. This application is so vigorous that it is not usually continued more than two to four minutes.

Mechanical Percussion.—There are two forms of percussion which may be administered mechanically; viz., (1) slapping; (2) beating.

Slapping is administered mechanically by means of a vertical revolving bar, to which is attached a broad strap about sixteen inches in length (Fig. 12). The strap is fastened to the bar at its middle, the two ends being free; and thus two blows are struck at each revolution. Different degrees of force are secured by modifications of the speed with which the bar is made to revolve, the thickness of the strap, and the position of the patient in relation to the bar and the strap. The time of application is one to three minutes.

* From a new work by the editor, "The Art of Massage," published by the Modern Medicine Pub. Co., Battle Creek, Mich.



FIG. 9. APPARATUS FOR KNEADING THE ARMS.



FIG. 10. APPARATUS FOR KNEADING THE LEGS.



FIG. 11. TRUNK ROLLING.



FIG. 12. APPARATUS FOR MECHANICAL PERCUSSION.

FIG. 15. TURNING-TABLE.

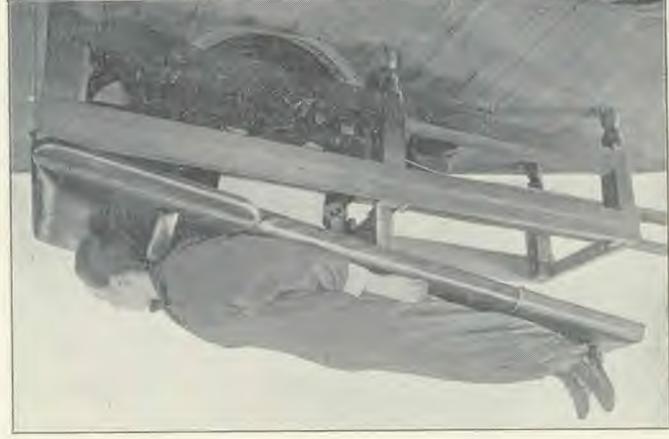


FIG. 13. HEATING APPARATUS.

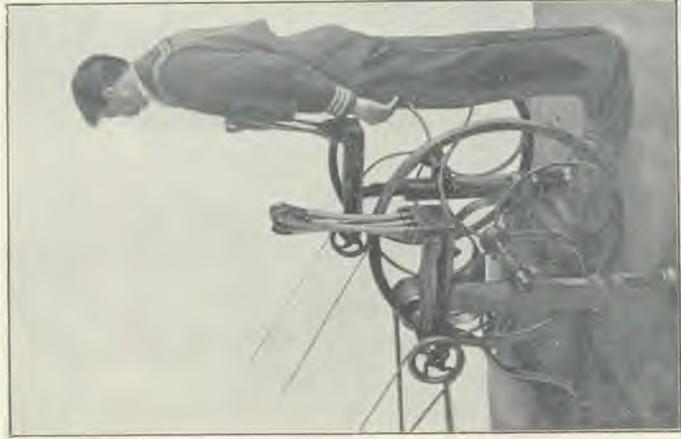


FIG. 16. PELTS-TURNING.

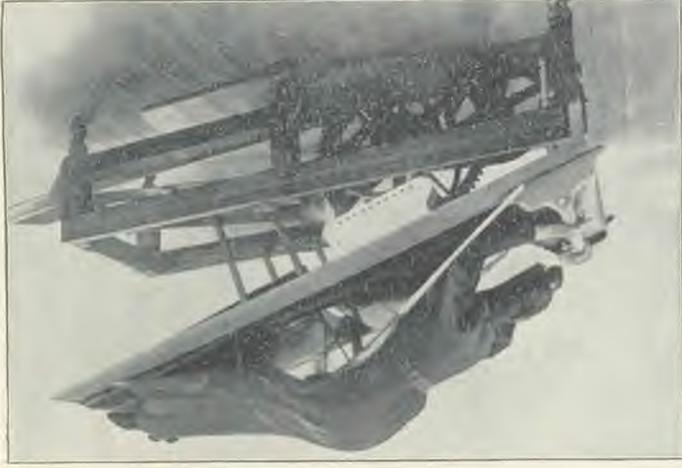


FIG. 14. MECHANICAL FRICTION OF THE FEET.



Mechanical slapping is a most effective measure for stimulating the surface circulation. In this respect it is not excelled by any procedure which can be administered by the hand. It is most usefully applied to the shoulders and back, the legs and thighs, and the soles of the feet.

Mechanical Beating (Fig. 13) is an efficient mode of percussion, though less valuable in comparison with beating administered by the hand than is mechanical percussion in comparison with manual percussion. It is most effectively applied to the spine and chest, and over the abdomen. The apparatus shown was devised simultaneously by the writer and by Zander, of Stockholm. The usual time of application is from two to four minutes.

Mechanical Friction.—Friction may be applied to the soles of the feet by a revolving ribbed cylinder (Fig. 14), which was first used by Zander. The writer has added a number of features which have proved serviceable. One of these is the employment of an apron to cover the ribs of the revolving cylinder, thus preventing the wearing upon the patient's stockings or slippers; another improvement is the insulation of the chair in which the patient sits, which I was led to make by noticing that sparks could often be drawn from different parts of the patient's body while receiving treatment from the apparatus. It is not an uncommon thing to see the hair of a patient sitting in the insulated seat, erected by the electric charge generated by the friction of the machine. It is possible that a certain portion of the static electricity may be generated by the driving belt. This phenomenon is of course chiefly confined to the colder months, when the atmosphere is dry.

The apparatus is a very valuable one, as it performs its work efficiently, and does something which cannot be so well accomplished in any other way. It is a favorite machine with our patients. The application is a very agreeable one, and may be continued almost *ad libitum* without injury. The usual time is from five to ten minutes.

Tilting Table.—In Fig. 15 is represented a tilting table, which the writer devised nearly twelve years ago, and has had in use since. The patient lies upon his back while one end of the table-top is lifted by means of a large cam operating beneath it. The patient lies with his head at the stationary end of the table.

The purpose of this apparatus is to secure what I have termed "vasomotor gymnastics." When the hand is raised above the head, a strong contraction of its blood-vessels occurs, the effect being rendered

visible to the eye by blanching of the skin. At the same time that the blood-vessels of the arm are thus made to contract by a vasomotor reflex, the vessels of the corresponding portion of the brain also contract. By a repetition of the movement, real gymnastics of the muscular walls of the vessels may be executed, and thus relaxed vessels be contracted and strengthened, and local congestion relieved, if so situated as to come within the sphere of the reflex action set up by the change in the position of the arm.

This same principle applies with equal force to the lower extremities, which have a relation to the organs of the pelvis similar to that which the arms sustain to the brain. Leg-raising, with the patient lying in a horizontal position, is one of the recognized and most valuable movements in the medical gymnastics of the Swedes. There is, however, a certain disadvantage in this mode of exciting vascular contraction. It is impossible to raise a limb by voluntary effort without a certain degree of strain, which involves holding the breath, and producing, as a result, an increase of pelvic and portal congestion, so that the exercise must to some degree defeat its own purpose. In this exercise, also, but one leg is raised at once. When the lower part of the body is elevated mechanically, there is no exertion on the part of the patient, consequently no strain, and both limbs are elevated at the same time; thus the maximum effect is obtained.

This apparatus is of great service in all forms of pelvic congestion, in ovarian disease, uterine catarrh, displacements of the pelvic viscera, and in rectal disease of various forms. After spending a few minutes upon the tilting table, rising and falling with its oscillations at the rate of about eight times a minute, patients suffering from the maladies named and others similar, almost invariably express themselves as experiencing a marked sense of relief. The effects of this mode of passive exercise of the blood-vessels are so agreeable that patients are inclined to continue the application as long as they are allowed to do so. As a rule, ten to fifteen minutes will secure decided physiological effects.

Pelvis Tilting.—Nearly all forms of pelvic disease give indications for the use of the tilting table above described. In displacement of the womb or ovaries, however, as well as of the stomach, liver, kidneys, bowels, and other abdominal organs, it is important to combine with the vasomotor gymnastics described, the employment of position as an aid to restoration of the displaced viscera. This is accomplished by adding to the tilting table above described a device by means of which the pelvis is

lifted free from the table while the patient lies upon the face, thus causing the abdominal wall to sag downward (Fig. 16). As the table is tilted, the patient is lifted into such a position as to cause gravity to make an upward (in relation to the normal position) pull upon the viscera of the trunk. The device consists simply of an attachment placed in the center of the table, which is made to rise more rapidly than the table itself, thus lifting the pelvis before the rest of the body, and holding it in this

relation until the table returns to a state of rest. The effect of this apparatus is increased, if, while the patient is elevated, the attendant applies percussion or beating to the sacral region.

The use of this apparatus alone is not sufficient to restore displaced organs to position, but it aids greatly in relieving congestion, and is certainly a help toward a cure of visceral prolapse. The application should be made daily, or twice daily, and continued from eight to ten minutes each time.

(To be concluded.)

DISCRIMINATION IN EXERCISE.

WHEN we are dull, tired, and generally out of sorts, it is not unusual for some enthusiastic and interested friend to advise us to go out and take a brisk walk. The exercise fiend with his walk-cure is ever present, and many a time persons who are altogether unfit for such exertion, are crowded over a course like a race-horse in training.

While exercise is one of the things necessary to health, the utmost care must be used not to overdo it. There are many enthusiasts who go on the theory that if a little of anything is good, a great deal must, as a matter of course, be a great deal better. Therefore they advocate out-of-door exercise and walking to and from business, no matter how long the distance may be, provided it is within the city limits.

And urged on by the eloquence and entreaty of these advocates of foot-travel, and prompted by their desire to feel better and get back their strength, these victims of a dangerous delusion follow out this plan until their vitality is entirely exhausted; and long before they realize the cause, they find themselves in a condition of hopeless invalidism, and, between repinings and pain, wonder whatever can be the matter, for they certainly went out every day and took regular exercise; and if fresh air is worth anything, surely they should never be ill.

It seems almost impossible to make many persons believe that exercise means anything besides foot exertion. That one could get much more beneficial effects by sitting or standing still and moving the arms or the body, would be to them an unheard-of idea. But while there is, of course, much to be said in favor of pedestrianism as an aid to health, the judicious use of the muscles of other portions of the body than those brought into play by this means is quite as important.

An eminent authority has declared that one may indulge in quite as much activity as a healthy system

requires, and yet never take a walk of any length; and there are many persons whose experience and observations are worthy of attention, who maintain that long walks are not only not as important to the health as has been popularly supposed, but that they are positively injurious to very many persons.

Young men who have a great amount of brain work to do are often advised to take long walks or habitually to walk from their residence to office or studies. Experiments by a number of law students, some years ago, were made with a view to testing the soundness of this theory.

Those who walked to the office where they studied — a distance considerably over two miles — found that upon sitting down in the warm atmosphere of a steam-heated apartment they became dull and sleepy, and were often obliged to leave their books for a time or fall into a doze. Those who walked half a mile and rode the rest did not feel the sense of oppression that their fellows complained of, but were in admirable working condition, and far outstripped the others in mental grasp and retentiveness of memory. So marked was the difference in their progress that those who walked were advised to give up at least a part of their walk, which they did to their decided advantage, substituting for it fifteen minutes' exercise in swinging the arms, breathing deeply to fill the lungs, standing erect and throwing the shoulders back, and describing various arcs and circles with the body and head.

Mere walking never made a fine figure. This is best secured by standing for a few moments at a time with the back to a perpendicular wall, filling the lungs meanwhile, and pressing the shoulder-blades closer to the back. Constant alertness on this subject, and even and careful action of all the muscles will best secure good health and a symmetrical figure.

— *N. S. Stowell.*

HEALTH AND PERSONAL APPEARANCE.

HEALTHINESS and physical beauty are more nearly synonymous than we are accustomed to think. The ancient Greeks strove to attain physical perfection—beauty of figure and of face—by means of exercises, baths, and every means known to them for stimulating the bodily functions to a high degree of health. They were intense admirers of physical beauty, and appreciated the fact that health is one of its prime conditions. The modern science of hygiene teaches that the observance of certain laws is necessary for the evolution of the growing boy and girl into the healthy man and woman. Prominent among these laws is that of personal cleanliness. To obtain and to retain a healthy and active condition of the skin, frequent bathing is necessary, followed by active friction with a brush or towel. It should be remembered that the skin is an excretory organ; that material which has been expelled through it collects upon its surface, and must be removed.

The skin also secretes an oily matter which keeps it moist, flexible, and healthy. This is partially removed by bathing, and the healthy secretion is again stimulated by active rubbing. To attain a good development of the muscles, physical exercise must be taken. The growing boy and girl should have a fixed time for exercise, either at home or at school, as well as for study, for eating, and for sleep. The athletic trainer tells his pupils that temperance in all things is necessary for even a fair degree of physical development; he insists upon regularity in exercising, eating, and sleeping. Such a temperate and regular method of living should be the aim of every one. In that sense of the word, every one should keep himself "in training." This is especially important in youth, when not only are habits forming, but the foundations of future good or ill health are being laid. And the means by which health is best attained are the same means by which one's personal appearance is best improved.—*Sel.*

VALUE OF GYMNAS TIC TRAINING.—We want to-day to do away with the results of conventional life; we want to do away with its limitations, which make us weak; we want to give our children strong bodies, and in doing that we want to give them stronger minds and brains. Now, how can this be accomplished? Can it be done by using each muscle individually by lifting dumb-bells, or by such games as football, tennis, baseball, etc.? It is a question of activity; it is not a question of merely muscular strength. Activity such as the Greeks had is the ideal activity. The forms they gave us in marble are ideal forms, many of them, and those forms resulted from active, unrestrained life, from the absence of compressing and restricting clothing. To-day we want that kind of activity, and it can be best gotten in games and sports, because there one gets the mental stimulus of the play, as well as activity and brain development. The games and sports usually engaged in by the small boys are those that demand activity, skill, a quick perception of conditions and quick action upon that perception,—the doing something instantly, and doing it at the proper time. It is a question of brain development as well as of muscular activity. Sports and games give this all-round development better than any other form of systematic training.—*Geo. W. Fritz, in Herald of Health.*

EXERCISE AND LONG LIFE.—All authorities who have treated on longevity, place exercise, moderately and regularly taken, as one of the main factors of a long life. That there are many exceptions does not alter the fact that physical exercise is as useful in keeping one healthy as it is in prolonging life. Good walkers are seldom sick, and the same may be said of persons who daily take a certain prescribed amount of exercise. Exercise is both a preventive and a remedial measure. In my own practise I have seen a case of persistent perspiration that followed the least bodily effort, and which annoyed and debilitated the person at night—it being a condition left after a severe illness—disappear as if by magic after a day or two of exercise on a bicycle.

Pliny relates that a Greek physician who took up his residence in Rome was wont publicly to declare that he was willing to be considered a charlatan if he should ever fall ill, or if he failed to die of any other disease than old age. Celsus, in speaking of the same physician, observes that his faith in the benefit to be derived from exercise was so great that he had in a great measure abandoned the administration of internal remedies, depending mostly on hygienic measures and exercises. As an evidence of the correctness of his views, Pliny tells us that this physician lived to be a centenarian, and then died from an accident.—*National Popular Review.*



Home Culture

CONDUCTED BY
MRS. E. E. KELLOGG, A. M.

PURITY AND PARENTAL RESPONSIBILITY.*

(Concluded.)

ONE of the helpful measures to be used in early childhood, where self-control is yet lacking, is a daily physical drill. Training in Swedish gymnastics serves a most admirable purpose in this direction; it not only strengthens and invigorates the whole body, thus giving tone to the nervous system, but the variety of exercises at one lesson necessitates close attention and quick voluntary movements, thus disciplining the will in controlling the muscles. Control exercised in one direction aids control in other directions. Every child desires to be strong physically because he sees how much greater enjoyment and usefulness come to a strong person than to a weak one; and moral strength can be made to seem to him quite as desirable as physical strength. Character influences character, and high ideals of control properly presented to the young mind will greatly aid in the establishment of self-government. But let parents bear in mind that "the highest in the child is aroused only by example," and that whatever lessons they desire their children to learn they must themselves first learn.

Although self-control is one of the first essentials to be striven for as an anchor for purity in the young life, it is not the only element the parent must seek to establish in the child's character. Impurity is so closely interlinked with other sinful propensities that the only sure immunity from evil comes from the right formation of character in its entirety. Obedience, well learned, lies in the path of self-control. The more perfectly the habit of obedience to parents is fixed, the more easy it becomes for the individual to yield to the behests of right and duty.

The child who is taught to respect his own body as the temple of the Holy Spirit, lent him for his

temporary use, to be returned pure and undefiled to his Creator, will find it far easier to exercise self-control in the use of it.

Self-reliance early taught will aid in making the child capable in self-entertainment in wholesome and profitable ways. The boy or girl who is wholly dependent upon somebody else for entertainment and happiness, who does not know how to spend a leisure hour profitably, is in great danger. Such an one is easily led into pernicious associations, and may only because of favorable circumstances escape the path of ruin.

Often the danger which besets the pathway of the youth comes through a lack of training in industry; through the neglect of parents to instil into the child's character a love of work for work's sake. The child must be occupied with something; if he is not occupied with good, he will be busy with evil. "The idle hour waiting to be employed, idle hands with no occupation, an idle and empty mind with nothing to think,"—these are the great invitations to vice. To the child who has been trained to love work, idleness will not be pleasurable. The boy or girl whose time is filled with wholesome occupation will have little desire to loiter upon the street corners, frequent the parks and other public places where temptation so often assails the untaught, pleasure-seeking, indolent youth. Let parents reflect that thoughtfulness of mind, stability of character, and purity of life are among the natural outgrowths of a training in industry.

Another fountain from which springs the stream of impurity, is the lack of a proper training of the appetite,—a failure to teach that its gratification is to be made subservient to right and reasonable ends. The appetite, like all natural instincts, is susceptible to education both in a right and a wrong direction.

*Paper read before the National Purity Congress, held at Baltimore, Md., October, 1895.

This fact is often unrecognized, and the child's appetite left to chance development, which, far more frequently than otherwise, leaves him subject to rather than ruler of it. Depraved appetites are frequently inherited, but they are as often created through lack of proper care and training. Purity of heart is a condition quite incompatible with sensual pleasuring of the appetite. Children allowed to eat at all hours, to partake of unwholesome, stimulating food, to overeat, to eat without need simply to please the taste, are thus taught self-gratification rather than self-control, and are almost hopelessly placed under the dominion of their lower nature. A love of appetite established in one direction will be hard to restrain in others.

Not the least among the influences which tend to lead boys astray is the acquirement early in life of a disrespect for womanhood. Laxity of parental discipline is in a great measure responsible for this. The boy who is permitted to trample upon his mother's authority soon loses respect for her and, in time, for her sex. The average boy judges all women by his estimate of his mother and sisters. The discrimination so frequently seen in families in favor of the sons soon leads them to esteem their sisters lightly, and to regard all women as inferior beings. In many households the daughters are taught to wait upon the sons, and to make their own wishes subservient to those of their brothers; thus these sons grow to manhood with the idea that woman's chief mission in the world is to minister to man's convenience and pleasure. Two different standards of morality are the outgrowth of the training in many homes. While the daughters are carefully instructed in the ways of modesty and virtue, the sons, instead of being taught from earliest infancy that God intended them to go through life just as pure as their

sisters, are left to come up as they may, with no training whatever; and their first steps on the downward road are condoned by the oft-repeated excuse, "Oh, he is a regular boy," thus making a tacit distinction in the moral standard of the sexes.

One of the greatest responsibilities of the parents lies in the direction of imparting proper knowledge at the proper time. The influences which children are sure to encounter at school, upon the playground, along the streets, and even in their own homes, make it imperative that they be forearmed against danger by being forewarned. To shield one's children from seeing or hearing evil is a matter of especial importance, since it is true that "by beholding we become changed," but ignorance is not innocence. Knowledge is power; to be able to discern evil when evil comes unexpectedly is a strong defensive armor against the wiles of Satan. Shield them from contact with evil under every possible circumstance, but fortify them against sin by that knowledge which shall make them in love with truth, and in fear of that which is impure and unholy.

The responsibilities devolving upon parents, if they would have their children grow up clean and pure, are indeed almost numberless. All along the way from infancy to maturity, the way is so beset with pitfalls that eternal vigilance is the only price of safety. Parents must seek to cleanse the pathway which their children's feet must tread,—to guard their associations, their amusements, and their reading,—and to barricade every possible avenue leading to evil. They must themselves supply the proper conditions for upward growth; then, through the grace of God, they may hope to witness the development of a noble manhood and a true womanhood upon the foundations thus carefully and securely laid.

E. E. K.

THE MOTHERS OF MEN.

THE bravest battle that ever was fought,
Shall I tell you where and when?
On the map of the world you'll find it not—
'T was fought by the mothers of men.

Nay, not with cannon or battle shot,
With sword or nobler pen;
Nay, not with words of eloquence fraught
From the mouths of wonderful men.

But deep in the walled-up mother's heart,
A mother that will not yield,
But patiently, quietly bears her part—
To them in this battle-field.

No marshaled troops nor bivouac song,
No banners that gleam or wave,
But O! those battles they last so long—
From babyhood to the grave.

—Joaquin Miller.

ARTICLES of old furniture are sometimes made to appear new by washing them with lime-water and then applying a coat of oil.

CORN-MEAL and salt well mixed make one of the best brighteners for carpets when sweeping.

To clean bottles use crushed egg shells in a little water.

Cut a piece from the top of an old kid shoe and insert it inside the flat-iron holder when you make one.

THE BATTLE CREEK SANITARIUM DRESS SYSTEM.—XIII.

In entering upon another year we feel that perhaps we can do nothing which will better advance

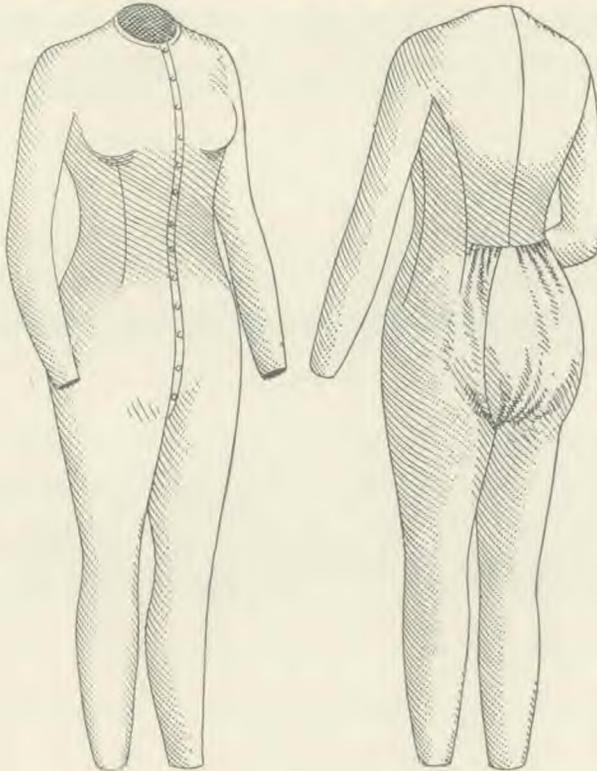


FIG. 1.

FIG. 2.

the cause of sanitary and hygienic dress than to republish cuts of the foundation garments of our valuable dress system, more particularly as many new subscribers are with us now who have not previously been made acquainted with the principles underlying healthful dress.

The style or plan of an undergarment is of greater importance, from a health standpoint, than that of any other garment can be. If all the undergarments are constructed on right principles, the form and style of the remaining articles of a woman's dress are of comparatively small consequence as regards health.

As the first requisite, our union suit (Figs. 1 and 2) clothes the entire body in wool from neck to ankles, loosely and warmly, providing for an equal distribution of both weight and warmth over the whole surface. The combination suit (Figs. 3 and 4) to be worn over it is in effect somewhat similar, though it may be made of as light material and fashioned as daintily as desired. These are the undergarments par excellence which ought to be worn by all womankind from the child and growing girl upward.

In reference to clothing the body properly, we quote from a little work by Dr. Kellogg, entitled, "How to Dress Healthfully," as follows:—

"In the first place, the corset and all its substitutes and subterfuges, tight belts, and every other device for compressing the waist or any other part of the body, can be at once discarded without drawing the attention of any one to the fact, unless it be by the more elastic and graceful step, the brighter color of the face, and the general improvement in health in all respects. Suppose the waist does expand a little, or a good deal even,—is it any disgrace?—No, indeed. If required, a suitable garment may be made, to support the bust, which will fit the form neatly without compressing any part.

"The next important step should be to regulate the clothing properly. The whole body should be clad in soft flannel from neck to wrists and ankles nearly the year round. It is best to have the underclothing for the upper part of the body and that of the limbs combined in one garment. If arranged in two garments, they should only meet, and not overlap, as this gives too much additional heat over the abdominal organs. A woman's limbs require as many thicknesses as a man's; and a garment which fits the limbs closely will afford four times the protection given by a loose skirt. Thick shoes or boots with high tops, and heavy woolen stockings which

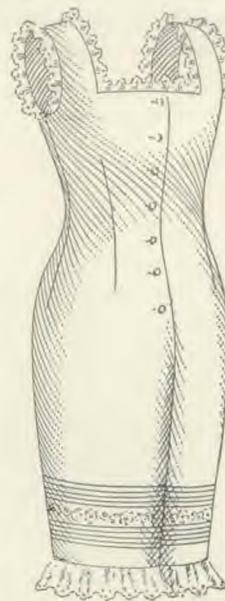


FIG. 3.

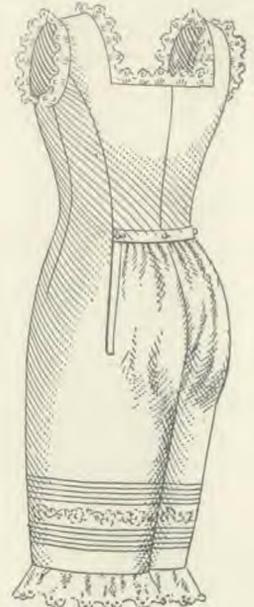


FIG. 4.

are drawn up outside the undergarments clothing the limbs, complete the provision for warmth."

TEACHING CHILDREN TO GOSSIP.

"It is no wonder," said an observing woman, as she returned from a visit to the house of a friend, "that the world is full of gossips. I have just been a guest where the family training seemed in some respects to be specially directed toward the graduating of the most malicious troop of mischief-makers I ever came across. I must confess that I was absolutely shocked at some of the lessons that I witnessed. For example: One of the children was sent to a neighbor's on an errand. As the child left the room, the mother whispered, loud enough for the little girl to hear: 'I am just sending her over there to see what's going on.' Of course the child was bright enough to understand what that meant, and as a natural consequence, used her eyes and ears and tongue to the very best advantage, knowing that the more she had to tell, the more likely she would be to get the privilege that she had been teasing for,—going to stay all night with one of her playmates.

"When the little one returned, she was put through a series of cross-questionings absolutely shameless,—who was there, what they were doing, what they said, the dresses, the food on the table, and every possible inquiry that the woman could think of. I was quite of the opinion that the child exaggerated somewhat, but she made out quite a case; and the mother was so delighted with her success in finding out what was going on in her neighbor's house that she permitted the child to go, although she had previously positively denied her. When she came home next morning, there was the same series of questions, and before the two finished their conversation, there was very little current incident about

that family of which the little visitor's mother was not in full possession.

"I spent four weeks in that house, and came away sick at heart; yet the mother was by no means a malicious or evil-disposed person. I think she would have been positively shocked had she comprehended to the full the mischief she was doing in encouraging her child to observe and comment on the affairs and actions of her neighbors.

"In striking contrast to this was a girl at another place where I visited, who was reproved by a friend for lack of interest in some neighborhood matter.

"'Why, you have n't a bit of curiosity,' she said. 'Why don't you ask what they are going to do?'

"'I never thought of it,' said the girl.

"'Stupid child,' said the lady, as she went out of the house.

"The girl heard it, and colored with embarrassment.

"'Never mind, dear,' I said, 'if you have n't any curiosity, you'll never be tempted to be a gossip, or to meddle with people's affairs. You are much better as you are; so don't worry about it; it is all right.'

"These two girls developed characters such as one might naturally expect; the one became an almost intolerable neighborhood meddler, who was neither liked nor respected by any one; the other minded her own business all through her life as she had done in her childhood, and was correspondingly admired and approved of."—*"Around the Editor's Table," in Grand Traverse Herald.*

A SOCIETY FOR THE PREVENTION OF CRUELTY TO MOTHERS.

"CAN you help me a little, Marion?"

"I should like to, but I don't see how I can." The tone was not impatient, but hurried. "I have this essay to finish for the society this evening. I must go to our French history class in an hour, then to a guild meeting, and get back to my German lesson at five o'clock."

"No, you cannot help me, dear. You look worn-out yourself. Never mind. If I tie up my head, perhaps I can finish this."

"Through at last," said Marion wearily, giving a finishing touch to "The Development of Religious Ideas among the Greeks," at the same time glancing hurriedly at the clock. Her attention was arrested

by a strange sight. Her tired mother had fallen asleep over her sewing. That was not surprising; but the startled girl saw bending over her mother's pale face two angels, each looking earnestly at the other.

"What made that weary look on this woman's face?" asked the stern, strange-looking angel, of the weaker, sadder one. "Has God given her no daughters?"

"Yes," replied the other, "but they have no time to take care of their mother."

"No time!" cried the other. "What do they do with all the time I allow them?"

"Well," replied the Angel of Life, "I keep their

hands and hearts full. They are affectionate daughters, much admired for their good works; but they do not know they are letting the one they love most slip from my arms into yours. Those gray hairs come from overwork, and anxiety to save money for music and French lessons. Those pale cheeks faded while the girls were painting roses."

The dark angel frowned.

"Young ladies must be accomplished nowadays," explained the other. "Those eyes grew dim sewing for the girls, to give them time to study ancient history and modern languages; those wrinkles came because the girls had not time to share the cares and worries of every-day life." That sigh comes because their mother feels neglected and lonely while the girls are working for the women of foreign lands; that tired look comes from getting up so early while the poor, exhausted girls are trying to sleep back the late hours they gave to study or the concert; those feet are so weary because of their ceaseless walk."

"Surely, the girls help, too?"

"What they can. But their feet get weary enough going around begging for the charity hospital and the church, and hunting up the poor and the sick."

"No wonder," said the Angel of Death, "so many mothers call me. This is indeed sad,—loving, industrious girls giving their mothers over to my care as early as selfish, wicked ones!"

"Ah, the hours are so crowded!" said Life, wearily. "Girls who are cultured, or take an active part in life, have no time to take care of the mother who spent so much time in bringing them up."

"Then I must place my seal on her brow," said the Angel of Death, bending over the sleeping woman.

"No, no!" cried Marion, springing from her seat. "I will take care of her if you will only let her stay!"

"Daughter, you must have nightmare. Wake up,

dear; I fear you have missed your history class."

"Never mind, mamma; I am not going to-day. I am rested now, and I will make those buttonholes while you lie down on the sofa and take a nap. I'll send word to the guild president that I must be excused to-day, for I am going to see to supper myself, and make some of those muffins you like."

"But, dear, I dislike to take your time."

"Seeing you have never given *me* any time; now go to sleep, mamma, dear, as I did, and do not worry about me. You are of more consequence to me than all the languages or classes in the world."

So, after having been snugly tucked in a warm afghan, with a tender kiss from her daughter—usually too busy for such demonstrations—Mrs. Hensen fell into a sweet, restful sleep.

"I see we might have lost the best of mothers in our mad rush to be educated and useful in this hurrying, restless day and generation," Marion soliloquized, as she occasionally stole a glance at the sleeping mother. "After this, what time mamma does not need I shall devote to outside work and study. Until she gets well restored, I shall take charge of the house, and give up all the societies except one—that I'll have by myself, if the other girls will not join—a Society for the Prevention of Cruelty to Mothers."

And Marion kept her word. A few months later, one of the Woman's Progressive League members said to her:—

"We miss your bright essays so much, Miss Marion. You seem to have lost all your ambition to be highly educated. You are letting your sisters get ahead of you, I fear. By the way, how young your mother looks to have grown daughters. I never saw her looking so well."

Then Marion felt rewarded for being a member of what she calls the "S. P. C. M."—*Jenness-Miller Monthly*.

DON'T NOTICE THE DEFECTS. — The following advice, given to a young married woman who was visited by another older and more experienced one, may be helpful to some of our readers:—

When the visitor arose to go, the hostess went with her to the door, and out upon the pleasant piazza, which, however, looked a little dusty in the corners.

"Oh, dear!" said the young wife, "how provoking servants are! I told Mary to sweep the piazza thoroughly, and now see how dusty it is."

"Grace," said the older woman, looking into the

disturbed young face with kindly humorous eyes, "I am an old housekeeper. Let me give you a bit of advice: Never direct people's attention to defects. Unless you do so, they will rarely see them.

"Now, if I had been in your place, and noticed the dirt, I should have said: 'How blue the sky is!' or, 'How beautiful the clouds are!' or, 'How bracing the air is!' Then I should have looked up as I spoke, and should have gotten you safely down the steps and out of sight without your seeing the dust." —*The Household*.

THE TIME FOR REVENGE.—The Arabians have a quaint old story with a noble lesson in it: A haughty favorite of an Oriental monarch, who was passing along the highway—so runs the story—threw a stone at a poor dervish, or priest. The dervish did not dare to throw it back at the man who had assaulted him, for he knew the favorite was very powerful. So he picked up the stone and put it carefully in his pocket, saying to himself: "The time for revenge will come by and by, and then I will repay him for it." Not long afterward this same dervish, in walking through the city, saw a great crowd coming toward him. He hastened to see what was the matter, and found, to his astonishment, that his

enemy, the favorite, who had fallen into disgrace with the king, was being paraded through the principal streets on a camel, exposed to the jests and insults of the populace. The dervish, seeing all this, hastily grasped at the stone which he carried in his pocket, saying to himself: "The time for my revenge has now come, and I will repay him for his insulting conduct." But, after considering a moment, he threw the stone away, saying: "The time for revenge never comes; for if our enemy is powerful, revenge is dangerous as well as foolish; and if he is weak and wretched, then revenge is worse than foolish; it is mean and cruel. And in all cases it is forbidden and wicked."—*Sel.*

NATURE'S ANSWER.

A MAN would build a house, and found a place
As fair as any on the earth's fair face;

Soft hills, dark woods, smooth meadows richly green,
And cool, tree-shaded lakes the hills between.

He built his house within this pleasant land,—
A stately white-porch'd house, long years to stand;

But, rising from his paradise so fair,
Came fever in the night and killed him there.

"O lovely land!" he cried; "How could I know
That death was lurking under this fair show?"

And answered Nature, merciful and stern,
"I teach by killing. Let the others learn."

—Charlotte Perkins Stetson.

SOME SEASONABLE RECIPES.

Vegetable Roast.—One cup of strained stewed tomato, one cup of cooked lentils (measured after being rubbed through a colander), one cup of cooked crystal wheat, one tablespoonful of nut butter, one-half teaspoonful of finely powdered and sifted sage, or one tablespoonful of very finely minced celery. Add a little salt for seasoning, turn into a baking dish, and bake in the oven until quite dry.

A Quickly Prepared Soup.—Into a quart of water slice a small onion, and add a teaspoonful of nut butter. Heat to boiling, then remove the slices of onion, which are used simply for flavoring the soup, and stir in six rounding tablespoonfuls of No. B gluten prepared by the Sanitarium Health Food Co. Boil until thickened, add salt to season, and it is ready to serve.

Nut Butter Pie-Crust.—Take one tablespoonful of nut butter to one cup of flour, and use in same manner as ordinary shortening, adding cold water sufficient to make a dough.

Baked Cabbage.—Chop cabbage fine, and cook in boiling water twenty minutes. Drain in a colan-

der. To one quart of the cooked cabbage add a cupful of water in which has been dissolved a dessertspoonful of nut butter, two well-beaten eggs, and the juice of one lemon. Add salt to taste. Mix thoroughly, and bake in a double baker until the cabbage is thoroughly done and the egg well cooked.

Lentil and Tomato Soup.—Two and three-fourths cups of lentils (measured after having been cooked and rubbed through a colander), one cup of strained tomato, one teaspoonful of nut butter, and two stalks of celery. To these add sufficient water to make the soup of proper consistency. Heat to boiling, remove the celery, and add salt to season and one teaspoonful of browned flour rubbed to a paste with a little water. Boil for two or three minutes until the flour is cooked, then serve.

Nuts with Lentils.—Three pints of strained cooked lentils, one pint of stewed tomato; season to taste with nut butter and salt, and bake. If desired, the lentils may first be cooked with onion to flavor.

Nut butter may be used in all dishes in which cream or butter is ordinarily used; and as it has nearly the same proportion of fat as butter, the same quantity may be used.



NURSING IN MALARIAL FEVERS, AND HOW TO PREVENT THE DISEASE.

MALARIAL diseases are among the most common and wide-spread; and in tropical countries, malarial fever is one of the most fatal of all the acute infectious fevers. The parasite which causes the disease is generated in the soil and found in the water of a large portion of our globe, especially in hot countries. Wherever there is decaying vegetation, heat, and moisture, these parasitic organisms grow and multiply. In the human system they develop in the red blood corpuscles, feeding upon them, and finally causing their complete disintegration. These organisms are taken into the body mostly through air, water, and unclean food, and undoubtedly find their way into the circulation through the mucous surface of the alimentary canal.

The spring and autumn are the seasons when malarial diseases are most prevalent. They are much more prevalent in some years than in others. This is especially true after a wet, hot summer, followed by a dry autumn. Low, marshy ground, overflowed in the springtime, and becoming dry in the autumn; a rich, uncultivated soil, newly broken up; stagnant ponds of surface water,—these are all frequent sources of malaria. The water of rivers and brooks used for drinking and other domestic purposes is often the cause of this disease.

Under a good system of underdraining and cultivation of the soil the disease often subsides from a locality where it has prevailed. Certain districts in England are examples of this. In the time of the reign of Bloody Mary of England, when the cruel religious persecutions caused some portions of England to become deserted and uncultivated, malarial diseases so ravaged those parts as to render them almost uninhabitable. To-day, under the modern methods of cultivation, the disease is almost unknown in those localities. The draining and cultivating of marshes in the vicinity of cities and the paving of streets often does away entirely with epi-

demics of malaria, especially when the water supply is good.

Knowing that the malaria parasite is of the earth earthy, and the conditions under which our common mother brings forth this pestilential crop so destructive to the lives and health of her children, it becomes every householder and every housemother to know how to guard the inmates of their homes from infection by it. Sunlight and fresh air are always destructive of disease-producing organisms. Therefore the home should be well ventilated, and the site dry and well drained. When it seems a necessity to build on a malaria-producing soil, the yard surface should always be covered with a thick-grown, grassy lawn, kept fresh and green by frequent mowing; and all the cellar and basement floors and walls should be covered with air-tight cement. If a home must be built in the vicinity of a mill-pond, marsh, or any intermittently overflowed ground, it should, if possible, be located on the side where the prevailing winds will blow the miasma away from the dwelling instead of toward it. A row of trees, planted between the house and a marsh or other infected locality, will catch and hold a great deal of the infectious dust. The poison is most virulent in the evening just after sundown and in the morning before sunrise. Hence the windows and doors on the danger side of the house should be kept shut at those times. The sleeping-rooms of houses in these situations should be as high as the second floor, and well ventilated and frequently dried by fires. In the autumn and spring, when the mornings and evenings are cold and damp, great care should be taken, in malarial climates, to avoid exposure by sitting out of doors in the evening or by going out early in the morning and getting damp and chilly. It is always best in such a climate to reinforce the system by eating breakfast before it has been long exposed in the open air.

It has been found of late years that much of the malarial fever of the soldiers of the British army in India can be prevented by compelling them to drink sterilized water and eat sterilized food. The poison is taken into the alimentary canal in infected water and raw food, as celery, lettuce, and the like, and in milk and other food which may be infected by malaria-laden dust. Every housekeeper should learn from this how important it is, in order to preserve the health of the family, to keep all food covered, and also to sterilize it by heating whenever there is a suspicion that it may have become infected. Whole crews of ships have sickened and many died from taking on board a supply of malaria-infected water, or from bringing on board the vessel malaria-infected earth around the roots of tropical plants. Therefore in a malarial season care should be taken to keep dust out of the house as far as may be, and house-plants should be looked after as a possible source of danger.

It is also very necessary to keep in good order the army of defense within the body. The stomach and bowels are the organs from which most absorption takes place, and the healthy secretions of all sound mucous and serous membranes, as well as those of all healthy glands, are germ destroyers. It is therefore a very important matter to keep the alimentary canal healthy by avoiding the use of all unwholesome articles of diet, overloading the stomach, or overtaxing it by hasty eating, eating when tired or excited, or with cold feet, or when chilly. The active circulation of the skin should be kept up by cool bathing and friction, and excitement of the nervous system should be avoided as much as possible. There is nothing better than cheerfulness to stimulate the healthy cell-action of all the tissues, and nothing is more depressing and disease-inviting than despair and melancholia. Taking cold may be avoided by keeping the body warm, and taking care not to clog the liver by overeating.

An attack of malaria, whether in the form of chills and fever every day, or every other day, or every fourth day, or in the form of a continued remittent fever, is always preceded by some days or even weeks of ill feelings by the patient. The skin looks sallow, the tongue is coated, the appetite is poor, the muscles ache, and the person feels generally out of sorts. Under favorable conditions all these symptoms may pass away, and the attack be aborted. Efforts should be made to help nature overcome the poison by resting in bed, fasting for twenty-four or forty-eight hours, taking a mild cathartic, a hot pack, a full bath, an electric-light, Russian, or Turkish bath,

with hot fomentations to stomach and liver daily, and drinking plenty of hot water that has been boiled or distilled. This simple abortive treatment, faithfully followed out, will often prevent weeks of illness, and even save life.

A cold from exposure, an excessive day's work, or overeating may furnish just the exciting cause needed to paralyze the already overworked blood corpuscles, and overwhelm the depurating organs in their efforts to cast out the disease-producing enemy. An ounce of prevention at this time is worth a hundred pounds of cure.

Sometimes the onset of the fever is very gradual, with only a slight rise of temperature at first, which, if not heeded, is followed by a severe chill and high fever, and this repeated every day or every third or fourth day until, under proper treatment, the symptoms gradually abate, the paroxysms of chill and fever grow farther apart and less severe, and the patient recovers. In other cases the paroxysms increase in gravity and frequency until the fever becomes continuous, and the patient is perhaps sick for weeks or months, and recovers, if at all, with an enlarged liver and spleen, and health impaired for the remainder of his life.

The treatment for such cases should be very vigorous at first. It is worse than foolish to go about half sick, but working and eating as usual. When even the aching and chilling begins, the patient should go to bed, and keep the skin active by drinking hot water, taking warm baths, hot fomentations, and hot sheet packs. The secretions of the body, especially those of the alimentary tract, are all more or less deranged, and the digestive fluids are so impaired as to be unable to properly digest food. Unless the digestive organs are given rest, they will become crippled, and unable either to digest food or to destroy the germs in the alimentary canal. All food remaining long undigested becomes a culture-field for germs, which are rapidly carried to the tissues of the body by the absorbents. The fearful vision of starvation from fasting a day or two at the beginning of an attack of fever has led many a patient to die of actual starvation after the disease had spent its force, because the digestive organs could not gather sufficient strength to take care of the needed food. The use, at the beginning of such an attack, of a laxative, some intestinal disinfectant, and enemas of warm water, thus cleansing the alimentary canal of all decaying food, fecal matter, microbes, etc., will be of great benefit, as the parasites which cause malarial fever rapidly permeate the whole body through the circulation.

If all other methods of treatment fail, the patient may need a few doses of quinine; but much less of the drug will be required if taken into a clean alimentary canal than if that thirty feet of digestive tubing is filled with filth. This drug, like all other medicines, should be given under the advice of a competent physician, and no more taken than is needed to destroy or hinder the multiplication of the parasites of malaria in the blood. By thus stopping their development, the red blood corpuscles are saved, and the excretory organs are able to expel the waste matters and poisons from the blood.

Malarial disease does not, like many infectious diseases, furnish immunity from future attacks. In fact, when once the poison gets into the system, it may remain there indefinitely, and an acute attack develop from sudden activity of the latent germs whenever depreciation of the general health favors their activity. Thus a person who contracted the poison months or years before will sometimes suddenly come down with the disease, even when living in a locality where malaria is unknown.

The greatest amount of care and discretion should be exercised during the period of recovery from malarial disorders. Overloading the stomach with food, overexertion, exposure, or taking cold, may cause a new growth of the poison germs, resulting in a fresh attack of chills and fever. The liver, stomach, spleen, etc., being all very much weakened by the warfare through which they have passed, are unable to do any extra work, and should be favored until

they have regained their normal state. The food supply should be curtailed so as not to overwork the digestive organs, and bodily exertion should be so regulated as to stop short of causing an overtired feeling. If the digestion can be maintained in good order, the excretory organs do their duty well, and a clean food and water supply be maintained, a person may feel reasonably safe, even in a malarious region.

Diseases become dangerous to mankind just in proportion to the belief in fatalism; and the person who goes into a place where malarial disease or any other is prevalent, feeling that nothing can be done to avoid the danger, and trusting only to blind chance, must of necessity suffer; while he who will search out the causes, and seek to prevent and remove the same, will shield not only himself but others.

The mother who gives her children clean food and drink, and when disease threatens, enforces the needed rest, fasting, and treatment, to prevent an attack, is a true missionary worker. So also is the householder who keeps his fields well drained and tilled, and his barns and outhouses in a good sanitary condition. He should also seek to choose a healthful building site, and establish a sanitary home in all its details. The malarial germ, like many other disease-producing agents, is born and reared in filthy earth; and he is a benefactor to mankind who keeps clean his own habitation and plot of ground.

UNNECESSARY NOISE.

THIS is a busy, noisy world. All nature is active during the day, and much of her activity is accompanied by more or less noise. There is the fierce thunder crash of the tempest, or the more subdued sounds of the wind in the woods, the songs of the birds, and the gentle rustle of the leaves, as well as the fierce howls and screams of beasts and birds of prey. On the water there is the sound of lashing waves. On the farm are heard the lowing of cattle, the bleating of sheep, and the squealing of pigs, mingled with the voices of crowing roosters and cackling hens, as well as cat concerts, howling dogs, and mules braying at the moon at night. Here also one hears the rumble of cart, wagon, and all other farm machinery, which during the busy day make the phrase "the quiet country" rather a misnomer.

In the last half of the nineteenth century, noise has increased very much because of the vast amount of machinery employed, and the use of steam power.

Now night brings the city no respite, and how much of the nervousness and insomnia of the present decade is due to this increase of noise might be an interesting subject for the study of sanitarians.

Humanity adjusts itself usually to all necessary noises, and even becomes so accustomed to certain sounds that many cannot sleep when the noise ceases. The noise which is most disturbing is that heard close at hand and unusual. A few nights of sleeplessness a short time ago led me to think the slamming of doors with creaking hinges, rustling starched dresses, and creaking shoes, with noisy, heavy walking, were the most distracting and annoying noises to be endured by the invalid, and the torture in these cases is usually furnished by the nurse, or the one caring for the suffering one. Next to this is loud conversation and whispering. The inventor of a noiseless shoe, and elastic door casings, which will enable people to shut or slam doors hard yet

without noise, will confer a great boon upon sick humanity. In the meantime, all persons, especially at night, should wear felt or cork-soled or other soft slippers. All doors and locks should be kept well oiled, and every one should try to cultivate the art of shutting doors as noiselessly as possible. At night especially the nurse should discard the starched garments, and wear some soft material which will not creak or rustle when she is moving about. In every movement avoid making a noise.

The invalid who is shut within four walls needs change. The eye and brain become weary and worried, and the nervous system is injured by gazing at the same figures on the wall paper, a crack in the plaster, spots in the dingy ceiling, or a nail head in the moulding. These oft-looked-at objects often take on fantastic and sometimes hideous forms of imp or demon, which craze the weak, distracted

brain of the sick. A change may be made in the location of the bed, so that without effort the patient can look out of the window at the blue sky, trees, or hilltops, a piece of grass, or a bright flower. In winter the snow-covered landscape, dazzling in the sunlight, or even the commotion of a stormy sky, are all more healthful and restful to the mind than monotony. Change the pictures on the wall. Any one can have a collection of bright prints now, for cheap chromos come with many Sunday newspapers, being largely used for advertising. These can be pasted in a scrap-book, or put in some fancy home-made frame, and thus form a pleasant change for the weary eye. Fresh-cut flowers or a bright potted plant, in winter an evergreen branch or a bunch of holly, bright with red berries,—all are useful helps in leading the sick one through his weary days of illness and convalescence back to health.

LITTLE THINGS IN THE SICK-ROOM.—The nurse who is absent-minded and forgetful is always annoying to the patient, as is also the one who lacks method, who mislays things and has to take many extra steps, who forgets things and keeps her patient in constant suspense, who makes the sick one feel that she must have the care of her own case. When such a nurse takes off a fomentation, she forgets to cover up her patient, leaving her exposed to take cold when perspiring, while she goes into another room for water to cool her off. When the patient gets up, the nurse forgets her slippers, and the feet are chilled by stepping on the cold floor. When the nurse goes to give a sponge bath, she uncovers her patient, then remembers that there is no soap or towel at hand; she then has to run to the linen room, or somewhere else, to get the towels or soap. She gets her patient up to change the bed. The patient may be very weak, unable to sit in a chair but a few minutes without injuring her, yet this thoughtless nurse gets her up without having first provided the clean bed-linen, and the soiled sheets either have to be used again, or the patient grows tired and exhausted, waiting for sheets to be gotten and aired.

Such a nurse is always in a hurry, and tires herself needlessly, and makes the patient tired. When she leaves her, she never stops to think whether things are left properly or not, sometimes leaving doors and windows open, when the patient becomes chilled and is made worse by the cold. Often the nurse forgets to turn off the extra heat and open the windows, which have been closed because of

the patient's sitting up or the giving of treatment, and the poor, helpless one cannot rest by reason of the bad air and heat, and the quiet sleep she expected so much from, is lost to her. Such nurses commonly forget to set the water pitcher and glass where they can be easily reached, and the patient must suffer with a parched mouth or throat until some one comes to relieve her.

It is the same about serving the meals; the forgetful, unmethodical nurse forgets to make her patient's toilet before she gets the tray ready, and an appetizing meal is left to get cold and spoil while the patient is being prepared for it. She forgets the spoons, the salt, and many other things, and with such a nurse no patient can ever be quiet and restful. She is always expecting something to be delayed or forgotten, unless there is constant, continual prompting on her part. Such nurses are often good-natured, but they are very annoying to the nervous, helpless invalid, who is left completely to the tender mercies of their thoughtlessness.

A NURSE who is indifferent and preoccupied in her manner or speech in the sick-room, can never be successful. Her patient is ill and suffering, but anxious to get well. His sickness is to him the most important thing on earth. His nurse and doctor are his principal reliance for recovery. A half-hearted, indifferent, heedless answer to some question which may seem of grave importance to the patient, may blot out his hope for health, and be the cause of a relapse, or even of a fatal ending of the disease.

GOOD HEALTH

J. H. KELLOGG, M. D. EDITOR.
BATTLE CREEK, MICHIGAN.

NUT BUTTER AND NUT MEAL.

It has long been a recognized fact that nuts contain a larger percentage of wholesome and nutrient material than any other class of foods. The great objection has been their comparative scarcity and their firmness of flesh, rendering mastication difficult. A nut when imperfectly masticated or otherwise reduced to a pulpy consistency, is almost indigestible, owing to the firmness of its structure. By a fortunate discovery, as the result of long and patient experimentation and investigation, a method has now been found whereby certain nuts—especially those which, like the almond, are capable of being blanched, thus removing the bitter, unwholesome, woody envelope—can be rendered easily digestible and capable of ready combination with other foods in a variety of ways. The most valuable products which have been thus far developed are nut butter, nut meal, and bromose.

The special advantages of nut butter over ordinary butter, tallow, lard, cottonseed oil, cocoanut butter, olive oil, suet, cream, and other materials used for shortening foods, are the following:—

1. Nut butter is a purely vegetable product, and hence free from the elements of disease which are often found to an extent dangerous to life in animal fats. Recent examinations made in Italy show that ten per cent. of ordinary butter contains the germs of tuberculosis, or consumption. Examinations made in this country have shown that American butter also contains tubercle germs. The germs of hog-cholera and also those of other diseases have been found in lard. Cream of course contains the same germs as butter.

2. Nut butter, being perfectly sterilized, is free from germs of all kinds. Butter and cream, unless sterilized, always contain germs capable of setting up fermentation, putrefaction, and other morbid

processes in the stomach. More than fifty different kinds of germs have been found in milk, cream, and butter. This is the principal reason why these substances disagree with so many stomachs, producing biliousness, headache, constipation, and other unpleasant symptoms.

3. Nut butter is an emulsified fat. Nature has made no provision for the digestion of free fat in the stomach. Observations show that free fat in the stomach interferes very materially with the digestion of other foods, fat being digested only after the mass of food leaves the stomach, and enters the small intestine, where it is acted upon by the bile and pancreatic juice. Neither the saliva nor the gastric juice, which act upon the food in the stomach, has any influence whatever upon free fat. But emulsified fat dissolves in water, and hence readily mingles with the food without interfering with the digestion of other food elements. This objection holds against butter, suet, lard, cottonseed oil, olive oil, cocoanut butter and oil, peanut oil, and all other free fats, nut butter being the only vegetable product which is not open to it. It mixes readily with water, which no other substitute for butter will do.

4. Nut butter used as a seasoning for vegetables or other foods imparts a rich, tasty, and meaty flavor, due to the large amount of osmazome contained in it, and the fact that its composition very closely resembles that of fat meat, a large percentage of nitrogenous matter as well as fat being present.

5. Nut butter is a complete food, not a condiment. While its chief component is vegetable fat, of which it contains forty-one per cent., it also contains a large percentage of nitrogenous, or blood-forming, elements. A pound of nut butter contains half as much fat as a pound of butter, and at the same time contains as much of the nitrogenous, or blood-form-

ng, element as a pound and a quarter of beefsteak.

6. Nut butter is not a mixture; it is a pure, natural product. It is a true food, the elements of which are formed in the laboratory of nature, and so modified by the process of manufacture as to be most readily and perfectly assimilated. It never produces biliousness, sour stomach, fermentation, heartburn, or any of the ill effects which follow the use of fat meats, oils, and animal fats.

7. Nut butter may be safely eaten by invalids, and is admirably adapted for the use of all persons who need an increase in fat and blood. Numerous instances can be cited of persons who have gained one or two pounds a week by its use. It increases flesh not only by its own nutritious properties, but by assisting the digestion and assimilation of other foods.

8. Nut butter is by many persons found to be a perfect remedy for chronic constipation or inactivity of the bowels. Nuts have long been known to be useful for this purpose, but the difficulty of digesting them in their ordinary form has prevented their general use. The production of nut butter and nut meal has solved this problem.

9. What has been said concerning nut butter may be said also respecting nut meal, the difference between the two products being that nut meal contains a larger percentage of the blood- and tissue-forming element (thirty-one per cent.) and a smaller proportion of fat (forty per cent.).

10. Nut meal may be eaten in a great variety of ways. It is delicious in the form of gruel, or purée. Combined with fruits in various ways, it is delicate and wholesome.

Bromose is a combination of nuts with digested starch. It is the vegetable analogue of malted milk, and constitutes a perfect food. It has all the advan-

tages over animal fats presented above, and in addition, the advantage that it contains a full assortment of all the food elements which are most difficult of digestion (starch and fat) in a predigested state, and ready for prompt assimilation.

Bromose is not intended to be used as a condiment or seasoning, but as a food. Used freely, it is not only delicious and palatable, but is perhaps the most easily assimilated, the most strengthening, and the most fattening of all foods. The writer often makes a breakfast of a dozen small cakes of bromose and three or four apples, and has the satisfaction of knowing that with such a breakfast he will not only be able to enjoy a clear head, but a maximum of vigor and energy; and that if duty should require such unremitting attention as to afford him no opportunity to eat again until the next day, no special inconvenience or harm would be suffered in consequence.

A pound of bromose contains emulsified fat equivalent to more than half a pound of butter. It contains, in addition, albumin in precisely the same amount as a pound of beefsteak. In other words, a pound of bromose contains as much beefsteak as a pound of beefsteak. It contains, in addition, the strengthening and sustaining elements of one and one-half pounds of bread. It thus combines all the nutrient qualities of bread, beef, and butter, and has the advantage over all of them, that, being predigested, it is ready for prompt assimilation, and being also thoroughly sterilized, it promotes a healthy condition of the stomach. It does not disagree with the most delicate digestive organs.

Nut butter, nut meal, and bromose are manufactured and sold at reasonable rates by the Sanitas Food Company, Battle Creek, Mich.—*J. H. K., in Modern Medicine.*

PRESERVATION OF MILK BY FREEZING.—A Swede has recently taken out a patent in this country for a process of preserving milk for transportation. The method has been practiced in Sweden for some time with excellent success. The process is as follows: When the milk is received from the farmers, it is heated to a temperature of 167° F., then cooled off to 50°, after which the milk is put into cans, "and placed in a freezing apparatus, where it will be thoroughly frozen in the course of three hours. The frozen milk is then put into barrels of pine, the only kind of wood that can be used. The barrels, however, are only half filled with this frozen milk, the balance being filled with unfrozen milk. This way of packing has proved to be the only practical one, as part of the milk has to be frozen in

order to keep the whole cold, and part has to be in a flowing state in order to get the barrels exactly full, which is necessary in order to avoid too much shaking up on the road, by which the cream would be churned into butter; the floating masses of ice at the same time prevent the cream from separating in the unfrozen milk. Milk which is treated in this way has proved to keep quite fresh for twenty-six days.

THE KOREAN DIET.—A contributor to the *Canadian College Missionary*, writing from Korea, states that during the month of July cucumbers form the proper accompaniment of rice in the native diet. Mellons are also eaten in August, but they are eaten green, never being allowed to ripen.



EATING TOO FREQUENTLY.—One of the most pernicious customs of modern life is that of frequent meals. This habit is seen in its extreme development in England, five meals a day, including lunches, being there considered none too many. The idea seems to prevail that the stomach must never be allowed to become empty under any circumstances. In this country, three meals a day is the general custom, though more are sometimes taken.

Healthy digestion requires at least five or six hours, with one or two hours for rest before another meal is taken. This makes six hours necessary for the disposal of each meal. If ordinary food is taken at shorter intervals than this, the stomach must suffer disturbance sooner or later, since it will be allowed no time for rest. Again, if a meal is taken before the preceding meal has been digested and passed from the stomach, the portion remaining, from its long exposure to the influence of warmth and moisture, is likely to undergo fermentation, in spite of the preserving influence of the gastric juice. Thus the whole mass of food is rendered less fit for the nutrition of the body; and what is still more serious, the stomach is liable to suffer permanent injury from the acids developed.

Too frequent eating occasions too long contact of the acid contents of the stomach with the gastric juice, which produces catarrh and ultimately ulceration of that organ. Frequent eating is often resorted to as a relief from what is commonly termed faintness, or an "all gone" feeling in the stomach. The fact that eating gives a respite from this sensation is taken as good evidence that it is the proper remedy; but, at the best, only temporary relief is obtained, and that at the expense of aggravating the difficulty. Food affords relief simply by separating the irritated mucous surfaces of the stomach, and diluting its acid fluid.

VAGARIES OF DIGESTION.—The stomachs of certain persons seem to be possessed of marked peculiarities, as the result of which certain articles of food which agree perfectly well with most people, give rise in them to very unpleasant symptoms, such as oppression or burning, headache, and occasionally slight fever. These symptoms sometimes occur as the result of eating strawberries or honey. They are, however, more likely to arise from eating shellfish, lobsters, oysters, and clams. Some people cannot eat buckwheat, and there are cases in which even oatmeal produces a peculiar eruption of the skin. These instances are, however, very rare. The poisonous and sometimes fatal effects resulting from the use of oysters, are due to the constant presence in these bivalves of a poison discovered by Brieger—mitylotoxin.

STOMACH WASHING IN CHILDREN.—There is no doubt that quite a large proportion of chronic stomach disorders in children are the result of a foul condition of the stomach, which might be readily remedied by the use of the stomach-tube. It is, of course, difficult to employ this method in children, but by means of a mouth-gag with an opening in the center, the operation can be performed without injury to the child, providing reasonable care is taken not to introduce the tube into the lungs, the child being laid upon the side after the tube has been introduced. When the stomach is filled, the tube is lowered and the fluid is allowed to escape. Dr. Nesbitt, who advocates this mode of treatment of children, states that he has often removed large pieces of coagulated and putrid casein from half an inch to an inch and a half in length, and nearly as tough as leather. Such pieces are often expelled with the vomiting which follows the withdrawal of the tube.

COLD AIR FOR CONSUMPTIVES.—There are now six sanitarium in Germany at which consumptives are treated by the cold-air method first suggested by Detweiler. The principal idea of this method of treatment is that the patients should be exposed constantly to air at a low temperature, currents of cold air being allowed to pass through their bedrooms at night, and during the day as much of the time being spent in the open air as possible. The pure, cold air quiets the cough, lowers the temperature, arrests night sweats, improves the appetite, and relieves or arrests the course of disease.

Observations made in these sanitarium have developed the interesting fact that it is rarely indeed that infection of healthy persons by contact with consumptive inmates is observed. The probable reason for this is, that greater precautions are taken to prevent infection in the sanitarium where special attention is given to this disease than in ordinary hospitals, or indeed in private houses. It is well known that the breath of a consumptive does not contain bacilli; it is only when sputum has been dried and reduced to powder so that it is carried about by the air, that there is a possibility of infection.

A SUBSTITUTE FOR COFFEE.—Most people are now aware of the fact that tea and coffee are unwholesome beverages. Everybody knows strong tea will keep a person awake at night. A drug which will make it impossible for a sleepy person to sleep must be a powerful poison. Both tea and coffee cause biliousness. Few physicians will allow their patients to drink either tea or coffee when suffering from either dyspepsia or nervous disorders. At the Battle Creek (Mich.) Sanitarium, caramel-cereal has been used as a substitute for tea and coffee for more than twenty years, and is highly approved by the physicians of that institution.

A WARNING TO PARENTS.—Prof. Fall, Professor of the State Board of Health of Michigan, at a late meeting of the Board, called attention to the fact that there is a possibility that the antitoxin treatment of diphtheria may lead to an extension of the disease and the loss of many lives by developing an undue feeling of security. The antitoxin treatment, while promising much, is not yet demonstrated to be a panacea for diphtheria. The child sick with the disease may possibly be benefited by the injection of diphtheria antitoxin, but, on the other hand, may die. Hence, no parent should entertain the idea that because antitoxin is discovered, it is

safe to allow children to be exposed to diphtheria or to take any less precautions to prevent the extension of this disease.

HOW NOT TO TAKE COLD.—At this season of the year, how to avoid taking cold is a most important practical question. Catarrh, whether nasal, pharyngeal, laryngeal, or pulmonary, generally finds its origin in a severe cold or a succession of colds.

The real cause of taking cold is the inability of the system to react after a chilling of the surface. Savages are practically as free from colds as are wild animals. A susceptibility to taking cold is one of the penalties, and a heavy one too, which we pay for wearing clothes and living in heated houses.

Some years ago the writer spent a few days among the Yuma Indians, studying their habits. He found them living in a perfectly primitive state, the younger members of the tribe wearing no clothing at all, and the older ones wearing aprons, or "G" cloths. A few of the children had been gathered into a mission school, and while in the school, they wore clothing. There was a general prejudice against the school on the part of the older Indians, however, due to the fact that the children who attended school were less healthy than the others, and were beginning to suffer from catarrhs, sore throats, and various maladies previously unknown to them.

The celebrated African traveler Rholf found the chieftain of a wild tribe suffering from a terrible nasal catarrh. He was the only member of the tribe who thus suffered, and was likewise the only one who wore shoes and stockings.

The German empiric, Pastor Kneipp, compels his patients to go both barefooted and bareheaded. An hour's tramping in the wet grass is one of his favorite prescriptions.

The only way to cure a propensity to take cold is by hardening the body. This will be best accomplished by wearing as little clothing as is consistent with comfort, sleeping under light covers at night, in a cool, well-ventilated room, and taking a cold bath followed by a vigorous rubbing, and, if necessary, the application of a little oil, every morning.

REMEDY FOR PROFUSE PERSPIRATION OF THE FEET.—Wash the feet morning and night in warm soap and water, adding an ounce of washing soda to a quart of water; rinse with cold water and dry very thoroughly, and apply a powder consisting of one part of salicylic acid, two parts of precipitated chalk, and seven parts of powdered soapstone (talcum). The chalk should be applied freely between the toes.

CAN STAMMERING BE CURED?—Stammering is a disease in which the nerve centers are sometimes at fault. It is doubtless, however, in most cases, a habit, and may be readily cured, especially if the case is taken in hand at a very early age. The following simple suggestion from a gentleman who had stammered from childhood almost to manhood, will be found useful as a means of relieving this unfortunate infirmity:—

“Go into a room where you will be quiet and alone; take some book that will interest but not excite you, and sit down and read two hours aloud to yourself, keeping your teeth together. Do the same thing every two or three days, or once a week, if found tiresome, always taking care to read slowly and distinctly, moving the lips, but never the teeth. When conversing with others, try to speak as slowly and distinctly as possible, and make up your mind that you will not stammer.

“Well, I tried this remedy, not having much faith in it, I must confess, but willing to do most anything to cure myself of such an annoying difficulty. I read for two hours aloud with my teeth together. The first result was to make my tongue and jaws ache,—that is, while I was reading,—and the next, to make me feel as if something had loosened my talking apparatus, for I could speak with less difficulty immediately. The change was so great that

every one who saw me remarked it. I repeated the remedy every five or six days, for a month, then at longer intervals until I was cured.”

HOW TO CURE CONSTIPATION WITHOUT MEDICINE.—The habitual use of purgatives which has long been so common in this and most other civilized countries is unquestionably one of the chief causes of the increasing prevalence of diseases of the stomach, liver, and kidneys.

The great prevalence of inactivity of the bowels requires, however, the use of a remedy of some sort. The mechanical method, or what is known as massage of the bowels, has long been employed. This method was many years ago successfully used by a New York quack, who used to put his patients under a pledge of secrecy as regarded the details of his method. Dr. J. Schreiber, a German physician, claims to be able to cure nearly every permanent case of constipation by the daily application of massage for two or three months. The writer has employed this method for more than twenty years, and with excellent success.

In some cases, however, the application of an abdominal bandage is required, as constipation is not infrequently due to a prolapse, or falling, of the colon, causing a folding of the intestine and consequent mechanical obstruction of the bowels.

ANSWERS TO CORRESPONDENTS.

DELIRIUM AFTER FEVER—GRAHAM BREAD, ETC.—R. E., Kans., writes thus: “1. My little boy nine years old had a rash two years ago, with very high fever. I gave him fever medicine, and when the fever left him, he became delirious and screamed for help. Since then, whenever he has fever, and for some time afterward, he has these same spells. At such times he is very nervous. He says it seems to him as though his hands and legs are getting large and heavy. What is the probable cause? and what ought to be done for him? 2. Will the eating of graham bread in some cases cause pain in the upper portion of the stomach?”

Ans.—1. The boy doubtless has an extremely excitable nervous system, with a tendency to hysteria. He should be kept as quiet as possible; that is, all exciting causes should be avoided, and every means should be adopted to improve the general health. A tepid morning sponge bath, followed by rubbing with oil, a simple, nutritious diet, and an abundance of out-of-door exercise are to be recommended.

2. We think not.

BLOOD POISONING.—Mrs. L. W. E. inquires: “1. What is the best thing to do to prevent blood poisoning or any bad results from the scratch of a cat? 2. In such a case might not the wound be bathed with something which would draw out the poison? 3. What should be done to

prevent lockjaw in case the foot is punctured by a nail?”

Ans.—Cleanse the part at once with a strong antiseptic solution, such as carbolic acid, one part to twenty parts of water, corrosive sublimate, 1-1000, or permanganate of potash, 1-200. The hands should be soaked in a hot antiseptic solution for five or ten minutes, and afterward dressed with carbolated vaseline.

2. There is no poison injected into the blood in cases of this kind. The poison is upon the surface, and can be readily destroyed by the means suggested.

3. The wound should be kept open, and dressed antiseptically. If the wound is large enough, it should be packed with iodoform gauze; the foot should then be soaked in hot water for an hour or two every day.

COATED TONGUE—BURNING AND DRYNESS IN THE MOUTH, HANDS, AND BODY, ETC.—Miss M. M., Mich., writes as follows: “1. I am twenty-six years old. I cannot eat fruit of any kind, meat, vegetables, grains, or graham bread without having a white coating on the tongue, and burning and dryness in the mouth, and of the hands and body. I drink neither tea nor coffee, and live mostly on granola, dry bread, potatoes, and cold water. I want to eat all the time,—cannot get enough; and the more I eat, the worse is the fever. The bowels are not constipated. What is

my trouble? and what ought I to do for myself? 2. Is Postum-Cereal (made at the Sanitarium) a healthful drink in this case?"

Ans.—1. You are probably suffering from hyperpepsia. See answer to Miss H. L. W., in this number.

2. Postum-Cereal is not made at the Sanitarium. The Sanitarium substitute for coffee is known as "Caramel-Cereal." We would not recommend drinks of any sort at meals, in your case.

CATARRH.—B. M., Canada, writes as follows: "A year and a half ago, after a severe attack of la grippe, I began to be troubled for the first time with a dropping of mucus from the head into the throat, which continued at intervals until a few months ago, when I took a cold in the head; and since then the discharge has been greater and of a greenish color. It causes no distress, except that sometimes I feel a slight stuffiness in the head between the nose and throat. Please prescribe home treatment for same."

Ans.—We would advise the use, several times daily, of the Perfection Vaporizer, with balsam solutions. The solution known as B. C. M. E. W., directions for which accompany the instrument, will be found especially useful. The instrument can be obtained from the Sanitary Supply Co., Battle Creek, Mich.

CARAMEL-CEREAL—YEAST, ETC.—F. W. B., N. Y., asks: "1. What effect does Caramel-Cereal produce on the bowels when freely used? 2. I am told that fourteen per cent. of the goodness of the grain is eaten up by the yeast in making bread. Is this true? 3. Is the bran and coarse part of wheat absolutely necessary to the fullest nutriment from the grain?"

Ans.—1. Caramel-Cereal has no medicinal effect.

2. We think the percentage named is rather large. The amount lost by the grain, however, will depend upon the length of time to which the dough is subjected to fermentation.

3. We believe the whole-grain preparations are superior to those from which any portion of the grain is excluded.

INDIGESTION.—Miss H. L. W., Mass., asks the following questions: "1. I am troubled with very sour stomach occasionally, also considerable eructation of gas. I have a good appetite, but feel tired, dull, and bloated after eating. At times I have pain just under the ribs, about three inches to the left of the sternum. I am much troubled with pimples on the face, and occasionally with constipation. My tongue is generally clean. Would like to know what the trouble is and what to do for it. 2. What ought I to eat? 3. What causes an expectoration of frothy mucus from the stomach? 4. What kinds of food are taken for a test breakfast? 5. Can any person use the tube to obtain a sample of the stomach fluid? 6. Where can the tube be obtained? 7. A girl eighteen years of age has had trouble with her stomach at times for three years. Three or four hours after eating, pain will begin in the stomach, and extend through to the back, and then her head will ache. The pain will frequently

begin in the morning after rising, and last until breakfast is eaten. Eating will always stop the pain. Her back troubles her some, and she also suffers from constipation. What is the disease? 8. Please indicate a line of treatment."

Ans.—1. You are evidently suffering from indigestion—probably have a dilated stomach.

2. You ought to take such food as will not readily ferment, or sour. You should avoid, especially, sweets, drinking at meals, and all foods difficult of digestion. We would recommend especially granose and bromose. It would be well for you to obtain a copy of "The Stomach: Its Disorders, and How to Cure Them," published by the Modern Medicine Publishing Company, Battle Creek, Mich.

3. The expectoration may be due to catarrh of the stomach, or it is possible that the expectorated matters are from the throat and not from the stomach.

4. Granose or water biscuit; in an emergency, stale white bread may be employed.

5. Yes, with instructions, but it is better to entrust the matter to a physician.

6. Of the Sanitary Supply Company, Battle Creek, Mich. If you send for one, ask also for particular instructions in reference to taking a test breakfast, unless you obtain a copy of "The Stomach: Its Disorders, and How to Cure Them," in which you will find full instructions for taking a test meal.

7. The young lady is doubtless suffering from hyperpepsia.

8. We would advise the following: Fomentation to the spine at night before retiring, a moist abdominal bandage to be worn during the night and a dry bandage during the day, a cool sponge bath on rising in the morning. The patient should eat moderately of dry food, avoiding acid fruits, meats, and irritating condiments; should rest quietly for an hour after eating, and three hours after eating should drink a glass of cold water. Full directions are given in "The Stomach: Its Disorders, and How to Cure Them," for the treatment of hyperpepsia.

SUPERFLUOUS HAIR.—A subscriber, Wash., inquires for a remedy for superfluous hair: "What drugs taken together would make the best depilatory paste?"

Ans.—Removal of the hair by means of electrolysis is an effective means of depilation; the depilatory paste may be made by mixing calcium sulphide and water.

NERVOUSNESS IN A CHILD—TWITCHING OF THE EYES.—Mrs. O. F. F., Pa., asks: "What ought we to do for our little girl seven years old, who is troubled with nervousness and twitching of the eyes? She seems to be growing worse and one eye twitches continually. We are strict vegetarians, and also use the health foods."

Ans.—The child probably needs general health training and culture and is perhaps suffering from indigestion. Nothing should be done for the nervousness, but the cause of the nervousness should be discovered and removed. The child may be suffering from intestinal worms. Indigestion may be the sole cause of the difficulty. A diet of granose and bromose is to be especially recommended for a case of this kind.

RELIEF DEPARTMENT.

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

1. Young orphan children, and
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.

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.

He wishes especially to state that those who apply for children will be expected to accompany their applications by satisfactory letters of introduction or recommendation.]

Nos. 262 AND 263.—A little boy and girl six and eight years old living in Pennsylvania have been brought to our attention. They are motherless, and their father, being in very poor circumstances, needs assistance. He desires to place his children in the homes of Christian people. We learn that they are good children, easy to teach, and of good appearance. They are now with their aged grandparents, who cannot care for them longer.

No. 282 is a boy seven years of age. He has blue eyes and light hair. His father and mother are both dead, and he has been cared for by his grandparents for three years. They cannot provide for him longer, and rather than place him in the poor-house, they apply for a home in a Christian family.

Nos. 285 and 286 are boys living in Pennsylvania. Their condition is like several that have been referred to us before; and from what we learn of them we are satisfied that they are worthy of help. Their father is dead and the mother not able to care for them. She has tried for the past few years to keep

them with her, not wanting to part them, but has now reached the point where she can see no other way than to place the children in homes. The boys are seven and eight years old, have blue eyes and brown hair, and are in good health. The mother has kept them with her most of the time.

Nos. 298 and 299 are two little girls aged six and eight years respectively, who are living in one of the New England States. They have blue eyes and light hair, and have had the best of training while their mother was alive. The father is very anxious to find good homes for them, as he does not feel competent to give them proper care and training. Here is a chance to do real missionary work.

Nos. 312 and 313 are two little boys aged eight and five years respectively, whose father has deserted them. The mother being away from home all day to earn a living, they are thus left to themselves. The older one has brown eyes and hair, and the younger one blue eyes and light hair. Will not some one offer them a home, and train them for usefulness? They are now living in New York State.

Nos. 318-321.—This is a group of four little boys living in Michigan, aged ten, eight, six, and three years respectively, whose mother has abandoned them, and whose father is not able to support and care for them. They are said to be obedient and well behaved, and to have acquired no bad habits. They have dark eyes and light hair and are all in good health. Will not some mother open her heart, and take them into her home?

No. 328 is a little Holland boy nine years old living in Michigan. He has dark eyes and hair, and is said to have good health. His mother is dead, and his father has deserted him. The stepmother, who has supported him, is dependent upon her relatives for support, but they are not willing to care for this little boy. Is there not some home that will offer this child a mother's love and tender care, and thus train him for usefulness?

No. 331.—Here is a bright little boy only two years old, who is sadly in need of a mother's care. His mother is dead, and his father being a day laborer in limited circumstances, cannot give him proper care and training. He has black eyes and brown hair.

NOS. 332, 333, AND 334.—Here is a group of three little boys, aged eight, seven, and four years respectively, living in Michigan. Their father is dead, and the mother, having to work out by the day, is not able to care for them. The children have been living with their grandparents, who are old and in feeble health, and so cannot properly care for them. They have blue eyes and brown hair, and are said to be very bright children. They have had good training and learn very readily, and we doubt not, if they are surrounded by good influences and receive proper instruction, they will be an honor to those who will thus direct their steps in the right path.

ABOUT two years ago we placed a little boy in a home in Canada, and from a letter received from the family who took him we extract the following:—

“We are still well pleased with him. He proves to be quite industrious, and is always ready to help. He learns very readily, and is making encouraging progress in his studies, and seems to be improving in various ways. He is now taking instrumental music, and is doing nicely in that also.”

Are there not other families who would thus have their homes brightened by taking in some of the homeless ones, and by proper training bring them up for usefulness? It cannot be claimed of all these children that they are model girls and boys. Nevertheless, they all are human beings; they all need to be fed and clothed, and all have souls to be saved. “Inasmuch as ye have done it unto the least of these my brethren, ye have done it unto me.”

THE following letter was received at our office a short time ago:—

“We will take the baby boy, No. 306, with blue eyes and light hair, the one that is four months old. My name is Sister ——. If any one is coming from there, please send it with them to ——. We have got two children. We will be as good and kind as can be to it. Send it to Mrs. ——.”

A few days later we received a postal signed by the same name, saying that the letter had been written by her nine-year-old girl while the mother was away from home. The little girl had written the letter and taken it to the office herself, and at last report was patiently awaiting the baby's arrival. We were sorry to have to disappoint the little lady, as a home had been found for the baby before her letter reached us.

FROM another letter we extract the following:—

“I enjoy reading the *Medical Missionary* more than I can express. My little girls, eight, six, and three, all enjoy it too.

The November number was longer coming than usual, and they began to inquire why I did not get any more of those ‘catalogues’ that have the children in that want homes. I must read about the little ones advertised the first thing when the magazine comes. It would have pleased the little ones if they could have seen my children come in with the November number last week. They had opened it, and learned of the little four-months'-old baby boy, and they rushed in with faces all aglow with delight. ‘O mama, let me tell you something! There is a little baby boy four months old in here. Don't you think papa will let us send for him?’ But papa would not consent, and they are obliged to bear the disappointment.”

PERSONS making applications for children advertised in this department are requested to send with their applications the names and addresses of two or more persons as references. If possible, these should be known, either personally or by reputation, to some member of the Board of Trustees.

PERSONS intending to visit the Haskell Home will please note that the visiting days are Sundays and Wednesdays, from 4 to 6 P. M. J. H. KELLOGG.

CLOTHING FOR THE POOR.

THE call for clothing of all kinds and the numerous offers to supply assistance of this sort, have led us to organize a Clothing Department to receive and properly distribute new or partly worn garments which can be utilized for the relief of the very poor. In connection with this work it is very important that a few points should be kept in mind and carefully observed:—

1. Clothes that are so badly worn that repairs will cost more in money or labor than the garment is worth, will of course be of no service. Garments that are old, though faded, or which may be easily repaired by sewing up seams, or made presentable by a few stitches judiciously taken at some point in which the fabric is nearly worn through, may be utilized to most excellent advantage. But garments so badly worn that they need extensive patching, or clothes which have become much soiled and grimy by long use in some dirty occupation, should find their way to the rag bag instead of the missionary box.

2. Freight must always be prepaid. It costs as much to send 25 pounds or any amount less than 100 pounds as to send the full 100 pounds; consequently it would be well for those who think of sending clothes to be used in this department, to put their contributions together in one shipment, so as to get the benefit of the 100-pound rates. *We are obliged to ask that freight should be prepaid as a means of preventing loss to the work in the payment of freight upon useless packages.*

3. Clothes that have been worn by patients suffering from any contagious disease—such as typhoid fever, erysipelas, consumption, and skin disorders of all sorts, as well as scarlet fever, measles, mumps, diphtheria, and smallpox—should not be sent. Infected clothes may be rendered safe by disinfection, but we cannot trust to the proper disinfection of such garments by those sending them, who, in the majority of cases, are quite inexperienced in such work; neither should those who unpack the clothes be exposed to the risk of contamination while preparing them for disinfection at this end of the line. Such clothes should, as a rule, be destroyed. If they are not destroyed, almost infinite pains is required to render their use perfectly safe.

4. All articles received here are carefully assorted and classified, and are then placed as called for, where they will do the most good.

5. Clothing intended for the Chicago mission should be sent to Chicago Medical Mission, 40 Custom House Place, Chicago, Ill.

LITERARY NOTICES.

"THE UP-TO-DATE PRIMER: A FIRST BOOK OF LESSONS FOR LITTLE POLITICAL ECONOMISTS."—Large type, 96 pp., limp cloth, 25 cents per copy. Funk & Wagnalls, publishers, New York City.

It is composed of words of one syllable, with pictures, and is designed for use in schools, colleges, universities, and other seats of learning. It is an amusing travesty on the child's primer in use in the public schools. It contains seventy lessons, illustrated with as many cleverly conceived cartoons, and there are spelling exercises at the head of each lesson. The series presents a complete exposition of the theory taught in the works of Henry George; notably a very clear conception of the idea promulgated in his "Progress and Poverty," a book which many fail to clearly understand. It is claimed that no person can read this primer and not thoroughly understand the whole matter.

THE first adequate description of life in the Colorado Health Plateau, with its varied social aspects, is given by Lewis Morris Iddings in the February *Scribner's*. He writes from a wide experience gained by residence in European and American health resorts, and speaks with the greatest enthusiasm of the social side of the life around Colorado Springs, as well as of its wonderful benefit to invalids. An artist was sent by *Scribner's* to the region for the express purpose of making these illustrations from nature.

"ISRAEL AMONG THE NATIONS."—A study of the Jews and Antisemitism. By Anatole Leroy-Beaulieu. Translated by Frances Hellman. Authorized edition for the United States and Europe. 8vo, cloth \$1.50. G. P. Putnam's Sons, New York.

No such thoroughgoing study of the Jews and the Jewish question has been attempted as this scholarly and comprehensive work. M. Beaulieu entertained for a long time a prejudice against the Jews; but, in the desire to do no man an injustice, he studied them, at home and abroad, for three years, and this work is the result of his researches and observations made while among them.

"LITTLE JOURNEYS TO THE HOMES OF GOOD MEN AND GREAT."—By Elbert Hubbard, author of "No Enemy but Himself," etc. Illustrated with twelve portraits, some of which are in photogravure. 16mo,

printed on deckle-edge paper, gilt top, \$1.75. G. P. Putnam's Sons, New York.

These accounts of certain pilgrimages made by Mr. Hubbard to the homes of famous authors have attracted not a little attention while in course of serial publication. They are now bound together in a distinctive cover, designed by Mr. George Wharton Edwards. Portraits (some of them in photogravure, etching, and half-tone) include those of George Eliot, Dickens, Thackeray, Ruskin, Shakespeare, Goldsmith, Turner, Gladstone, Victor Hugo, Wordsworth, and Swift.

THE *Independent* of New York for forty-seven years has held the first position among the great religious literary and family weeklies of the land. It presents features for the coming year far in advance of any heretofore offered. It has the leading contributors of the world; it prints the best poetry; it has twenty-one departments, edited by specialists, devoted to Fine Arts, Science, Insurance, Finance, Biblical Research, Sunday-schools, Missions, Health, etc. The *Independent* is particularly fitted for intelligent people, whether professional men, business men, or farmers, and for their families.

The subscription price of the *Independent* is three dollars a year, and a sample copy will be sent to any person free by addressing, The *Independent*, New York City.

"RHYMES OF OUR PLANET."—By WILL CARLETON. Illustrated. Post 8vo, cloth, ornamental, \$1.25. Harper & Brothers, New York.

It has been said with marked and unmistakable emphasis—not by one approving critic merely, or by any school of literary criticism, but by the general public—that Will Carleton has the art to express the sentiments of average men and women, and to touch the hearts of many people, as perhaps no other verse-writer of the time has done. The present volume, in the choice of simple themes and the direct manner of treatment, resembles its author's extremely popular "Farm Ballads."

Every Where is Will Carleton's newspaper magazine. There are poems and sketches by him in every number, and also the best of other literature. Only fifty cents a year, sample copy five cents. A subscription to *Every Where* included with *GOOD HEALTH* for \$1.30.

PUBLISHERS' DEPARTMENT.

DR. AND MRS. BELKNAP, of Portland, Ore., are spending a little time visiting friends in Battle Creek and at the Sanitarium, with which they were for several years connected. Dr. Belknap has, for the last year or two, been located at Portland, where he has built up a large and growing practise. The doctor, in connection with several other gentlemen of the Pacific Coast, has recently undertaken the establishment of a sanitarium to be known as the Portland Sanitarium, which will be conducted on the same principles as the institution at Battle Creek.

* *

REPORTS from the sanitarium at St. Helena, Cal., indicate a prosperous condition. Mr. Irving Keck has recently assumed the position of business manager of the institution. He is very much pleased with the climate and surroundings, and the encouraging outlook for the institution. Dr. Maxson, the superintendent, is spending a short vacation in New York City.

* *

DR. ADDIE C. JOHNSON, who will be remembered by many of the readers of this magazine as the amiable house-physician of the Sanitarium Hospital, a position which she ably filled for several years, has recently taken the position of lady physician at the sanitarium connected with the medical mission located at Guadalajara, Old Mexico. This is an excellent place for persons who wish to escape altogether from the cold weather of the temperate regions, and yet fear to expose themselves to the malarious conditions existing in some portions of the South. Guadalajara, although in the tropics, is located at an altitude of one mile above the sea-level, and hence enjoys perpetual summer, without the disadvantage of excessive summer heat. Indeed, this place has perhaps the most delightful climate in the world.

ON a recent hurried trip West, the editor made a short stop at the sanitarium at Boulder, Col., and found the superintendent, Dr. Place, with his hands full of work, the two capacious cottages which had been erected in advance of the main building being crowded to their utmost capacity. Still the doctor declared that he had room for more; but where he could put them it was not easy to see. The new building is rapidly approaching completion, and April 1 has been set for the dedication.

* *

WE had the pleasure of spending a day recently at the Nebraska sanitarium located at College View, a suburb of Lincoln, Neb. We found the institution full, and many patients rooming outside. A fine addition to the building is in progress and nearly completed; but we were assured by Dr. Loper, the superintendent, that when finished, it would not accommodate all the patients who had spoken for rooms. We were especially pleased to find a great interest in health principles and sanitary progress manifested by all connected with the institution.

* *

By recent letters from South Africa we learn that the health institution in that country, a cut of which we hope to show our readers soon, will be opened for business by September 1 of the present year. Dr. Anthony, who has been spending some years in this country in medical studies, recently sailed for that distant region, and we hope that by this time he has safely reached port.

* *

THE editor was glad to have the pleasure of meeting, recently, two old friends in the persons of Mr. and Mrs. Druillard, whom he last met in London several years ago. After spending a number of years actively engaged in phil-



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Both Medal and Diploma

Awarded to Charles Marchand's Glycozone by World's Fair of Chicago, 1893, for its Powerful Healing Properties.

This harmless remedy prevents fermentation of food in the stomach and it cures:

DYSPEPSIA, GASTRITIS, ULCER OF THE STOMACH, HEART-BURN, AND ALL INFECTIOUS DISEASES OF THE ALIMENTARY TRACT.

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IS THE STRONGEST ANTISEPTIC KNOWN.

One ounce of this new Remedy is, for its Bactericide Power, equivalent to two ounces of Charles Marchand's Peroxide of Hydrogen (medicinal), which obtained the Highest Award at the World's Fair of Chicago, 1893, for Stability, Strength, Purity and Excellency.

CURES ALL DISEASES CAUSED BY GERMS.

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HYDROZONE is put up only in small, medium and large size bottles, bearing a red label, white letters, gold and blue border.

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PUBLISHERS' DEPARTMENT.

anthropic and educational work in South Africa, they have come to this country for a short rest, but will probably return to Cape Town in a few months.

* *

DR. KELLOGG'S new work on digestion and its disorders is now in press, and is being pushed rapidly to completion. This work embodies the result of the author's extensive experience in the study of more than five thousand cases of chronic indigestion by a more complete and thorough method of observation than has ever been brought to bear upon such a large number of cases. The result obtained in the treatment of this large number of chronic invalids has been in the highest degree satisfactory. Hundreds of persons who had been complete invalids for many years previous, have been restored to sound health in a comparatively short time by the aid of the methods which are the outgrowth of careful scientific study of this disease, and a minute chemical investigation of the products of digestive work obtained by the test breakfast.

The old methods of dealing with cases of indigestion were simply the result of scientific guessing, more or less shrewd according to the experience and natural tact of the guesser, but never to any degree exact, and always more or less disappointing. The new method affords exact data whereby a precise prescription can be made, and the patient started off at once on the road to recovery, instead of enduring the vexatious experience of the old "cut and try" system in diet. Every dyspeptic ought to have this book, and, in fact, everybody ought to read it, as it tells how not to become a dyspeptic as well as how to get well if you have become one.

IRRIGATION in Dakota is causing that much-maligned section of the Western country to blossom like the rose. Quoting from a published article on the subject, it is stated that "men who are accustomed to farming in non-irrigated districts are slow to believe the reports of enormous yields of all kinds of farm products in those sections of the country where irrigation is practised." An irrigated forty-acre farm produces greater and better results than a six-hundred-and-forty-acre farm cultivated in the ordinary way. In a few weeks we hope to be able to publish various items from different individuals, giving their personal experience in irrigation farming.

In the meantime, send for a free copy of an illustrated pamphlet in reference to irrigation in Dakota, published by the Chicago, Milwaukee & St. Paul R'y Co. Address, Harry Mercer, Michigan Pass. Agent, Detroit, Mich.

* *

THE *Pilgrim* (Holiday Number).— Full of good sketches — prose, poetry, and illustrations — by bright writers and artists. Entirely original, new, and entertaining. Mailed free to any address on receipt of six (6) cents in postage stamps. Write to Geo. H. Heafford, Publisher, 415 Old Colony Building, Chicago, Ill.

* *

WINTER TOURS.— The Michigan Central has placed on sale winter tourist tickets to all the principal Southern winter resorts at reduced rates. For full particulars, address, Geo. J. Sadler, Pass. Agt., Battle Creek, Mich.

HOW TO GET FAT.

MANY an invalid would gladly exchange a hundred dollars for a pound of flesh, and be willing to repeat the experiment a number of times. A lean lady recently reported that after having eaten five pounds of **Bromose**, she found that she had gained a pound of flesh for each pound of **Bromose**. Her red lips and pink cheeks indicated a gain of blood as well as of fat. **Bromose** is a blood-making as well as a fat- and tissue-building food.

Bromose is not a mixture, but is a pure, simple, natural product. It is a thoroughly sterilized, pre-digested food, in which the starch has been converted into maltose and dextrin, the fat perfectly emulsified, and the albumin reduced to a state of the finest subdivision, so that it is quickly dissolved by the gastric juice. No other food presents these elements in a form ready for so prompt and perfect assimilation.

Bromose is especially useful for the very large class who have difficulty in digesting starchy foods, such as oatmeal, cracked wheat, rolled oats, and

other cereals. In such persons, the acidity, flatulence, and other symptoms are due to the fact that the starch, being imperfectly digested, is not readily absorbed; and being retained in the stomach for too long a time, it undergoes fermentation. **Bromose** presents the starch in a digested form ready for absorption, and thus obviates this difficulty.

Bromose is equally good for persons who cannot eat milk or cream, in consequence of the tendency of these substances to produce biliousness, constipation, headache, acidity, and other unpleasant symptoms. Those suffering in this way usually have dilated stomachs, which causes the food to be retained too long in the stomach. Milk being naturally digested in the small intestine, when it is longer retained in the stomach, undergoes decomposition, as the result of which various poisonous substances known as ptomaines are formed, and by the absorption of these, biliousness and other disagreeable symptoms are produced. The retention of milk in the stomach is caused by the formation of hard

curds, which are dissolved by the gastric juice with great difficulty, and often undergo decomposition before the solution is completed.

In **Bromose** the albumin is divided into extremely fine particles, so that it is quickly dissolved in the stomach, and passed along into the intestine for absorption, and hence does not undergo decomposition in the stomach, nor give rise to biliousness or other symptoms produced by the use of milk, fat meats, etc.

Bromose agrees with many persons who cannot digest butter or free fats of any kinds, for the following reasons:—

1. It is a purely vegetable product, hence is free from disease germs, such as those of hog-cholera, consumption, etc., which are found in lard, butter, and other animal fats.

2. It is thoroughly sterilized; hence is free from all those germs which are found in butter and cream, and which give rise to biliousness, through decomposition, fermentation, and other changes set up in the stomach.

3. Being an emulsified, or partially digested, fat, it readily mingles with other foods in the stomach, and hence does not interfere with their digestion, as do free fats.

Bromose is a complete and perfect food; it may be used to the exclusion of all other foods, when necessary, as it affords complete and ample nourishment. This is due to the fact that it is a natural product. No artificial or laboratory substitute for food can be relied upon to sustain life for any great length of time; as it is only by the subtle chemistry of nature that the elements of nutrition can be so combined as to furnish the body with all the essential requirements for the maintenance of life and health.

Bromose has the advantage over cod-liver oil and various emulsions which have been prepared and recommended for persons requiring a rapid addition of fat and blood, in the fact that it is not only wholesome and nutritious, but palatable and delicate in flavor, and that it never nauseates or disturbs the stomach, but rather aids the digestion of other foods.

The following letter from an invalid lady in New York City who has made a rapid recovery through the use of **Bromose**, is not an exaggeration of the truth respecting the advantages of this excellent food:—

“In **Bromose** I feel as if I had found a ‘pearl of great price,’ for it has more than surpassed my expectations. I have been a victim to bronchial

trouble for years, subsisting on maltine, cod-liver oil, and other drugs. I have at last found in **Bromose** not only a preventive of colds, but a nerve tonic and a wonderful health restorer. It has given me a new lease of life, and I find I have gained one pound of flesh for every pound of **Bromose**. I have not had a return of my usual winter bronchial trouble, which is the first time in many years that I have escaped. Having tried every conceivable remedy, I certainly cannot speak too highly of **Bromose**. It shall be my purpose to convert to the use of **Bromose** the many of my friends who are using cod-liver oil through the winter months for various ills, with disastrous results to the stomach and digestion. I have taken no medicine of any kind since beginning the use of **Bromose**. This is the first time in years that I have not been under the influence of some stimulative drug. I cannot sound the praises of **Bromose** too highly, for what it has done for me in the last few weeks.”

In composition, **Bromose** contains the nutritive qualities of beefsteak, rich cream, and the choicest cereals, with the added advantage that the starch and fat are both digested and prepared for assimilation, while the nitrogenous element corresponding to beefsteak is thoroughly sterilized, and also prepared for immediate solution and absorption.

COMPOSITION.

Maltose (digested starch).....	21.58
Nut fat (perfectly emulsified, or digested).....	24.06
Vegetable albumin.....	19.62
Dextrin and soluble starch.....	17.82
Salts... ..	1.78
Water.....	15.14

From the above it will appear that one pound of **Bromose** is—

Equal in strength-sustaining properties to one and one-half pounds of bread.

Equal to one pound of beef in blood- and tissue-making properties.

Equal to two thirds of a pound of butter in fat-making properties.

For lean dyspeptics, consumptives, neurasthenics, and all persons requiring concentrated, easily assimilated, fat- and blood-making food, **Bromose** is the food par excellence.

Bromose is also admirably adapted for fever cases, for teething infants, and for badly nourished children. Children eat it as readily as candy, and grow fat on it.

Bromose may be eaten either dry or dissolved in hot or cold water, with milk, or other liquids.

For sample, address Sanitas Food Company, Battle Creek, Mich.



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Granola,

An Invalid Food prepared by a combination of grains so treated

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Thoroughly Cooked and Partially Digested, this food preparation is admirably adapted to the use of all persons with weak digestion, defective assimilation, general or nervous debility, brain workers, feeble children, and invalids generally, as well as travelers and excursionists, who often need to carry the **largest amount of nutriment in the smallest bulk**, which is afforded by Granola in a pre-eminent degree.

One Pound More than Equals Three Pounds of Best Beef

In nutrient value, as determined by chemical analysis, besides affording a better quality of nutriment. Thoroughly cooked, and ready for use in one minute.

Send for illustrated and descriptive circular of Granola and other Health Foods to the **BATTLE CREEK SANITARIUM HEALTH FOOD CO., BATTLE CREEK, MICHIGAN.**

The Umschlag

ONE of the most useful inventions of Dr. Priessnetz, the father of modern hydropathy, was the umschlag, or heating compress, as it is sometimes called by the Germans. There is no better remedy for indigestion, inactive bowels, or sleeplessness, than this simple measure, when properly applied. The umschlag consists of a properly-adjusted bandage, moistened and worn about the body at night, to be replaced by a dry bandage during the day.

Send for Catalogue.

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A Natural Flesh Brush



This is the product of an Egyptian plant called the Loofah, or dish-rag gourd, which grows along the Nile. It excels every other natural or artificial product for use as a flesh brush. Conveniently arranged with tapes, as shown in the cut, it can be applied to every part of the body. It will last indefinitely.

SEND FOR CATALOGUE.

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Perfection Vaporizer,



A New Instrument which has no Equal as a Means of Applying Medicaments to the Nose, Throat, and Lungs.

The PERFECTION VAPORIZER

has the following advantages over all others:—

1. It furnishes a continuous stream of medicated air, without the necessity of continuously working the bulb.
2. By its aid, medicated air may be introduced into the nasal cavity with sufficient force to cause it to enter the ears, frontal sinuses, and other connecting cavities.
3. It permits thorough treatment of the coats of the nose and throat at the same time, and so economizes time.
4. It is strong, does not upset easily, is durable and efficient. It embodies all the good qualities of any other volatilizer or vaporizer in addition to the above.

The Perfection Vaporizer is indispensable in the successful treatment of COLDS, BRONCHITIS, NASAL and THROAT CATARRH, diseases of the EARS, and in all other affections of the nose, throat and lungs.

PRICE, \$3.

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THE CYCLONE WASHER



THE CYCLONE STILL WHIRLS,

Washing Everything Clean
that Comes in Its Way.

See What the People Say.

MESSRS. COON BROS.,
Battle Creek, Mich.

Gentlemen: Enclosed find order for "Cyclones" which please ship at once. I have canvassed five full days, made twenty-five canvasses and sold 10 machines. Four of them are delivered, and I shall deliver the rest as soon as the machines get here. Respectfully,

N. G. MERCHANT.

PAW PAW, MICH., Jan. 1, 1896.

Enclosed please find draft for more "Cyclones." Those you sent before are all delivered, and I have canvassed part of a day besides. I began after 11 A. M., and made 6 calls, and took four orders. The machine is a great seller; I wish that I had gotten hold of it years ago. I think that when I get accustomed to the business a little, I can do pretty well.

N. G. M.

MASON CITY, IOWA, Dec. 24, 1895.

MESSRS COON BROS.

Gentlemen: I have made 12 exhibitions and sold 12 machines. One place they did not take one, but one man took two, so it made the number good.

M. C. C.

MANUFACTURED BY **COON BROS.,**
Agents Wanted Everywhere. **BATTLE CREEK, MICH.**

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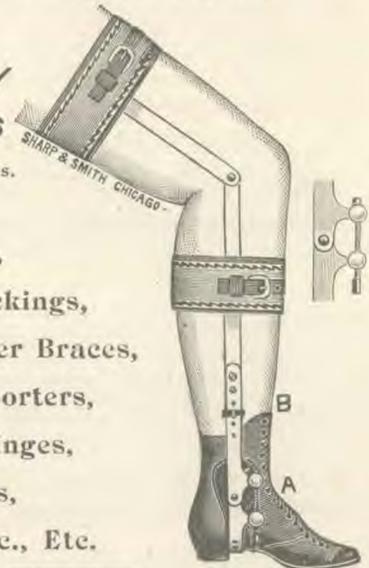
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The ingredients of which these tablets are composed constitute the most valuable known means of establishing an aseptic condition of the stomach and intestines. The great objection to their use heretofore has been the inconvenience of their administration. The discovery of a special form of vegetable charcoal, and of the method of combining it with other valuable ingredients, has enabled us to overcome the objections heretofore existing, and to present these most valuable agents in an efficient and agreeable form. These tablets, while they contain no foreign substances or excipient whatever, may be taken as easily and agreeably as a caramel.

ANTISEPTIC, DEODORANT, DIGESTANT.

Antiseptic-Corrective Tablets cure sour stomach, or acid fermentation, heartburn, bloating, flatulence of the stomach or bowels, foul tongue, bad breath, "nasty" taste in the mouth, biliousness, sick headache, nervous headache, constipation, and a variety of other conditions growing out of the action of microbes in the stomach and intestines.

Address for sample and circular, the

MODERN MEDICINE CO., Battle Creek, Michigan.

Your Face



Will be wreathed with a most engaging smile, after you invest in a

White Sewing Machine

EQUIPPED WITH ITS NEW

**PINCH TENSION,
TENSION INDICATOR**

AUTOMATIC TENSION RELEASER,

The most complete and useful devices ever added to any sewing machine.

The **WHITE** is

Durably and Handsomely Built,
Of Fine Finish and Perfect Adjustment,
Sews ALL Sewable Articles,

And will serve and please you up to the full limit of your expectations.

ACTIVE DEALERS WANTED in unoccupied territory. Liberal terms. Address,

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CLEVELAND, O.**

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CHICAGO & GRAND TRUNK

R. R.

Time Table, in Effect Nov. 18, 1894.

GOING EAST. Read Down.						STATIONS.	GOING WEST. Read up.					
10 Mail Ex.	4 L't'd Ex.	6 Atk. Ex.	42 Mix'd Tr'n.	2 P.L. Pass.	11 Mail Ex.		1 Day Ex.	3 R'd L't'd.	23 P. C. Pass.	5 P'de Ex.		
a m	p m	p m	a m			D. Chicago A.	p m	p m	p m	a m		
9.00	9.10	8.15				Valparaiso	9.45	1.50	9.10	7.50		
11.25	5.05	10.30	6.00			South Bend	6.05	11.35	7.10	5.45		
1.05	6.30	12.00	10.05			Cassopolis	3.10	10.15	5.44	4.10		
1.45	7.12	1.45	11.40			Schoolcraft	2.15	9.40	5.13	3.28		
2.33		1.33	3.43			Vicksburg	1.20					
2.44	7.55	1.48	4.30	a m		Battle Creek	1.10	8.52		2.37		
3.30	8.35	2.40	6.20	7.0		Charlotte	12.15	8.15	3.55	1.50		
4.33	9.25	3.25		7.47		Lansing	11.14	7.23	3.07	8.40		
5.10	9.55	4.00		8.20		Durand	10.40	6.53	2.40	8.00		
6.30	10.45	5.03		9.30		Flint	9.35	6.05	1.55	6.50		
7.30	11.17	5.40		10.05		Lapeer	8.35	5.35	1.28	6.47		
8.15	11.50	6.15		10.43		Imley City	7.49	5.02	1.00	5.10		
8.42	a m	6.35		11.06		Pt. H'n Tunnel	7.28			4.48		
9.50	1.00	7.30		12.05		Detroit	6.50	3.50	11.55	3.50		
9.25	p m					Toronto	a m	a m	a m	p m		
	a m					Montreal				10.40		
	8.15	5.25				Boston		9.20		1.00		
	p m	a m				Susp'n Bridge		a m				
	8.15	7.25				Buffalo		9.15				
	a m	p m				New York		a m	p m			
	8.12	7.15				Boston		8.30				
	a m	p m						p m	a m			
	7.50	4.25						10.15	7.05	2.25		
	a m	p m										
	7.00	5.40								1.00		
	p m	a m						a m	p m			
	8.53	5.05						8.15	6.10	8.00		
	a m											
		11.20								7.00		

Trains No. 1, 3, 4, 6, run daily; Nos. 10, 11, 2, 23, 42, daily except Sunday.
All meals will be served on through trains in Chicago and Grand Trunk dining cars.
Valparaiso Accommodation daily except Sunday.
Way freights leave Nichols eastward 7:15 a. m.; from Battle Creek westward 7:05 a. m.
† Stop only on signal.
A. R. McINTYRE, Asst. Supt., Battle Creek.
A. S. PARKER, Pass. Agent, Battle Creek.

MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected Nov. 24, 1895.

EAST.						
STATIONS.	*Night Express.	†Detroit Accom.	‡Mail & Express.	*N. Y. & Bos. Spl.	*Eastern Express.	*Atlantic Express.
Chicago	pm 9.30		am 6.50	am 10.30	pm 3.00	pm 11.30
Michigan City	11.35		8.48	pm 12.08	4.50	am 1.19
Niles	am 12.45		10.15	1.02	5.55	2.45
Kalamazoo	2.05	am 7.20	11.52	2.15	7.21	4.25
Battle Creek	2.55	8.10	pm 12.50	2.50	7.58	5.05
Jackson	4.30	10.00	2.40	4.10	9.20	6.30
Ann Arbor	5.40	11.05	3.50	5.00	10.12	7.30
Detroit	7.10	pm 12.20	5.30	6.00	11.15	9.00
Buffalo			am 12.10	am 6.45		pm 5.30
Rochester			3.00	9.55		8.40
Syracuse			5.00	pm 12.15		10.45
New York			pm 1.45	8.45		am 7.00
Boston			3.00	11.35		10.60

WEST.							
STATIONS.	*Night Express.	*N.Y. Bos. & Chi. Sp.	‡Mail & Express.	*N. Shore Limited.	*Western Express.	†Kalam. Accom.	*Pacific Express.
Boston		am 10.30		pm 2.00	pm 3.00		pm 7.15
New York		pm 1.00		4.30	6.00		9.15
Syracuse		8.30		11.30	am 2.15		am 7.20
Rochester		10.37		am 1.20	4.10		9.55
Buffalo		11.45		2.20	5.30		pm 3.30
Detroit	pm 8.45	am 6.30	am 7.15	8.30	pm 1.00	pm 4.45	11.05
Ann Arbor	10.28	7.30	8.18	9.25	2.00	5.55	am 12.15
Jackson	11.50	8.35	10.43	10.30	3.02	7.35	1.25
Battle Creek	am 1.20	9.48	pm 12.15	11.43	4.18	9.11	2.55
Kalamazoo	2.10	10.27	1.05	pm 12.21	4.57	10.00	3.36
Niles	3.55	11.48	3.00	1.45	6.27		5.00
Michigan City	5.10	pm 12.50	4.25	2.45	7.22		6.40
Chicago	7.10	2.40	6.35	4.30	9.05		7.50

*Daily. †Daily except Sunday.
Kalamazoo accommodation train goes west at 8.05 a. m. daily except Sunday.
Jackson east at 7.27 p. m.
Trains on Battle Creek Division depart at 8.10 a. m. and 4.35 p. m., and arrive at 12.40 p. m. and 6.35 p. m. daily except Sunday.
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