

JULY, 1896.

GOOD



HEALTH

CONDUCTED
BY

J. H. KELLOGG M.D.

Subscription price \$1.00 PUBLISHED MONTHLY

GENERAL HYGIENE	191-201
Zoological Health-Studies: 7. Remedial Instincts (<i>To be Continued</i>), by F. L. OSWALD, M. D.—The Natural Position During Sleep—Nuttose: A New Food for Brain and Muscle Building—Fruit Trees of the Tropics—Blue Blood—Ancient Punishment for Drunkenness—Health Habits of Schopenhauer—Soap as Currency—The Conditions which Make for Longevity—Healthfulness of Sunshine—Eating for Strength—Worry as a Source of Indigestion—A Fruit-Shop—Health Habits of Susan B. Anthony—The Oldest Herbarium in the World—The World's Largest Loaves of Bread—Effect of Alcohol on Muscular Strength—Alcohol no Help to the Laborer.	
HOME GYMNASIUM	202-205
How to Have a Clear Head, by J. H. KELLOGG, M. D.—The Hygienic Value of Voice Culture—The Bicycle a Factor in Modern Hygiene—What We Need.	
HOME CULTURE	206-211
Self-Discipline Necessary to Parents, by MRS. E. G. WHITE—A Mother's Unselfish Love—The Battle Creek Sanitarium Dress System, XVIII (<i>Illustrated</i>)—Bringing Up—The Virtue of Endurance—Sweeping and Dusting—The Visiting Baby—Seasonable Recipes.	
HOME TRAINING SCHOOL FOR NURSES	212-215
Typhoid Fever Nursing: Diet (<i>To be continued</i>)—The Care of the Hair During Illness.	
EDITORIAL	216, 217
Fruit and the Complexion—The Kola Delusion—Radical Measures for Preventing Contagion in the Public Schools—Cause of the Increase of Cancer—Is Tuberculosis Transmitted by Milk?—Typhoid Fever.	
A DOCTOR'S CHATS WITH HIS PATIENTS	218-221
Danger from Natural-Gas Heaters, or Oil and Gas Stoves—Coffee and Disease Germs—Late Suppers and Six-o'clock Dinners—Hygiene for Babies—The Face as an Index of Disease—A New Food—ANSWERS TO CORRESPONDENTS: Biliousness—Hyperpepsia—Malt, Maltine, etc.—Acid Stomach—Irregularity of the Bowels, etc.—Anti-Cereal Diet—Eating Cold Food—Prolapsus of the Ovary—Canned Fruits and Vegetables—Crackers—Cocoa Shells, etc.—Fat for Cooking—Warmed-over Potatoes, etc.—Indigestion—Constipation—Rigidity of the Muscles, etc.—Inflammation of Conjunctiva—Chronic Diarrhea—Bunions—Eruclations of Gas—Boils—Stiff Limbs, etc.—Neuralgia—Whisky Treatment in Diphtheria, etc.—Sour Buttermilk—Corn Bread, etc.—Chronic Cystitis.	
LITERARY NOTICES	222

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.

SANITARY AND ELECTRICAL SUPPLY CO., BATTLE CREEK, MICH.

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.

SANITARY AND ELECTRICAL SUPPLY CO., BATTLE CREEK, MICH.



Vol. XXXI.

NUMBER 7.

BATTLE CREEK, MICHIGAN

JULY, 1896.

ZOOLOGICAL HEALTH-STUDIES.

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

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

7. Remedial Instincts.

DR. ISAAC JENNINGS, in his "Medical Reform," discusses the success of certain forms of faith-cure, and suggests that Providence might have intended them to break up the deep-rooted delusion of the drug-superstition, by proving that ninety-nine out of a hundred diseases can be more easily cured without any medicine at all.

But— "they order those things better in France"— Providence could not afford to stake the welfare of her wards upon the accident of such discoveries and the still more doubtful chance of their international recognition, and for all who possess the eyes of common sense, the habits of our instinct-guided fellow creatures constitute a sufficient refutation of what Oliver Wendell Holmes used to call the "insane idea that the sick must be fed on poisons." Sick animals do not hasten to the free dispensary of the poison jungles; they shun medical springs. They would turn shuddering from ready-prepared "specifics," exposed for their free use; yet Solomon in all his wisdom was not equipped like one of these for discovering the means of physical well-being. Beasts, birds, and insects find their appropriate food in the most intricate hiding-places of the wilderness. Within four hours after death, and before chemical tests can discover the least atmospheric symptoms of decomposition, a slain animal attracts vultures from a distance of thirty and forty miles. Honey-gathering insects select the pabulum of their young, their own food, and their winter stores with nice discrimination, and from distant foraging-grounds return to

their hive in a "bee-line." The ichneumon wasp deposits her eggs in the living body of caterpillars that have attained a sufficient stage of development to support a brood of larvæ, yet are not near enough their chrysalis phase to escape the impending doom by a timely metamorphosis. Several species of wood birds line their nests with vegetable substances that puzzle botanical experts, and excel any artificial fabric in serving the purpose of keeping the little nursery warm and dry.

The naturalist Sprenger once received from far-off Batavia a box containing live specimens of splendid tropical butterflies, including a large variety of the *Papilio Turnus*, which escaped during the attempt to transfer the consignment to a wire cage. By bad luck the window of the professor's study was wide open, and in the exultation of regained liberty the deserter rose high above the grape arbor of an adjoining garden, and then shot off with bird speed in the direction of a hill forest on the other side of the river. To that hill Mynheer S. took his wire cage the next morning and suspended it from the branch of an outpost tree, while he kept watch, butterfly-catcher in hand. About twenty minutes afterward he heard a rustling noise, and looking up, saw the highflyer flutter about the cage, and finally alight near a corner where his mate was clinging to the wires in the despondency of her grass-widowhood. The home-finding faculty achieves still greater marvels; for instance, a large turtle, after having been branded with the trademark of a British provision

dealer, fell overboard in the Bay of Biscay, and the next year was recaptured on Ascension Island, three hundred miles from St. Helena, and about six thousand miles from the coast of Spain.

Can it be doubted that the same tendency of adaptation that evolved such miraculous instincts would also guide our sick fellow creatures to the abundant tonic, cathartic, and astringent products of the wilderness, if they really possessed any remedial value? Some vegetable specifics of that sort cover whole mountainsides, or speckle our meadows, attracting attention by the glaring color of their blossoms or berries; but they attract no instinct-guided invalid. The poppy has no charm for the four-footed martyrs of loose bowels; their youngsters do not "cry for Castoria;" the castor-oil plant is shunned by beasts and birds, and even by the famished grasshoppers of the Eastern deserts; the *Palma Christi* is the upas-tree of the semi-tropics.

Dogs, it is true, sometimes eat grass, but only as a mechanical depurative, to cleanse the bowels by the introduction of less concentrated food. The advantages of the grape-cure are recognized by foxes, raccoons, and bears; and if we may believe Dr. Livingstone, a hankering for an occasional slice of watermelon seems to be a touch of nature that makes all African mammals kin. "After a few good rains," he says, "the country is literally covered with the kengwe, the *Cucumis caffer*, or wild watermelon. Then animals of every sort and name, including man, rejoice in the rich supply. The elephant, true lord of the forest, revels in this fruit, and so do the different species of rhinoceros, although naturally so diverse in their choice of pasture. The various kinds of antelopes feed on them with equal avidity, and lions, hyenas, jackals, and mice all know and appreciate the common blessing."

The instinct prompting an occasional change of diet (not a change from food to poison) is also illustrated by the report of an accurate observer who combined experimental therapeutics with the study of natural history. "Our lioness had several litters of cubs," says Dr. Huggins, F. R. S., superintendent of the Dublin Zoological Gardens; "but the young ones invariably languished and died after a short time, till we hit upon the expedient of supplying their mother with live goats. This seems horrible enough, but in fact it was not so. The goat was put in the cage in the evening, and instead of manifesting the extreme terror one would have expected, it seemed to feel no fear at all, but ate grass placed in the den with perfect content, and when night came, and it had eaten its fill, lay down

by its terrible companion, cuddling up close to her, chewing its cud, and seeming to enjoy the warmth, and to be delighted with its new bedfellow. The lioness showed no hostility to the confiding beast until toward the morning, when she suddenly smashed its head with one blow of her paw, ripped it open, and at once began feeding with avidity upon the paunch, with its contents of softened and half-digested grass, always completely finishing this herbaceous treat before setting to work on the flesh."

Captive bears often eat grass like cows, though in the freedom of their native haunts they prefer a compromise diet: nuts and berries in our Southern Alleghanies, and carol beans ("St. John's bread") in the Spanish Pyrenees. The coarsest vegetable food appears, indeed, now and then the best prescription for counteracting a carnivorous surfeit, and a North German epicure of my acquaintance had redeeming intervals of hankering after the black *pumpernickel* bread of the Westphalian peasants. To avoid temptation he took his fishing-tackle to some out-of-the-way hamlet, where made dishes were known only from hearsay, and subsisted for weeks together on skim-milk and rye-bread crusts,—the tougher, the better,—"cleaning out his teeth and his stomach at the same time," as he expressed it, and then, I regret to add, returned to the overspiced flesh-pots of his Bremen restaurant. The invigorating effects of the pumpernickel-cure followed him, like the good deeds of the godly, and the success of the king's evil prescription, I suspect, admits of a similar explanation. The "touch" of a legitimate despot would have benefited the patients about as much as an encounter with an anointed billy-goat, but to reach the royal presence they had to travel scores, often hundreds, of miles, mostly afoot, and share the pot-luck of frugal rustics, besides getting a full dose of fresh air.

How is it, we are often asked, that one finds so rarely the bodies of dead birds and wild animals —

"What becomes of pins, we should like to know,
And the birds that die, where do they go?"

Do they fly off to Avalon, the paradise of winged songsters, or are they all entombed in the maw of carnivorous enemies? Do they never die a non-violent death? The truth seems to be that in the evening twilight of the last long night, they all retire to the best hiding-place the local topography affords: to caves, to cavities in the root-tangle of gnarled trees, to the penetralia of tangled thickets or stone-piles. A decrepit pet woodchuck of mine that had been misdoctored by an officious visitor, lay snuggled up in a warm basket near the fireplace, but under

cover of darkness got up, squeezed out of a back door and disappeared. It did not seem likely that he could have mustered strength enough to scale the board fence, and his whereabouts remained a mystery till months afterward, when we found his remains under the foundations of an old garden house, where but for the accidental removal of the floor-planks, they might have remained indefinitely.

Yet the desire to insure the sentimental boon of post-mortem peace cannot have much, if anything, to do with the motives of the hiding-place seekers. The main cause of their preference for solitude is perhaps the dread of having to measure their diminished strength against the power of hostile intruders; but even the denizens of lonely islands and highland regions evince the same propensity; and a collateral explanation can probably be found in the remedial importance of perfect rest—protection from the risk of physical and mental disturbance.

“Never worry a sick man with bad news of any kind,” was a favorite maxim of the late Dr. Sequester; “let him day-dream in peace—the next best thing to the sound slumbers in which the *vis medicatrix* of nature asserts its chief power.” Nor should the chance for the blessing of such slumbers be unnecessarily diminished; a sick-room should be protected not only against the intrusion of troublesome visitors, but as far as possible also against disturbing sounds; and nature herself thus seems to endorse Miss Florence Nightingale’s denunciation of the practise of locating hospitals in the central wards of large cities.

And in critical diseases the organism’s appeal for rest extends to the repose of the digestive organs. With the rare exception of confirmed gluttons and dipsomaniacs of the Richard Parson type, the sick, if not overpersuaded by the solicitations of a meddling nurse, would, I believe, fast from lack of appetite, if not in compliance with their doctor’s advice. Animals in physical distress starve themselves with a persistence that is apt to be mistaken for morbid obstinacy but, *per se*, involves no physiological danger, as long as the attention of the vital powers remains diverted from kitchen interests to repair-shop problems. During the vacations of my college years, I often visited the riding-school of my native town, and was more than once puzzled to dispose of a pet spaniel that refused to run home, and was liable to follow the horses and get trampled. Being unable to drive him back, I one day entrusted him to the care of the stable-boy, and forgot all about it till, on leaving the building, I heard a whine from the louver of a hay-loft, some sixty feet above the level of the

street. There, on a slippery sill, with one paw on the hook of the hoisting tackle, stood my little spaniel, who the next moment lost his balance and came down, head over heels. He turned over and over, and struck the pavement with a crash that made it doubtful if a single joint of his anatomy had escaped demolition. When I picked him up, he tried to turn his head, and from sheer reluctance to kill him on the spot, I carried him home and put him, with a bundle of old linen rags, into a box that could be used for a coffin the next morning. But the next day came and passed, and my little patient still breathed, and raised his head whenever one of his nurses approached his couch. He had always been a dog that thought life worth living, and in three weeks his optimism pulled him through. For two thirds of that time it kept a boy busy to re-fill his little tin pan with water, which we occasionally tried to mix with milk; and I now wish I could recollect if we ever succeeded in making him swallow more than a few drops of that mixture. But I do remember that he absolutely refused to touch a morsel of solid food. There were about ten different broken bones in his body, and he could not afford to spare one volt of his scant vital reserve force for gastronomic purposes. Racked with pain as he was, he instinctively knew that the process of digestion would be marred anyhow, and that he had better not let the rejected oil of life feed a burning fever.

Violent emotions, too, interfere with the proper functions of the digestive organs, and a biographer of the patriot Carnot (grandfather of the late president) mentions that the ardent agitator sometimes abstained from food for forty-eight hours, while the fate of one of his pet reform projects hung in the balance; and that his friends had often almost to force him to break his fasts.

Animals who dispense with the ministrations of such monitors survive the ordeal of a voluntary fast for a much longer period. The fur-seals of the Pribyloff Islands, near the coast of Kamtschatka, are pronounced polygamists, but withal recognize the charm of novelty, and once a year—about the middle of May—the braves of the tribe meet for the re-distribution of their squaws. Each veteran male, according to his resources of strength and cunning, drives an assortment of females to the shore-cliffs, and there corrals them, watching them day and night, and withal keeping a side-eye upon the harems of his rivals, in the hope that superior vigilance will enable him to enlarge his collection at their expense. The intensity of his excitement keeps all other propensities in abeyance, and a

number of careful observers agree that the champions of a fur-seal camp out-starve Dr. Tanner, often abstaining entirely from food for seven or eight weeks.

Fish abound in those coast waters, and such of the competitors as wish to break their fast are at liberty to do so at any time by taking a header into the surf, but even while gorging themselves, they risk witnessing the triumph of their rivals, in which case they are probably ever after shunned by their females as churls, who have permitted their baser to get the better of their nobler passions. The plurality never

approach the water, and the strangest fact is the circumstance that this eclipse of appetite outlasts its immediate occasion. The males captured alive during the months of courtship continue their fasts in confinement for three or four days, or till the tide of their emotions begins to assuage; while those caught at any other time of the year evince a disposition to lethargize their despair with the torpor of gluttony. Mental excitement, indeed, may be said to accompany the crisis of every perilous disease, and the anxiety of conflicting hopes and fears equals grief in counteracting the desire for food.

(To be continued.)

THE NATURAL POSITION DURING SLEEP.

SOMETIMES I wonder why our learned scientists have not paid more attention to the positions which persons, young and old, are prone to assume during sleep. It seems to me that the phenomena really offer a fruitful field for study, for I have come to the conclusion that there is an important physiological meaning or significance in the different sleeping positions. The natural attitude adopted by young children, when free to do as they please with their bodies and limbs, is interesting. You have seen, of course, chickens sleep on the roost. You may have noticed them, also, with the head under the wing and the legs drawn up close to the body. Now, that is exactly the position of the chick in the egg. Similar conditions may be noted among the four-legged animals. Puppies and kittens lie curled up during sleep, just as they did before birth.

Now, what is the natural position of babies during sleep? You will find in nine cases out of ten that young children, when old enough to control their limbs, and unfettered by clothing or cover, draw up their legs and bend their head over in their arms. They simply resume the position they occupied in embryonic life. Of course, the trouble is in too many cases that our children are not allowed to sleep according to their natural inclinations, and mothers and nurses interfere with the positions most convenient for them. So, too, Indian babies are seldom allowed to sleep in the position they like best. The squaw bundles the little one into a motionless thing, and often straps the child tightly to a board. But if you will observe how babies sleep in warm climates, where they are not bothered with much clothing, you will find them sleeping in the natural position I have described. Whether they

sleep on mats of grass, on the warm earth, or in hammocks, the children lie in the curled-up position. My attention was first called to this position by the negro babies in the South. There I often saw the negro mammy lay the black baby down to sleep on its stomach, and I wondered whether or not the child was comfortable.

Since then I have found this practise common among mothers and nurses in Southern countries. They know that their young ones like to sleep in the same position as do many animals; that is, with the stomach downward and the legs and the arms, usually, bent under them. After a while boys and girls of four or five years of age slightly change their attitude during sleep. They now lie on the face, face also on the side, and with the legs drawn up, using one of the arms as a pillow. This is the same position assumed by the higher order of monkeys in their sleep. It is not until boys and girls grow up that they stretch out their limbs full length in sleep. The lower order of monkeys sleep in the crouching position, with the head bent down upon the knee. There is one position during sleep that is peculiar to human beings. It is lying flat upon the back. No animal of its own choice takes such a position in sleep. One of the keepers at Central Park, who has excellent opportunities for watching the animals there, says that he has never found the apes sleeping upon their backs. We all know the usual disagreeable results of sleeping on the back. A person in sleep will often roll over flat, whereupon he sees strange sights, and hears odd noises. Many a time I have seen mothers and nurses go to the child on its back, muttering or crying in sleep, and gently turn the dreamer over on the other side. The right

side is preferred by many people, while some find the left side comfortable. I do not know that it makes much difference. Some think that we should not lie on the left side, because it oppresses the

heart and lungs, and interferes with the freedom of circulation of the blood and with breathing.—*Condensed for Current Literature from the New York Sun.*

NUTTOSE: A NEW FOOD FOR BRAIN AND MUSCLE BUILDING.

THE excessive indulgence in sugar, candy, and other sweets, and the general use of imperfectly cooked grains in the form of oatmeal, cracked wheat, and the great variety of other breakfast foods with which the market is flooded, have given rise to a new form of ailment which is almost universal among Americans, although but recently recognized. This disease is known as "amylaceous dyspepsia," or indigestion of starch, and is sometimes called "vegetable dyspepsia." It manifests itself by pain and sourness in the stomach, formation of gas in the stomach and bowels, bloating, colic, heaviness after eating, catarrh of the bowels, headache, emaciation, dilatation of the stomach, and numerous other symptoms of indigestion.

In quite a large proportion of cases a perfect cure is not possible, though the patient's condition may be greatly ameliorated by treatment, and a careful and continuous regulation of the diet. It is especially important that articles containing starch should be avoided. In most cases the substitution of dry, twice-cooked and partially digested foods like granose and granola, for such pasty and dyspepsia-producing foods as oatmeal porridge, cracked wheat, grits, etc., will secure the disappearance of all unpleasant symptoms. For some, however, it is necessary to confine the dietary to foods containing no starch, or those in which the starch has been completely digested, as bromose, which has been found of great service in such cases; and there is an increasing demand for a staple article of diet which is entirely free from starch. Fruits and nuts sometimes agree very well with this class of dyspeptics, as they contain little or no starch; but the latter are usually found very difficult of digestion, especially by persons with dilated stomachs, which is the condition of the great majority of those afflicted with amylaceous dyspepsia.

Quite a large proportion of persons suffering from this form of dyspepsia find so much relief from their distressing symptoms by the use of a flesh diet that they are naturally led to the conclusion that a vegetable diet does not agree with them, and so subsist almost wholly on meats, not knowing, or else disregarding, the fact that this temporary relief is

obtained at the expense of still more serious difficulties, which are certain to appear sooner or later in the form of rheumatism, nervous exhaustion, apoplexy, jaundice, Bright's disease, and other diseases which grow out of the constitutional poisoning resulting from the use of flesh foods.

The effort to meet the requirements of this class of patients has led the writer to undertake an extended series of experiments, as a result of which he has succeeded in producing a most delicious and wholesome food from nuts, to which has been given the name of nuttose. It is so perfect a substitute for flesh food that in eating it one could readily imagine himself to be partaking of roast beef, dried beef, broiled chicken, or other meats, according to the mode of preparation.

Nuttose not only satisfies the craving for meat, but supplies the same kind of nutriment, and in a form which is digestible, and wholly free from the unwholesome properties of flesh food. Nuttose contains exactly the same proportion of proteids, or nitrogenous matter, as beefsteak, and, in addition, thirty per cent. of fat, and a rich supply of the nerve- and bone-building salts. The invention of nuttose has thus removed one of the greatest obstacles which has stood in the way of the advancement of dietetic reform.

Nuttose has the advantage over meats and most other foods in that it is very quickly digested, agrees with almost any stomach, can be made an exclusive article of diet if necessary, and contains all the elements required for complete nutrition. One pound of nuttose is equivalent in nutritive value to more than one and one-half pounds of beef or chicken, and to nearly two pounds of chicken, salmon, or other fish, besides being far more digestible, and more delicate and toothsome in flavor. It is indeed a most admirable and perfect food, and is destined to work a revolution in dietetics.

Nuttose is put up in one and one-half pound tins, hermetically sealed, and in this condition will keep for an indefinite length of time; and being perfectly sterilized, it will also remain good for several days after opening. Nuttose is served and eaten in the same way as beef, mutton, or other meats.

Those who wish to avoid the liability of infection with tuberculosis, tapeworm, and other diseases arising from the use of flesh foods, will find in nuttose a delightful substitute for meats of every kind. Nut-

tose is, in fact, beefsteak at first hand, and is as much superior to beef, mutton, and other second-hand food substances, as a new, clean garment is to a worn and soiled one.

FRUIT-TREES OF THE TROPICS.

ALTHOUGH the fruits of the tropics seldom ripen in temperate climates, the trees are often cultivated merely for the beauty of their foliage; so that it may prove of interest to become further acquainted with their general appearance and uses in their far-off native habitats. The beautiful date-palm is indigenous to Africa and Asia, though flourishing in all hot countries. There are said to be nearly a thousand species, the most vigorous specimens reaching the height of eighty feet, and living for two hundred years. Each tree yields from one hundred and sixty to two hundred pounds of fruit in a single season, some of the clusters weighing nearly forty pounds. It is propagated from the root, whence its name of "Phoenix," and bears its first crop when about eight years of age.

No less than three hundred and sixty uses are claimed for this invaluable tree. The trunk furnishes timber for furniture and house-building, as well as fuel, cooking utensils, and bows and arrows; the roots are utilized for fencing and roofing, and the fiber is woven into mats, fish-nets, ropes, baskets, and articles of clothing. Among the natives of the Orient the nutritious fruit is the principal food for nearly the entire year, and pounded into solid cakes, is carried by Arabs journeying over the scorching desert, the stones being used as fodder for the camels. Roasted and ground, the kernels make a fair substitute for coffee, and are also valued on account of their oil. These trees are sometimes known as the "palms of victory," as the large frond-like leaves are supposed to be identical with those that were strewn before the Saviour on his entry into Jerusalem, and that were borne with songs of rejoicing before ancient conquerors returning from their triumphs on the battle-field; while on Palm Sunday and at the Jewish Feast of Tabernacles, they are highly prized as church decorations. In some varieties the flower-spathes yield a large quantity of sweet sap, which upon evaporation becomes "date sugar," this being fermented into an intoxicant called "arrack." The terminal bud, or "cabbage," is considered a great delicacy, and is boiled and eaten like a vegetable.

Another well-known fruit-tree of the tropics is the

graceful musa, or banana, a relative of the plantain. The rapidly growing suckers are productive at any season of the year, in a period of from nine to eighteen months, according to the altitude, the tree dying after ripening several bunches, some of which weigh nearly eighty pounds. Many of the large handsome leaves — usually torn to fringes by the trade winds — measure ten feet in length by two feet in breadth, their uppermost crests waving twenty feet above the ground. From the fibrous petioles, or leaf-stalks, is manufactured a fine white flax, which is woven into delicate muslins, or when in a half-finished state, is used for tinder or wadding; while one variety in the Philippine Islands furnishes the well-known manila hemp. Green bananas are sometimes dried and ground into meal or flour, which is baked or fried in cakes. So common is this fruit in the tropics that a huge cluster may be purchased for the trifling sum of twenty-five cents, and a generous bunch always hangs in the hallway or on the veranda of the hospitable planter's home.

Tradition claims that plantains flourished in the garden of Eden, together with the "tree of life" and "the tree of the knowledge of good and evil." They are larger and more succulent than bananas, and are used for almost the same purposes. Like the date-palm and the cocoanut-tree, the "cabbage" of this plant is a favorite article of diet. The bread-fruit, or *Artocarpus*, is a native of the Indian Archipelago and also of the islands of the Pacific. It attains an elevation of about fifty feet, and grows wild in the forests. The leaves are large, glossy, and deeply pinnated, like the fronds of a fern, and the fruit resembles a muskmelon, the edible interior being of the consistency of newly baked bread, and tasting like batter-pudding or boiled milk and potatoes. It is sometimes fried in slices, and served with meat as a side dish, or eaten with milk and sugar; but the usual mode of preparation is to bake the unripe quartered portions in rude ovens of heated stones, arranged in layers with earth and leaves, on the same principle as scalloped oysters. As there are many varieties ripening at different seasons of the year, the supply is practically inexhaustible. Some kinds yield valuable timber, and from

the inner bark of other species, the natives manufacture clothing.

The "jack fruit," a South Sea representative, is long and gourd-like, and weighs from twenty to sixty pounds. Although most of the crop is borne on the boughs, in the usual manner, some of the fruit grows directly on the bare trunk, a foot or two from the ground, presenting a very singular appearance. It ripens numerous seeds, which are considered very nutritious, and are eaten like chestnuts. An Indian tree of great beauty and interest is the tamarind, with its thick, lofty trunk, wide-spreading branches, and clusters of purplish or yellowish flowers. So fine and light is the foliage that the Koran doomed lost souls in hell to have their thirst quenched only once in a thousand years, with as much water as could be held in a single leaflet. The long, narrow pods contain citric and tartaric acid, sugar, and potash, and are imported in large quantities from the East and West Indies, to be utilized in various economics.

The fruit of the curious papaya, sometimes called the papaw, suggests a pumpkin in taste and general appearance, and a score or more are attached in a mass to the naked stem immediately beneath the crest of leaves. As they contain a large amount of pepsin, they are widely used medicinally, and tough meat, if wrapped for a couple of hours in one of the leaves, becomes exceedingly tender, and in time almost rotten. There are numerous kinds of guavas, the best being the red and white species, which are famous for their jelly-making possibilities. The fruit is about the size of a small apple, and is obtainable at nearly every season of the year.

The mango came originally from Hindustan, and is a magnificent shade tree, forty feet high, with leaves something like those of a peach-tree, and quantities of juicy yellow plummets, suspended from the branches by very long slender stems. Some wild varieties have an unpleasant taste of turpentine, but the better-flavored sorts are manufactured, when in an unripe state, into preserves and pickles for exportation. The shining emerald leaves and the pretty scarlet flowers of the pomegranate (*punica granatum*) are familiar to nearly every one who owns a garden or frequents a city park. The fruit of this

CORRECT thinking depends on physical health, and that depends on correct living. Morality and religion begin with the food that yields the energy by which they are manifested.

It is said that sleep-walkers can be aroused when they first get out of bed, by having a strip of wet

plant was mentioned by Moses as one of the attractions of the promised land, and he was commanded to make golden pomegranates and their blossoms alternately on the hem of the ephod; while four hundred specimens of these various globes were wreathed around the capitals of the two brass pillars of Solomon's temple. Various parts of this shrub were used by the ancients for medicine, and the bitter juice furnished a light indelible stain.

The ohia, or Malay apple, is a common timber tree of the Hawaiian Islands, though not peculiar to that locality. On the island of Maui is a mammoth orchard of wild ohias, extending from the sea to the mountains, and measuring twenty miles in length by from five to ten miles in width. The trees are from forty to fifty feet in height, some of the largest yielding nearly fifty pounds of fruit, the total crop being said to be sufficient to fill a fleet of one hundred steamers. The beautiful crimson or white apples, however, are unfit for transportation, as they last but a short time in good condition.

Near the Volcano House, on the island of Hawaii, are great thickets of the ohelo, or Hawaiian huckleberry (*Vaccinium reticulatum*), which the natives consider sacred to Pele, the goddess who is supposed to preside over the famous crater of Kilauea; and together with white pigs and chickens, are thrown by them into the boiling red lake during an eruption, to appease the wrath of the aggressive dame, and thus cause the rivers of lava to cease flowing on their destructive course. These berries grow in clusters on low bushes right on the very brink of the brimstone beds, and are so numerous that a bushel may be easily gathered in half an hour. In appearance they somewhat resemble a cranberry, and the flavor is pleasantly suggestive of grapes. Space forbids more than passing mention of many other fruit-trees of the tropics, such as the avocado, or alligator pear, tasting like our ordinary salad; the curious pineapple, with its cactus-like leaves; the mandarin orange, glowing brightly against its deep green foliage; the cheromoya, or custard apple; the lime, the lemon, and the Japanese loquat, though they are all of great beauty and extended usefulness. — *Bertha F. Herrick, in Popular Science News.*

carpet by the side of the bed, or a piece of sheet iron, zinc, or copper, which will feel cold to the feet.

BLUE BLOOD.—The princes and potentates have been described as men carrying upon their backs all sorts of orders, and in their blood all sorts of disorders.

ANCIENT PUNISHMENT FOR DRUNKENNESS.

THE offense of drunkenness seems to have been a source of great perplexity to the ancients, who tried various ways of dealing with it. If none of them succeeded, it was, in all probability, because they failed to suppress the means by which this insidious disease is incited and propagated—the liquor itself. Severe treatment was often attempted without any satisfactory result.

The Romans prohibited the drinking of wine upon the part of men under thirty years of age,—a rule which applied to women of all ages. If a wife were declared guilty of consuming fermented liquor, her husband might legally scourge her to death.

The Carthaginians prohibited governors, magistrates, soldiers, and servants from drinking anything stronger than water, and the Athenians made it a capital offense for a magistrate to be drunk.

The Suevi seem to have realized the necessity of drastic measures, as they went so far as to prevent the importation of wine into their country.

The Locrians, under Zalenous (660 B. C.), made it a capital offense to drink wine unless it were mixed with water; even an invalid was not exempt from punishment, unless his physician had ordered him to drink undiluted wine. History does not relate whether physicians were in the habit of giving such instructions.

Pittacus of Mytilene (651–569 B. C.) made a law that he who, when drunk, committed any crime, should receive double the sentence which he would have received had he been sober. Aristotle and Plato considered this law the height of wisdom. The Roman censors were empowered to expel a senator for drunkenness, and were at liberty to confiscate his horse.

Mohammed ordered drunkards to be bastinadoed with eighty blows.

Some nations seem to have approved of “mod-

erate” drinking, as they limited the quantity to be consumed at one sitting. This was the system adopted in ancient Egypt, but the limit does not appear to be stated in any history now extant. The Arabians fixed the quantity at twelve glasses a man. Unfortunately, however, the size of the glasses was not clearly defined. The Anglo-Saxons ordered silver nails to be fixed on the side of drinking-cups, so that each person might know how much he had consumed. This method is said to have been introduced in consequence of King Edgar’s noticing the drunken habits of the Danes.

Lycurgus of Thrace (about 900 B. C.) was a thorough prohibitionist; he ordered the vines to be cut down.

The Spartans tried to turn the vice (as it was then regarded) of drunkenness into contempt by systematically making their slaves drunk once a year, in order to show their children how contemptible men looked when in an inebriated condition.

Drunkenness was considered much more vicious in some classes of persons than in others. The ancient Indians, for example, held it lawful to kill a king when he was drunk. Charlemagne (A. D. 742–814) enacted a law that judges and pleaders should fast while performing their duties.

The English expression, “drunk as a lord,” proves that at one time to become intoxicated was regarded as indicative of aristocratic birth and breeding. Moreover, “a three-bottle man” was respected as one who displayed qualities which his friends might well envy.

It is not a great many years since people supposed that total abstinence from alcoholic stimulants actually shortened life; and there exists in London (England) to-day a gentleman whose life was refused by an insurance company solely upon the ground that he was a teetotaler!—*The Voice*.

HEALTH HABITS OF SCHOPENHAUER.—Schopenhauer, who evidently got a good deal of enjoyment out of life in spite of his pessimism, writing in his old age, said: “I run like a greyhound, blow at my flute every day, and beyond my deafness have nothing to complain of on the score of health.” Readers of his biography are aware that he lived with great regularity, never missing his morning bath, two hours’ constitutional, etc. His mind was active to the last, and he died suddenly without any

painful illness. He never overworked himself, and thus brain and body remained healthy. He lived to be over eighty.

SOMETIMES a prayer for a good meeting is not answered because there is a bad ventilation.—*Ram’s Horn*.

HALF of the world’s product of quinine is said to be used in the United States.

SOAP AS CURRENCY.—A gentleman traveling in Mexico a few years ago gives the following amusing account of a strange kind of currency he found in use among the natives. As reported in *Harper's Round Table*, he says:—

“In one of the small towns I bought some limes, and gave the girl one dollar in payment. By way of change, she returned me forty-nine pieces of soap the size of a small biscuit. I looked at her in astonishment, and she returned my look with equal surprise, when a police officer, who had witnessed the incident, hastened to inform me that for small sums soap was legal tender in many portions of the country.

“I examined my change, and found that each cake was stamped with the name of a town and of a manufacture authorized by the government. The cakes of soap were worth three farthings each. Afterwards, in my travels, I frequently received similar change. Many of the cakes showed signs of having been in the wash-tub; but that I discovered was not at all uncommon. Provided the stamp was not obliterated, the soap did not lose any value as currency. Occasionally a man would borrow a cake of a friend, wash his hands, and return it with thanks. I made use of my pieces more than once in my bath, and subsequently spent them.”

Soap is also used for money in India, and in some parts of Africa it has, through the influence of the missionaries, superseded plug tobacco as a medium of exchange.

THE CONDITIONS WHICH MAKE FOR LONGEVITY.—A Turin physician, Dr. Javali, has been sending a series of questions to all Italians who have attained the age of a hundred years. The total number of centenarians to whom he applied was two hundred and seventy-four women and one hundred and thirty-three men. Only fifty-two, however, out of the three hundred and eighty-two returned answers of which he could make any practical use for the object which he had in view; namely, a picture of the average manner of life of persons who become centenarians, for the instruction of all such as are ambitious of a long life. Dr. Javali has come to the conclusion that a man's outward constitution of body, whether tall or short, stout or lean, straight or bent, has very little influence on his chances of longevity.

The most important point of all, according to the answers which he received, is the food question. The vegetarian will be glad to learn that the majority

of these Italian centenarians reported that they were either small meat-eaters, or ate no meat at all, and that the staple food of nearly all was vegetables and fruit. From spirituous liquors, with the exception of the simplest wine of the country, most of them abstained. It is also important to note that the majority informed the questioner that they were careful always to wear warm clothing. Another point of no less significance was their uniform testimony to their cheerfulness of temper and avoidance of all excitement and worry about daily and hourly trifles. Ill temper shortens life. Sanguineness and content, Dr. Javali infers, are considerable aids to length of days. A certain degree of stoicism, he concludes, is worth cultivating in this respect.—*Sel.*

HEALTHFULNESS OF SUNSHINE.—A sunbeam is a small thing, yet it has power to fade the carpets and curtains, and to rot the blinds; and for this reason some people carefully exclude the sunshine. What is the result? The family is always ailing; the young girls have a waxen white skin and a weary, pinched expression of countenance. Their appetites fail; they fall into such a bad state of health that the doctor is called in. In olden days he would have shaken his head perhaps, and friends would have whispered that dreaded word “decline”! Nowadays he notes the pale gums and waxen skin, and says “anemia;” prescribes iron and milk, fresh air and exercise, and often a change. If he knows nothing about the darkened rooms, he will be puzzled as to why no permanent improvement manifests itself, and possibly the patient will seek other advice.—*Popular Science News.*

EATING FOR STRENGTH.—The perusal of the following brief account of the dietary of various European peasants ought to be sufficient to dissipate the popular notion that a flesh diet is essential for either health or strength:—

“*Belgium.*—Black bread, potatoes, vegetables, chicory, and sometimes salaisons.

“*Holland.*—Black bread, butter, vegetables, fish, coffee.

“*England.*—Beef, pork, potatoes, vegetables, tea, cheese, beer, cider.

“*Ireland.*—Oatmeal bread, potatoes, milk, a little lard.

“*Scotland.*—Oatmeal bread, potatoes, milk, butter, coffee, tea, and very rarely flesh.

“*Saxony.*—Bread, butter, cheese, soup, vegetables, coffee, flesh on feast-days.

"*Bavaria*.—Porridge, butter, milk, cabbage, potatoes.

"*Italy*.—Macaroni, bread, fruits, beans, peas, lentils, wheat, rice, wine, a little flesh on feast-days, but only in certain regions.

"*Spain*.—Bread, vegetables, fruits, flesh as a luxury.

"*Russia*.—Rye bread, cabbage, mushroom soup, wheat cooked with milk and oil.

"*Sweden*.—Potatoes, rye, oatmeal, barley, milk, salt herring, beer.

"*Switzerland*.—Cheese, milk, coffee, vegetables, soup, wine, rarely flesh.

"*Turkey*.—Black bread, onions, *poireaux*.

"*France*.—In the neighborhood of Bourgoigne, meat is eaten but once a year. The peasants of Morvan eat meat but twice a year; the peasants of Sarthe, but once a year; the peasants of Auvergne, five or six times a year; the Bretons never, except rich farmers, who eat flesh on feast-days."

WORRY AS A SOURCE OF INDIGESTION.—Worry is a baneful curse and the source of untold evils. It seams the face with lines and furrows, and has a most depressing effect upon that hypersensitive organ, the stomach, which at such times becomes a most unwilling and laggard servant. Indeed, it is safe to say that unless encouraged by a cheerful temper, and bright, or at least hopeful, thoughts, the stomach will play truant or sulk, and do no work which it can shirk. The physiological explanation of this is the close alliance of the great sympathetic nerves, which are worse than the telegraph for carrying bad news; the worry and anxiety which depress the brain produce simultaneously a semi-paralysis of the nerves of the stomach, gastric juices will not flow and—presto! there is indigestion. One sign of mental health is serenity of temper and a self-control that enables us to bear with equanimity and unruffled spirit the petty trials and jars of life, especially those arising from contact with scolding, irascible, irritating folk. It is well to remember at such times that these unfortunates are their own worst enemies, and a cultivation of the art of not hearing will help us very much. It is a very useful art all through life, and well worth some trouble to acquire.—*Demorest's Magazine*.

A FRUIT-SHOP.—Leigh Hunt, who abhorred the sight of a butcher's shop, thus enthusiastically described the beauties of a fruit-store, which he contrasted with the horrors of a butcher's stall:—

"There is great beauty, as well as other agreeable-

ness, in a well-disposed fruiterer's window. Here are the round, piled-up oranges, deepening almost into red, and heavy with juice; the apple with its brown red cheek, as if it had slept in the sun; the pear, swelling downward, and provocative of a huge bite in the side; thronging grapes, like so many tight little bags of wine; the peach, whose handsome leather coat strips off so finely; the pearly or ruby-like currants, heaped in light, long baskets; the red little mouthfuls of strawberries, ditto; the larger purple ones of plums; cherries, whose old comparison with lips is better than anything new; mulberries, dark and rich with juice, fit to grow over what Homer calls the deep black-watered fountains; the swelling pomp of melons; the rough, inexorable-looking cocoanut, milky at heart; the elaborate elegance of walnuts; the quaint cashoo-nut; almonds, figs, raisins, tamarinds, green leaves, in short, as Milton says:—

"Whatever Earth, all-bearing mother, yields
In India East or West, or middle shore
In Pontus or the Punic coast, or where
Alecneus reigned; fruit of all kinds, in coat
Rough, or smooth rind, or bearded husk, or shell."

HEALTH HABITS OF SUSAN B. ANTHONY.—This remarkable woman thus describes her health habits: "I attribute the secret of my good health to the fact that I have never abused it. I have always made it the rule of my life to be regular in my habits. I have a time for everything. I live on simple, muscle- and brain-giving food. I have not broken down in my campaign life simply because I never would indulge in dissipation or late suppers after a lecture. I do not eat a hearty dinner before speaking in public; on the contrary, I eat very lightly. After my lecture I do not accept invitations to swell suppers. I go straight to my rooms, take a bath, and drink a cup of hot milk and eat a cracker. I think if I lived down in New Orleans, I would merely eat an orange and a cracker before retiring, after a heavy evening's work.

"Another thing which human nature demands is a certain amount of sleep. Women need at least nine hours of it out of every twenty-four. If you go to bed and wake up in the morning without feeling refreshed, the human machinery is out of gear, and the equilibrium must be restored, else nervous prostration and a general breakdown will almost surely result. This is inevitable. Nature will not be cheated. She keeps an absolutely correct bank account, and collects every farthing. Women try to do too much. The overdrawn drafts on nature must be paid. When there is tearing down,

there must be upbuilding at the same time, or the structure falls. This upbuilding of the human wear and tear is accomplished by food and a sufficient amount of rest, recreation, and sleep. This has been my rule of life. Any woman may build up a strong, healthy constitution by following it."—*Journal of Hygiene.*

THE OLDEST HERBARIUM IN THE WORLD.—This is found in the museum of Egyptology at Cairo. It comprises a large number of floral crowns and garlands collected from ancient Egyptian tombs, and generally in a good state of preservation. Some of them, having been better protected than others, retain their natural hues to a wonderful degree, notwithstanding their extreme delicacy. There are watermelons, which, when immersed in liquid, show that they still possess their green coloring matter. These facts are truly astonishing when we consider that some of the sarcophagi in which the flowers were discovered, date from B. C. 2500. Their age cannot be made out with exactness, since many of the tombs have been previously opened; it is, therefore, uncertain to what precise period the plants belong. However, they must be at least three thousand years old; while the earliest herbarium in Europe counts only four hundred years. Among the Egyptian specimens are the blue and the white lotus, the red poppy, the Oriental larkspur, the hollyhock, different species of chrysanthemums, pomegranates, leaves of willow and celery, several kinds of grasses of the Greco-Roman epoch, etc.—*Sel.*

THE WORLD'S LARGEST LOAVES OF BREAD.—The largest loaves of bread baked in the world are those of France and Italy. The "pipe" bread of Italy is baked in loaves two and three feet long, while in France the loaves are made in the shape of very long rolls four or five feet in length, and in many cases even six feet. The bread of Paris is distributed almost exclusively by women, who go to the various bake-houses at 5:30 A. M., and spend about an hour polishing up the loaves. After the loaves are thoroughly cleaned of dust and grit, the "bread porter" proceeds on the rounds of her customers. Those who live in apartments or flats find their loaf leaning against the door. Restaurateurs, and those having street entrances to their premises, find their supply of the staff of life propped up against the front door. The wages earned by these bread carriers varies from two shillings to half a crown a day, and

their day's work is completed by 10 o'clock in the morning.—*Pittsburgh Dispatch.*

THE eminent physician and hygienist, Sir B. W. Richardson, recently expressed his decided opinion that if men and women in general properly understood and steadily obeyed the laws of their being,—physical, intellectual, and moral,—seventy per cent. of them would live to the age of 110 years.

EFFECT OF ALCOHOL ON MUSCULAR STRENGTH.—A moderate dose of beer or wine would, in most cases, at once diminish the maximum weight which a healthy person could lift.—*Dr. William Brunton, F. R. S.*

In my opinion, the best physical performances can only be secured through absolute abstinence from alcohol and tobacco. This is my rule, and I find after three years of constant work at the oar, during which time I have rowed many notable match races, that I am better able to contend in a great race than when I commenced. In fact, I believe that the use of liquor and tobacco has a very injurious effect upon the system of an athlete.—*Hanlan, the Famous English Oarsman.*

Alcohol does not give strength, does not maintain strength, and its use cannot be truthfully defended on the ground that the body is not strong enough to do without it. When any one feels that he requires alcohol to maintain strength, the evidence favors the suspicion that that person is in danger of collapse from the action of the very agent on which reliance is falsely placed.—*Sir Benjamin Ward Richardson, M. A., M. D., F. R. S.*

ALCOHOL NO HELP TO THE LABORER.—At one place in England where a large amount of brick-making is carried on, and where the amount of each man's work, the number of days lost by sickness or otherwise, and the deaths were made matters of record, the rules of the service allowed to every man a mug of beer at each meal. But there were among the workmen quite a number who wholly abstained from the use of the beer and every other intoxicating drink. An examination of the record showed that the average amount of work done per annum by the beer drinkers was a large percentage less than that done by those who wholly abstained, while the number of days lost by sickness was greater.—*British and Foreign Medico-Chirurgical Review.*



HOW TO HAVE A CLEAR HEAD.

BY J. H. KELLOGG, M. D.

FOR the student, the most essential of all mental qualifications is the ability to think clearly and consecutively. Clear-headedness is certainly, to some degree, a matter of heredity and training; but it is nevertheless true that intellectual acumen and mental activity are most of all dependent upon physical conditions which are closely connected with ordinary habits of life.

Most important of all, in this relation, are exercise and diet. And these, too, are very closely associated. The Bible maxim, "He that will not work shall not eat," is supported by the physiological fact that physical exercise is an essential condition for good digestion and normal appetite. Much of the ill health among students is certainly due to the lack of vigorous physical exercise properly combined with mental activity. The divine instruction to Adam that he must earn his bread by the sweat of his brow, though apparently a penalty inflicted upon him for transgression, was nevertheless an inestimable blessing in disguise. Daily physical exercise in sufficient amount to produce active perspiration is one of the conditions most essential to the maintenance of health.

John Wesley declared that he owed his good health while a student to the fact that he had scrupulously obeyed the instructions of his father, who, on the occasion of his son's leaving home to enter school in London, requested him to run three times around Charter House Square every morning—an injunction which young Wesley obeyed to the letter. Mr. Gladstone, at the age of eighty-seven still recognized as the greatest living Englishman, owes his good health to his active physical habits. During

the half-century that he has been active in public life, it has been his regular habit to run away to his home at Hawarden every few days and spend a day in wood-chopping. William Cullen Bryant, one of the sweetest of our American poets, and a man of great mental activity, maintained good health and the full command of his faculties to a very advanced age, by spending a half hour in the morning in vigorous exercise in his chamber, hopping up and down, swinging by his hands, supporting himself between two chairs, and similar exercises. Ericsson, the inventor of the monitor war-ships, and a man of great genius, was still active as ever at an age when he could look back over two generations, as the result of his temperate life and the habit he had of spending one or two hours in vigorous walking exercise every day.

Exercise increases the activity of the lungs, strengthens the heart, and purifies the blood, by encouraging elimination and the burning up of the waste elements of the body. The bright eye and the ruddy face of the wood-chopper afford a pleasing contrast to the sallow, sunken cheek and lusterless eye of the bank president or the professional man who spends his days in a musty office, and his nights in an air-tight brown-stone residence, oscillating between the two by the aid of a cab or a street-car. The painful contrast in appearance between the rosy-cheeked boys and girls seen trooping out from the country schoolhouse, and the pale-faced, weazened urchins who crowd the sidewalk in front of a city school building at the closing hour, is, on the one hand, an evidence of the good effects of an abundance of out-of-door exercise, and on the other, of

the baneful influence of the lack of this important means of physical grace. Dickens, although a gourmand in diet, was nevertheless enabled to do a vast amount of literary work through his daily habit of walking nine or ten miles before breakfast, sometimes prolonging his walk to twenty or thirty miles.

Many children who are accounted dull by their teachers are simply suffering from a lack of exercise. The accumulation of waste and poisonous matters in the tissues produces a sort of paresis, or semi-paralysis, of the brain, whereby its normal activities are suspended. The boy who finds himself unable to think, unable to fix his mind upon his studies, and who cannot comprehend the problems placed before him for solution, is doubtless laboring under the influence of tissue poisons which might be easily eliminated by a half-hour's vigorous exercise in the open air.

A wonderful advance has been made, within recent years, in the introduction of gymnastics as a part of the school-day program, but, as yet, comparatively few schools are supplied with regular and systematic work of that kind, and the amount of attention given to the subject is entirely inadequate, when its importance is considered. The all-round development of the body is quite as important a matter as the development of the brain. A mind stored with knowledge is really of but little value to the possessor who has only a frail, weak body to support his highly cultivated brain. Intellectual activity depends as much upon physical conditions as it does upon mental training. Indeed, we are coming to see that so-called "mental training" is really not so different from what is ordinarily termed "physical training" as we were formerly taught to believe. In other words, mental training consists in an actual physical change in the brain structure. Modern physiology includes the histology and structure of the brain as well as its various modes of activity. On the other hand, it is equally true that muscular activity involves mental and nervous action and development.

The progress which has been made within recent years is certainly in the right direction, but much more needs to be done in the same line. A most admirable missionary work in the interest of the students of our public schools is being done by Drs. Seaver and Anderson, in their splendid schools for physical training at New Haven and Chautauqua; by Dr. Sargent at Harvard; by Nebuske and Hart-

well at Boston; and by others who are laboring in similar lines. The physical education of teachers is coming to be regarded as an essential feature of equipment for the instruction of the young. As yet, the majority of them have but little appreciation of the importance of the relation of physical exercise to mental and moral health, and of the extent to which muscular activity should enter into the training of the young. In the writer's opinion it is a mistake to confine gymnasium work to one, two, or even three hours in the week. The student requires a certain amount of muscular work daily to secure proper muscular development, just as he needs his daily intellectual tasks to secure proper mental development. The writer would have, in addition to the daily hour for systematic work in the gymnasium or active exercise on the playground, a short series of exercises after each class-hour. Five minutes spent at the end of each recitation, or at each change of program, in breathing-exercises, and in other exercises calculated to correct the standing and sitting poise of the student, would be of inestimable advantage to the boys and girls growing up in our schools. The majority of students, even though constantly admonished by an intelligent teacher, are continually falling into incorrect attitudes, which are certain to result in more or less permanent deformity unless corrected by proper gymnastics.

The influence of exercise upon the growth and development of young persons is far greater than would be imagined by a person not familiar with this subject. Maclaren, for example, relates an instance in which twelve army officers averaging over twenty years of age, developed to such an extent by six months' gymnastic work that they were unable to get into their old clothing, and were obliged to obtain complete new outfits. In the case of one man the chest circumference increased in measurement five inches. He also tells of a youth who, though he had ceased to grow, under the stimulus of exercise gained four inches in height within a few months. Another boy who had ceased to grow, in consequence of an injury received from a fall, increased in height at the rate of an inch a month for nine months. Country boys are recognized as being, on an average, considerably larger and stronger than city boys, a difference which is doubtless chiefly due to this influence of exercise upon growth and development.—*Education Extension.*

A HINDUSTANI work on music says that "singing is the painfully acquired art of speaking very loud in a shrill voice."

THE king has left his counting-house, and wisely spent his money;

The queen and he are bicycling, forgetting bread and honey;

The maid has bought a wheel too, and left her hanging clothes.

'T would take a nimble blackbird now to nip off half her nose,—*SzL.*

THE HYGIENIC VALUE OF VOICE CULTURE.

VOCAL training develops the powers of the voice, and makes it master of its own resources ; it perfects and strengthens the instrument, and makes it capable of greater execution, more capable of sustaining fatigue, and better fitted to resist wear and tear.

When the voice is rightly used, the singer feels the peculiar physical satisfaction which accompanies the successful performance of any feat of skill. He rejoices in his art, and seems incapable of fatigue. The wrong use of the voice speedily brings its own punishment by giving rise to a sense of exhausting strain, sometimes amounting to sharp pain.

It is chiefly untrained singers and speakers who suffer from "clergyman's sore throat" and weak action of the vocal cords, trained vocalists being remarkably free from such affections.

The effect of training on the voice is like that of physical culture on the body. The latter changes the narrow-chested, awkward youth into one of manly proportions and graceful movements. Singing masters often work similar miracles. Training enabled Tamberlik (in his own words) to "add a story to his

voice." Though apparently intended by nature for a barytone, he succeeded in creating a tenor register of prodigious compass and exquisite beauty.

In the domain of speech, we are informed that Cicero's voice was by nature weak and unmusical, and remained so in spite of the labors of several teachers to improve it. At Athens, however, he found a master who made it equal to the greatest oratorical efforts. This vocal discipline had the happiest effect on his health.

Training of the voice should be universal. This is in the higher-class schools and universities almost entirely neglected. Most people who have thought upon the subject are agreed that universal training of the speaking voice is desirable. Every child should be taught to sing. Even when the musical sense is absolutely deficient, the vocal organs thus receive a certain amount of drilling which must conduce to their proper use in speaking. The child learns, at least, to open the mouth, separate the teeth, and deliver the voice a little less from the inner recesses of the throat.—*Scl.*

 THE BICYCLE A FACTOR IN MODERN HYGIENE.

THOMAS STEVENS has entered an earnest plea for the bicycle as a factor in modern hygiene. He holds that bicycling has already been of incalculable benefit to mankind, socially, morally, intellectually, and commercially, and that the probabilities of its expansion along these and other vital lines of human concern are beyond compute. It is a popular error to suppose that bicycling exercises no other part of the body to any extent except the legs. As a matter of fact, nearly every muscle of the body is brought into healthful play. It is doubtful if any other form of exercise can compare, in the fair and equal distribution of physical effort and mental alertness, with bicycle riding in the pure country air. Mr. Stevens recommends the lawyer, doctor, minister, banker, editor, professor, or teacher, whose sedentary mode of life has been insidiously filching away his reserve of health, to give a month's go-by to health-lifts, Swedish movements, massage treatment, Turkish baths, and indoor exercises of all kinds, and to invest in a high-grade safety bicycle, and take to the road. He speaks enthusiastically of "sipping with strange delight the dew and honey of health from pleasures the very existence of which is unknown,

even unsuspected, by people who do not ride the bicycle." The sensation of skimming across the country at the rate of ten or fifteen miles an hour is but a short remove from that of flying. The effect is electrical on all the functions of mind and body. The brooding cobwebs of the brain are swept away in the tide of quickened, oxygenated blood that courses through the veins in response to the new spirit of health and action. In bicycling, if the rider maintains the proper position, the lungs have all the action they need. The muscles of the back and abdominal region are exercised and strengthened, and a sluggish liver—the bane of sedentary men—quickened, the pedaling action of the legs producing a vigorous circulation of the blood that nothing can equal as a remedial measure. A wheelman's appetite has become a household word, and the bicyclist comes to look on dyspepsia as a humorous dream of the past.

Bicycling is of great benefit to those of a consumptive tendency, by teaching them to breathe fully and deeply, and to spend much of their time in the open air. Cases also of neurasthenia, melancholia, and other nervous troubles will derive much

benefit from the exercise, for in addition to the above hygienic elements, the wheelman must develop, whether he will or not, his will, his independence and self-reliance, and the accurate control of all his muscles. Those of rheumatic tendencies will find that regular riding will do much to keep the disease under control, and will even act as a cure. Some one has said that every muscle is a little heart, and surely no better means can be devised of eliminating waste matter from the system than the general and active use of all the muscles, both voluntary and involuntary.

The use of the machine by women is rapidly extending, and has been the means of making hundreds of weakly women strong and robust. It gets them out of doors, gives them a form of exercise adapted to their needs, neither too violent nor too passive; one very pleasant, one that they may enjoy in company with others or alone, and one that goes to the root of their nervous troubles; for we are beginning to realize that these do not for the most part have their origin in woman's peculiar anatomy and physiology. Even the orthopedist may employ the wheel with benefit in certain cases, as by proper adjustment of the parts, more or less work may be given to the limbs and muscles of either side.

The use of the bicycle as a form of bodily recreation is in itself no doubt wholesome. But one great danger to be guarded against is the tendency to overdo the exercise before the system has become accustomed to the new demands on its resources. Beginners, tempted by the ease of movement, combined, as a rule, with attractive scenery, are apt, in the flush of their enthusiasm, and wooed possibly by the delights of social communion under novel and exciting conditions, to take journeys beyond their strength, and thus to counteract much of the benefit they would otherwise enjoy. But judicious forbearance and steady practise will soon carry the young bicyclist beyond the region of this possibility, and then journeys which before would have been positively injurious can be taken with healthful enjoyment.

Of course it is understood in the foregoing remarks that the rider will have a wheel adapted to his or her weight and strength, properly adjusted in all its parts, but especially in the relationship between the saddle and the handle bar and pedals; and, above all, that the rider takes pains to maintain a

correct position and to do all he can to benefit his health and bodily development. There can be no question as to the erect posture's being the correct one, and if this be maintained, cycling tends to develop the chest by increasing the lung capacity, and to exercise the muscles passing from the trunk to the upper limbs. But if the tall, lanky lad with a narrow chest and stooping back, or any other person, persists in maintaining a posture resembling a half-opened jack-knife, the faults and evils resulting therefrom cannot be fairly attributed to the use of the wheel.

It requires muscular effort to sit erect on a bicycle or elsewhere, and that effort means, as every one knows, the continued exercise of all the muscles of the back and neck. The arm muscles are brought strongly into play in hill climbing, and whenever the speed is considerably increased, and the augmented depth and frequency of breathing that even the smallest amount of exercise induces, makes a new demand upon the chest muscles and the diaphragm. On the other hand, an improper position, especially the one so commonly seen, not only tends to cramp the chest and to interfere with the proper oxygenation of the blood, but by compressing the iliac vessels it also interferes with the flow of blood to and from the lower extremities, whose muscles are all being most actively exercised, and therefore most in need of an unimpeded current at this time.

The excessive use of the bicycle or tricycle by very young children is not advisable. Bad habits of position and carriage are easily acquired at this age, and there is danger of muscle strain and nerve injury. Persons suffering from rupture should not do much riding. Persons with organic heart disease should either not ride at all or do so with caution. Even those whose hearts are functionally weak should be careful, though the riding will probably benefit them by improving the general health. Several deaths have occurred from heart failure, and there is danger from hard or rapid riding for persons with any grave organic trouble, as it might be too heavy a task on the already weakened heart. Care should be taken on cold days to breathe through the nose, as by breathing through the mouth there is danger of incurring laryngitis or bronchitis. Also after riding and becoming heated, avoid drafts, and put on more clothing till the body is cool and rested. — *W. F. Prather, M. D., in Young Men's Era.*

WHAT WE NEED. — What the man of to-day needs most is not athletics in a gymnasium, but plenty of fresh air in his lungs. Instead of a quantity of

violent exercise that leaves him weak for several hours afterward, he needs to learn to breathe right, stand right, and sit right.



Home Culture

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

*

SELF-DISCIPLINE NECESSARY TO PARENTS.

BY MRS. E. G. WHITE.

It is the work of parents to educate and discipline themselves in order that they may educate and discipline their children. Let parents remember that they have transmitted to their children their own hereditary tendencies. Let them deal sternly with themselves as they see themselves mirrored in the dispositions of their children.

It is a mistake for parents to notice every little defect in the manners of their children. They should not criticise them continually; but when they see wrong traits of character developing, they should make most strenuous efforts to correct the wrong by strengthening traits of an opposite nature. If you roughly lay hold on these disagreeable developments, and battle with them concerning their objectionable traits, you will be in danger of causing two evils to exist in trying to eradicate one. When children are inclined toward evil, seek to draw their minds away from the things that will mar them, and turn their attention in a different channel.

If you would train a rare pink, or rose, or lily, how would you minister to it? Ask the gardener by what process he makes every branch and leaf to flourish so beautifully, to develop in symmetry and loveliness. He will tell you that it is by no rude touch, no violent effort, for this would only break the boughs, but by little attentions oft repeated. He moistens the soil, and protects the plants from the fierce blasts and from the scorching sun, and God, by his miraculous power, causes the plants to flourish and to blossom into loveliness. Parents should follow the method of the gardener in dealing with their children; and if the grace of Christ is in the heart, they will seek in various ways to educate and train their children, and to fashion their characters after the divine model. Parents

should not be satisfied until they see the image of the divine in the characters of their children.

That cannot be a happy home where love is not cultivated between husband and wife, between parents and children. If parents have been self-centered, and have trained their children in an atmosphere where love was not manifested in affectionate words and actions, let them change the atmosphere of their home as quickly as possible. Let husbands love their wives, and let the wives see that they reverence their husbands. The plan of salvation was devised in order to transform the natural character, and fashion it after the divine image. When the grace of Christ is received into the heart, it will soften whatever is harsh, and subdue that which is coarse and unkind. Courtesy will be expressed in the affairs of home life. Let father and mother remember that they themselves are but grown-up children. Though greater light has shone upon their pathway, and they have had long experience, yet how easily are they stirred to envy, jealousy, and evil surmisings! Because of their own mistakes and errors, they should learn to deal gently with their erring children.

It is very delicate work to deal with human minds. The discipline necessary for one would crush another; therefore let parents study the characters of their children. Never be abrupt, or act from impulse. I have seen a mother snatch something from the hand of her child which was giving it special pleasure, and the child could not understand what to make of the deprivation. The little one burst forth into a cry, for it felt abused and injured. Then the parent, to stop its crying, gave it a sharp chastisement; and, as far as outward appearances were concerned, the battle was over. But that bat-

tle left its impression on the tender mind of the child, and it could not be easily effaced. I said to the mother, "You have deeply wronged your child. You have hurt its soul, and lost its confidence in you. How this will be restored I know not." This mother was very unwise; she followed her feelings, and did not move cautiously, reasoning from cause to effect. Her harsh, injudicious management stirred up the worst passions in the heart of her child. To act from impulse in governing a family is the very worst policy. When parents contend with their children in such a way, it is a most unequal struggle that ensues. How unjust it is to put years and maturity of strength against a helpless, ignorant little child! Every exhibition of anger on the part of the parents confirms rebellion in the heart of the child. It is not through one act that the character is formed, but by a repetition of acts, habits are established and character confirmed.

It takes far less time and pains to spoil the disposition of a child than to imprint upon the tablets of the soul, principles that will result in habits of righteousness. Let parents be careful never to correct their children in anger. Never lay your hand upon a child when you are provoked and filled with passion. In so doing you will make him partaker of your own impulsive, passionate, unreasonable spirit. You may ask, "Shall I never punish my child by the use of the rod?" It may be necessary to whip a child at times. But every other means should first be tried before you cause your child physical pain. If you are a Christian father or mother, you will reveal the love you have for your poor, erring little ones. If you do have to punish your child, you will manifest real sorrow for its affliction. You will bow before God with the child, and with a heart full of sorrow will ask the Lord to forgive the erring little one, and not permit Satan to have control of his soul. Present before the little one the sympathizing Redeemer. Speak his own words to him, telling him that Jesus said, "Suffer the little children to come unto me, and forbid them not; for of such is the kingdom of God." Your prayer, uttered in con-

trition of soul, will bring angels to your side, and the child's heart may be all broken in penitence, and thus the victory be gained without the necessity for using the rod at all.

But if you take a child and correct it in the heat of passion, you pursue a course that may make a demon of your child; and then you may wonder why it is that your children have such unlovely traits of character, when you have so faithfully tried to break their stubborn wills. Here is where so many make a great mistake, in thinking that it is necessary to break and destroy a child's will. What you are to do is to guide and discipline and train that will by precept and example. In order to do this you must first learn how to control your own hasty temper, to subdue your own will in order that you may mold and fashion the character of your child. If you act out your hasty temper, and show an undisciplined will before your child, you will certainly educate him to imitate your words and actions, and you will have no reason to wonder why your children are so bad. It is your manner of training that is ruining your household.

Have you love for your child? Do you cultivate affection for the little ones you have brought into the world, and express that love in your words and manners? If your child is playing with something that is not a proper article for him to use as a toy, do not snatch it from him, but get him to exchange it for something that will be proper for him, and that will give him as much pleasure. Let your children have evidence that you love them, and that you want to make them happy. The more unlovely they are, the greater pains you must take to win their confidence and love; and when they realize that father and mother will use every justifiable means to make them happy, the barriers will be broken down. What a victory is gained when it is possible to mold the character of your children after the character of Christ! It should be the constant aim of parents to develop the characters of their children in such a way that they will be fitted to honor God and bless humanity.

A MOTHER'S UNSELFISH LOVE.—"We are told," says Dean Farrar, "of the Chinese sage, Mengtsen, that when he was a child, his mother's home was near a slaughter-house, and that she instantly left her home when she saw the child watching with indifference the pain inflicted upon animals. Her second home was near a graveyard, and again she left when she saw the boy imitating, at his play, the rites of

superstition. That is what a pagan mother did. Would we do the same? Would we at once give up a freehold in an eligible neighborhood if we saw it was tending to make our daughter worldly? Would we give up the chance of a good living,—what the world calls success,—for our son, if it were in some work that would not make him a better man?"

THE BATTLE CREEK SANITARIUM DRESS SYSTEM.—XVIII.

FOR the designs we submit this month we are indebted to Dr. Kate Lindsay, of the Sanitarium, and represent the Baby's Common-Sense Outfit. This outfit comprises the following garments: An outside slip, a flannel skirt with waist, a gauze or knit shirt, the elastic band, and the improved diaper, making five garments in all. Of these, the abdominal band made of knit goods is to be worn only so long as needed to keep the dressings in place. The diaper is also made of knit goods, and being shaped to the body, is not so likely to come off, and does not have to be pinned so tightly to keep it on. It is also absorbent, and an absorbent pad is used in connection with it. The gauze or stockinet shirt is made of a length to come down over the feet, thus taking the place of the old-time pinning-blanket and skirt. The flannel skirt belonging to the outfit may be left off in the hottest weather, and thus the little one will be clothed lightly and comfortably. The slip is an ordinary baby's slip, with high neck and long sleeves. There ought to be about two inches difference in length between these garments, the slip being, of course, longest of all.

The dressing of the baby is in this way made so simple that it can be done by any child old enough to be trusted with the care of a baby at all. As each garment has a waist and sleeves of its own, those of the shirt can be slipped into those of the skirt, while these in turn can be put inside those of the dress, and the entire outfit may be drawn on over the baby's feet and put on all together, it being necessary to turn the infant but once during the process, as all the clothing fastens at the back with buttons or strings. To dress a baby in the ordinary way requires two turnings of the child to put on the band, two for the skirt, two for the pinning-blanket, two for the flannel skirt, two for the white skirt, and two for the dress—twelve turnings in all. There are also at least twelve safety-pins used. The Baby's Common-Sense Outfit dispenses with eleven of the turnings, also four bands and eleven safety-pins, there being but *one* safety-pin used at all, and that is in the diaper. And, too, the hygienic advantage of having the body of the infant evenly clothed can scarcely be estimated. This suit is intended to be considerably shorter than the ordinary infant's dress; and as the garments are fewer in number, the action of the little limbs is not impeded, neither is there any interference with the circulation of the blood.

There is also an infant's dress, sack, and night-gown included in this outfit. These will be more particularly described in our next number.

The following are the garments described in this article:—

Baby's Improved Diaper.—The usual fulness at the waist is taken out in double darts, the darts being so placed that the seams fall on the sides instead of in the middle of the back. Stockinet is the preferred material, but cheese-cloth in several thicknesses may be used. This kind of material recommends itself because it is soft, absorbs moisture readily, and is easily washed. The quantity of material needed is 19 inches. There is but one size.

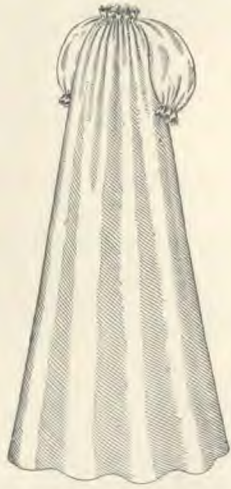
Baby's Abdominal Band.—This band is made of stockinet, preferably of wool and cotton mixed, or it can be easily knitted, thereby avoiding seams. It is supported from above by bands that pass over the shoulders and button on the front of the band, and is held down by pinning the extension at the bottom to the front of the diaper. All danger of rupture is avoided when wearing this band, as it readily yields to every distention of the abdominal walls. All edges should be buttonholed with silk. The quantity of material needed is $\frac{1}{2}$ yard.

Baby's Stockinet Skirt or Shirt.—This pattern is in three pieces,—half of front, half of back, and sleeve. This comfortable garment is to be used in place of the useless, purposeless little shirt commonly worn, and ought to be made of some exceedingly soft and dainty material such as stockinet, fine linen, or delicate cambric, and the seams covered with silk tape. The quantity of material needed is 2 yards.

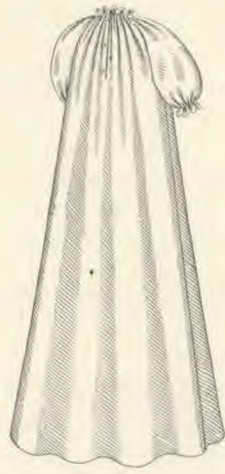
Baby's Combination Waist and Skirt.—This pattern is in two pieces, entire front of waist and skirt and waist of back in one piece, the straight breadth for back of skirt and sleeve. This is to be made of flannel, or some soft material, and may be left off during hot weather. The quantity of material needed is 2 yards of 36-inch goods.

Baby's Slip.—This pattern is in one piece. The material used may be lawn, nainsook, or cambric, and the garment may be very quickly and easily made. The neck and sleeves are to be finished with a ruffle of narrow lace. The quantity of material required is 2 yards of 36-inch goods.

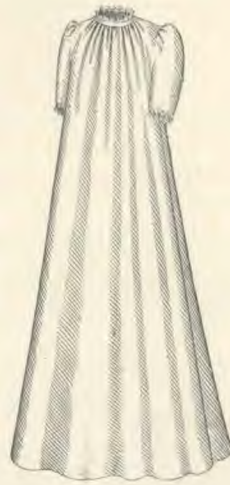
Price of patterns for the entire outfit, 50 cents. Address, Sanitarium Dress and Pattern Dept., Battle Creek, Mich.



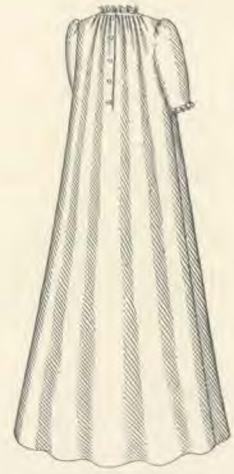
BISHOP GOWN — FRONT.



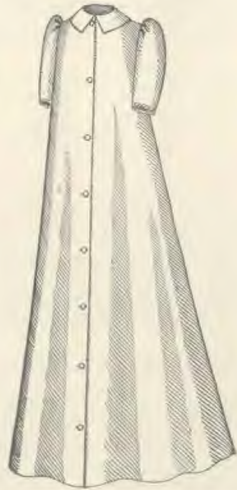
BISHOP GOWN — BACK.



BABY'S SLIP — FRONT.



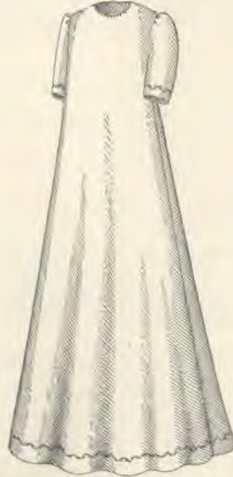
BABY'S SLIP — BACK.



NIGHTGOWN — FRONT.



NIGHTGOWN — BACK.



FLANNEL SKIRT — FRONT.



FLANNEL SKIRT — BACK.



KNIT SKIRT OR SHIRT — FRONT.



KNIT SKIRT OR SHIRT — BACK.



BABY'S SACK.



BABY'S SACK.



BAND.



DIAPER.



INSIDE DIAPER PAD.



BRINGING UP.

"No device has ever been invented that will take the place of being brought up."

So pithily said one of our prominent divines in a recent sermon. And the saying is worthy to be framed and hung up where every day it may come under the eye of the mother. Bringing up is a matter of day by day, week by week, year by year. It is a matter of social and moral atmosphere; it is a matter of example far more than of precept. Right habits must be formed, vicious tendencies checked, high principles implanted, noble impulses fostered, healthy appetites gratified and encouraged. Who is sufficient for these things?

We do not expect a fountain to rise higher than its source; and ought we to expect children to surpass their parents in essential nobility and worth? They may, in consequence of having greater advantages than their parents enjoyed, surpass them in some things; but they will be terribly handicapped in their efforts to move along the lines that reach forward and upward, unless an example of right principle and integrity of character has been set before them in their early years.

The mother who would bring up her child aright

must begin with herself; must be, so far as it is in her power, what she wants her child to be; must so lay the lines along which she wishes her child to move, and adjust the grades he is to climb, that the tender feet may easily advance along the chosen way, holding the parental hand, cheered by the parental voice, strengthened by the parental example and companionship. Those parents who make companions of their children, who enter into their sports, their enthusiasms, their ambitions, their hopes, their enterprises, are most successful in giving their children a good bringing up.

"My mother has made life easy for me by the habits she formed in me in my childhood," said an old lady the other day. "She taught me never to put anything out of my hand without putting it in its place. She taught me that the right way is the best way and the easiest way. She abhorred deceit, lying in every shape, company manners, dishonesty, debt, dirt, bad grammar, backbiting, idleness, extravagance, meddling. She loved knowledge, virtue, honor, integrity, honest toil, humanity, the church, the cause of Christ. Her ways were ways of peace."—*Mothers' Companion*.

 THE VIRTUE OF ENDURANCE.

At the present time so much is said about the duty of manifesting sympathy, especially toward children in the little misfortunes which seem to them so great, that we are led to wonder whether there is not danger of showing too much pity; whether our too free and ready expressions of compassion or sympathy may not tend to weaken the resolution and force which are essential to a heroic character; and to consider if heroism be not too grand a quality to be thus imperiled.

A little girl of four years, the granddaughter of a once famous statesman, was playing in the parlor of his fine old-fashioned country house. The yawning fireplace of more ancient days had been filled in with brick, in order that a modern grate might be used. Against a lower corner of this brickwork rested a piece of polished iron about eighteen inches square and nearly an inch thick. What was behind that piece of iron had often puzzled the child, and the answer that it "covered the opening left in the brickwork, so that straw could be thrust up the chimney and lighted to burn it out without removing the stove," conveyed no meaning to her per-

plexed mind. In her eyes the queer square of iron covered the entrance to some enchanted region where little girls must necessarily delight to go.

Accordingly, with all her little strength, she tugged away at the barrier. She saw an irregular opening, and caught a gleam of sunlight filtering down the flue. She sought to look further; but the iron was too heavy, and fell from the tiny fingers upon the tiny toes with crushing weight. The stately old grandfather raised the iron, and took the silent child upon his knee. Kissing her, he said kindly,—

"It must have hurt you very much, my pet."

The little face was all a-quiver with pain, tears stood in the brave, brown eyes, and the words faltered as they came:—

"I dess it's on'y for a 'ittle w'ile."

"That's right, darling," said the child's mother, gently removing shoe and stocking from the little foot, now found to have been seriously hurt; "that's right! mother's brave little girl knows that crying only makes the hurt last longer."

The poor baby could not keep the tears from run-

ning down her little cheeks, pale from the suffering ; but she refrained from making the least outcry or even moan.

After she had been carried off in her mother's arms, to sleep away the exhaustion of pain, her grandfather, with tears of pity and admiration in his eyes, said emphatically :—

"I have always loved my daughter-in-law, but never have I admired her so much as to-day. She is teaching her children to be heroes ! That child will make her mark in the world some day, God bless her !" The grandsire was right. The child became a woman of marked character and ability.

How much of future strength depends upon early

SWEEPING AND DUSTING. — Although the broom is oftentimes dubbed "a woman's weapon," the proper way of using it seems to be a lost art. Every woman can wield it on emergency ; but not every woman can wield it to its best advantage.

In energetic but poorly directed hands, a cyclone of dust is usually raised that leaves destruction in its wake. Needless to say, this is neither necessary nor expedient. A room swept carefully and thoroughly once a week, needs only a little daily brushing up with the carpet-sweeper to keep it in order. The preparation for sweeping a room takes more time than the sweeping itself. Everything movable should be carefully dusted, and set out of the room, while heavy furniture should be dusted, and covered with large sheets of sheer unbleached muslin or calico, kept for that purpose. Window shades should be brushed off and rolled up, draperies shaken out, and fastened up out of the way, picture frames wiped off and protected with a newspaper, and bookcases covered. Then with a long-handled brush the moldings at the top of the wall should be swept, and the walls themselves carefully brushed down. The rugs should next receive attention. If there is no grass plot upon which they may be taken and cleansed, brush off carefully, roll up, and set outside.

Wet a newspaper slightly, tear up and throw over the floor, open the windows on one side of the room only, so that there will be no draft through, and use the broom. The stroke should be long, with the broom always on the floor. She who uses the broom with a "flirt and flutter" wastes her strength for naught. Sweep with the arms, not with the back. It is usually better to begin in one corner and sweep toward the center, then take another portion, again with the center as a goal ; and so on until the entire surface has been covered. After

training in the exercise of true courage, comparatively few seem to remember. It is so easy to pity, caress, and openly sympathize with a sobbing child ; so hard to treat its hurts — whether moral or physical — with a touch as firm as tender, being brave that the child may also be brave. Yet it is as undoubtedly a duty to teach fortitude as it is to teach truthfulness. Truthfulness itself is largely dependent upon courage. A naturally timid person may, indeed, be also naturally honest ; yet it seems almost impossible for such a person to retain absolute honesty of word and act ; and the most unhappy of mortals are those who have not the courage to support the real truthfulness of their natures.— *Sel.*

the dust has settled (and there will not be a great amount if the broom has been held carefully), the carpet should be wiped off breadth by breadth with a large cloth wet in a pail of water, to which ox-gall or salt has been added. Then the windows may be wiped, rugs brought in and spread, furniture covers taken off, shaken, and folded, furniture brought back to position, bric-a-brac put in place, and the room will be fresh and sweet, ready for occupancy.

To be properly armed for dusting, the housekeeper should have a furniture brush for tufted furniture, a whisk-broom and wooden skewer for corners, a paint-brush for dislodging the dust on carvings, an old silk handkerchief for bric-a-brac and the piano, a feather duster for the covers of books, a damp chamois for glass doors of bookcases, and two soft dusters of cheese-cloth or old linings, washed out, for general dusting. The little spaces in woodwork require a corner of the cloth dampened and drawn through.

Broom covers should form part and parcel of every good housekeeper's stock in trade. Made of canton flannel in the shape of a bag, with a stout draw-string run through the top to tie around the handle of the broom just about the brush, they are far in advance of the old-fashioned way of tying a duster over the broom, that invariably slipped off at the most inopportune moment. These covers are very convenient for wiping down the walls, and invaluable for sweeping hard-wood floors, and deserve glorification for their efficacy in brushing dust off of porches. A yard and a quarter of canton flannel will make two. Several should be on hand, and they should be washed regularly when soiled. Unbleached canton flannel is to be preferred for the walls, but the dark colors for floors and porches.— *Emma Paddock Telford.*

THE VISITING BABY.

A FEW days ago I took my little girl of two years to the city with me to spend a week. Our train reached the city shortly after noon, and, hastening to our place of entertainment, we found dinner was over. The lady of the house explained that she had a picked-up dinner for the children, her husband being away, and she would prepare a lunch for us.

In a few minutes we were seated at a tastily arranged table on which was spread a good lunch for me, but what was there for my baby? Baby has a delicate stomach, which must be treated with consideration. By her plate sat a silver mug of milk, which she eagerly took, but after the first sip gave a disappointed little "Ugh!" It was almost ice-cold. I do not want her to drink coffee, but to warm the milk I poured some of my hot coffee into it.

There was cold meat, but a dinner of meat is not good for a child. The cake was too rich for her. Pickles I would not let her have. She likes but little bread. That day baby dined on bread, with milk warmed with coffee. For tea the fare was similar. There was nothing on the table for the child to eat but preserved pears, bread, and such cold, cold milk!

That night baby had the colic. At breakfast we

had pancakes, followed by sausage, fried potatoes, hot rolls, and coffee. My visit came to an abrupt close.

This is, in substance, the experience a friend told me. Many of us might claim it for our own. Why is it that so many housekeepers, even those who have raised a family, fail to provide any suitable food for the baby visitor?

The table is often loaded with delicacies to please the appetites of guests, but for the little one who has been invited, only a cup of the coldest milk will be furnished. A hungry child—healthy children are so hungry!—needs something simple, nourishing, and, in cold weather at least, something warm to eat.

If the bread my friend's little girl dined upon had been toasted, then softened with hot milk poured over it, she would have eaten it with a relish, and, with a cup of warm milk, been satisfied.

Well-cooked grains, rice, or what is still easier to prepare, some of the foods like granola, or even simple bread and milk, if the milk is warmed, will make baby an evening meal that will allow him to sleep well, and your friend will not wish she had stayed at home with him.—*Abbie Jewett Craig, in the Housekeeper.*

SEASONABLE RECIPES.

Nuts with Lentils.—Cook good brown lentils until tender; rub through a colander. To three parts of lentils thus prepared, add one part of stewed and strained tomato. Season with salt and two tablespoonfuls of nut butter to a quart of the lentil mixture. Turn into a shallow baking-dish, and bake in a moderate oven until quite dry and well browned. A little minced celery may be added as flavoring, or the lentils may be cooked with onion if preferred.

Irish Corn Soup.—Cook one pint of sliced potato until tender. Rub through a colander, and add one pint of stewed fresh or canned corn, which has also been rubbed through a colander. Add boiling water to make the soup of the required consistency. Season with salt, and serve.

Blackberry Mush.—Rub a pint of freshly stewed

and sweetened blackberries having considerable juice, through a fine colander or sieve to remove the seeds. Add water, if necessary, to make a pint and a half cupful of juice in all; heat to boiling, and sprinkle into it a cupful of sifted graham flour or sufficient to make a mush of the desired thickness. Cook for one hour or longer. Serve hot with cream.

Blackberry Corn-starch Pudding.—Take two quarts of well-ripened blackberries which have been carefully looked over, put them into a granite-ware boiler with half a cup of water, and stew for twenty minutes. Add sugar to sweeten, and three heaping tablespoonfuls of corn-starch rubbed to a cream with a little cold water. Cook until thickened, pour into molds, and cool. Serve cold with milk or cream. Other fresh or canned berries may be used in the same way.

If one looks upon the bright side,
It is sure to be the right side.
At least, that's how I've found it as I've journeyed through each day;

And it's queer how shadows vanish,
And how easy 't is to banish
From a bright-side sort of nature every doleful thing away.

—*Mary D. Brine.*



TYPHOID-FEVER NURSING : DIET.

(Continued.)

It is only recently that proper dieting has been recognized in its true importance as a life-saving agent in fever, or that any scientific research has been made with a view of finding out and making practical the best method of feeding fever patients. Indeed the old proverb, "Feed a cold and starve a fever," has long been the orthodox rule with the laity, and to them the physician of the past left the diet of the patient almost entirely. At last the profession awoke to an appreciation of the fact that there was danger that the fever patient would die of starvation before the fever was starved out. Then the pendulum of practise swung too far the other way, and a process of stuffing fever cases began, the stomach being filled with all the food the patient could be made to swallow. Nurse and doctor were both happy if the prescribed quantity of milk or other liquid food was swallowed by persuasion or force, at intervals of every two or three hours. What became of the food was supposed to be the business of the stomach, which was expected to do its duty, regardless of whether it was in a condition to secrete the gastric fluid or not. A certain Dr. White, who treated many cases of relapsing fever during a time of famine in Ireland, requested that it should be engraved on his tombstone that he *fed* fever patients.

And even to-day, after much careful research, the diet question is not fully settled, though much has been learned of the danger to the patient from over or under feeding. The diet should be regulated to meet the indications of the case at the different stages of the disease, also somewhat by the previous condition of the digestive organs and the dietetic habits of the patient. During the stage of onset, when the patient has been using a full diet, perhaps overeating, forty-eight hours of fasting will not only

be beneficial, but tend to preserve the digestive powers of the stomach and bowels, upon which largely depends the ability of the patient to pass through the fever safely. It is also well at this time to relieve the digestive organs as far as possible from all fermenting food, disordered secretions, disease germs and their products, the fasting being supplemented by the cleansing of the stomach by lavage, and the lower bowels by numerous enemata, and the administration of some mild saline cathartic to free the small intestine of morbid matter.

After this rest and the cleansing of the digestive tract, the question of what can be digested as well as relished must be carefully considered. The food of the typhoid patient should be in fluid form, nutritious, easily digested, aseptic, and containing but a small amount of waste matter. It must also, especially during the period of inflammation and ulceration of the bowels, be entirely free from all harsh, indigestible substances, as the bran of the coarser flours and grains, the seeds of berries, etc., as they are likely to increase both the inflammation and the danger from perforation, because of the irritated condition of the denuded mucous membranes.

Whatever food is given should be properly prepared and neatly served. The nurse should note carefully the effect of the food on the patient, and thus judge of how it is received by the digestive organs. If it does not digest readily, it will be quite likely to cause distress to the patient from colic pains and the formation of foul, ill-smelling gases, resulting in headache and stomach-ache; indeed, in severe cases the poison thus generated sometimes causes a stupor amounting almost to coma. The writer has many times seen such a condition relieved by a stomach lavage. Sometimes the poison arises from the fermentation of undigested

food in the intestines, whence it is absorbed into the system. If constipation exists, it may be the result of retained fecal matter in the bowels, in which case equally good results may be obtained from the administration of a mild cathartic or a copious flushing of the large intestine by an enema. The stools should be watched, and if any undigested curds be found in them, the food must be changed or differently prepared.

Milk has been looked upon as an almost perfect food, because it contains all the elements needed for tissue-building and repairs, but some persons cannot digest milk when well—much less when all the digestive organs are weak from the wasting of fever. In such cases it changes in the stomach into hard, undigestible curds, which irritate the bowels as they pass over their sensitive ulcerated surfaces, thus often proving fatal to a patient who might otherwise have recovered. Beef tea is another so-called fluid food which has been much relied upon for keeping up the nutrition in cases of extreme debility from any cause. Analysis of its constituents has shown, however, that it is not a food at all, but only a stimulant, furnishing scarcely any nutriment to supply the tissues with their much-needed building-material; and as all meats and meat solutions form first-class culture media for germs, it is best to use as little of them as possible. The only good result the writer has ever obtained from beef tea was to satisfy the craving of some meat-eating patient by supplying the accustomed stimulus, and inducing him to take some digestible food with it. Gruels, properly prepared, and mixed with milk or cream, are often well borne, and a variety may be had by using different grains in their preparation, so as to prevent the patient from becoming disgusted with the sameness of his diet.

The chief fault in the preparation of all cereal foods is the failure of the cook to keep them long enough at the boiling point to thoroughly cook them. This is rather difficult unless they are cooked either in a double boiler or a steamer. It takes from four to six hours to cook the coarse meals sufficiently to make them digestible by the weak digestive organs of the fever patient. Thorough cooking not only breaks up the food, but partially digests the starch in farinaceous foods. This is very important, as the digestive fluids are all more or less impaired at this time, and the function of the salivary glands is often almost entirely arrested. Besides thorough cooking, all gruels made from the coarse flours require straining to free them from lumps and bran. Cooked gluten flour and some

other prepared foods are more easy of preparation, and require less cooking, than the raw meals.

In some cases foods have to be peptonized, or partially digested, before being taken into the stomach. Preparations of the pancreatic fluid are most commonly used for this purpose at present. To peptonize milk, take half a pint of fresh sterilized milk, and add to it one or two teaspoonfuls of fluid pancreaticus, and fifteen grains of soda, which would be a little less than one fourth of a teaspoonful. To insure accurate measurement, have the druggist weigh out a sample powder, and keep it as a guide. Any kind of gruel may be used with the milk, and in any proportion from one half to only a small amount, as best relished by the patient and received by the digestive organs. There is also a ferment known as diastase found in malt which acts upon the starch in foods similarly to saliva and the digestive principle of the pancreatic fluid. Malted gruel may be made by mixing a tablespoonful of malt with a pint of cooked wheat or barley gruel and keeping it on the fire, stirring constantly until the whole mass becomes thin and sweet. After being thoroughly boiled, it should be strained, and may be eaten either with or without mixing with sterilized milk or cream.

The various fruit juices are often relished, and are beneficial in that they furnish the vegetable acids needed by the system. It is desirable to have some variety in the food; and by planning to have different kinds of gruels and different fruit juices for each meal of the day, this can easily be secured. There are many ways of serving milk. It may be taken plain, either hot or cold, or malted milk or good fresh buttermilk may be used. It may be made into kumyss, or mixed with all the different gruels and with soda or any other charged water, or charged with carbonic acid directly, where access can be had to a soda-fountain.

The patient should take from a quart to three or four pints of fluid food daily, and eat from four to eight times during the twenty-four hours. If it is desirable to give the patient a quart of food at intervals of four hours, at six in the morning he may be given half a pint of milk, or milk and gruel, or any of the other preparations of milk mentioned. At 10 A. M. two ounces of fruit juice may be given first, and ten or fifteen minutes later, six ounces, or a half pint, of gruel. At 2 P. M. milk prepared in some other way from that served in the morning may be given. At 6 P. M. another kind of gruel and fruit juice may be used. Just this order of feeding and just this kind of food need not be adhered to with-

out variation in every case; this bill of fare is given only as a guide in planning to make the food of the fever patient both digestible and pleasant to the palate.

Where the patient has lived largely on a meat diet, he may fail to relish either the farinaceous or milk preparations, and be dissatisfied without something which has the flavor of flesh. It is better in such cases to give some fluid meat preparation. A more nutritious food than beef tea may be made as follows: Take half a pound of lean beefsteak and cut off all the fat, pound, and broil slightly, just enough to start the meat juices, and then press in a lemon-squeezer. A few ounces of this will often beget a relish for other food. Meat broths, skimmed and free from fats, may be thickened with various strained gruels, and the flagging appetite of the patient be thus excited to tolerate the needed food to keep up nutrition.

Besides the articles of diet already mentioned, there are many prepared foods, chief among which is bromose, a partially digested preparation of emulsified vegetable oils made from nuts mixed with other food elements. Its analysis shows a little over twenty-four parts of fat, almost twenty parts of nitrogenous food, and over thirty-nine parts of starchy food more or less completely digested. It also contains about one and three-fourths per cent. of the salts needed by the body in tissue-building. When dissolved in water, it has the appearance of milk, and is as nutritious as milk, and much more easily digested. The writer has found it usually to relish best when served hot, and in some cases when given an acid taste by being mixed with tart fruit juice. It is a complete food, and, like milk, will sustain life without any other aliment. It is best, however, to exercise care not to disgust the palate with too continuous serving of any one article of diet.

The second, third, and fourth weeks are very critical periods with typhoid-fever patients. The inner surface of the bowels being denuded, there are often large portions of the tissues which slough off, leaving deep ulcers in the intestinal walls. Hemorrhages are likely to occur, and sometimes food must be withheld for a day or two until the bleeding ceases. At that time it is very important to prevent any irritating matter from reaching the lower bowel, also food which has a tendency to cause the formation of gas, as any distention of the bowels may precipitate hemorrhage or predispose to perforation.

In some cases the stomach will not tolerate any food, rejecting at once anything put into it. In

many such cases the writer has seen great relief of the symptoms result from the stomach lavage. Often, after the removal of the foul matter from the stomach, the nausea would cease, and the much-needed food be retained and digested. Where there is lack of hydrochloric acid, it may be supplied by taking some preparation of this remedy, as prescribed by the attending physician, either before or after meals. In some cases the patient, while unable to retain food when the fever is high, will eat and relish it after a cool full bath, when all the organs of the body are more active. A hot bag over the stomach after eating and the use of electricity are aids to digestion.

In cases where the stomach cannot be made to retain food, resort must be had to bowel alimentation. Partially digested foods should be used for this purpose, as the large intestine can absorb food elements, but cannot digest them. Peptonized milk or any of the peptonized meat extracts may be mixed with egg, or the bromose already mentioned is a very useful and easily prepared food for administration in this way.

Before introducing these nutrient enemata, the lower bowel should be freed from fecal matter by a tepid enema, and if this causes any pain or disturbance, it should be relieved by a fomentation, and all the excitement from the water injection allowed to subside before the food enema is given. The quantity given at once should be small—not more than a small teacupful, and often the bowels will not retain more than half that amount. The point of bowel tolerance being ascertained, more than that quantity should never be introduced, as it is likely to be rejected at once. Use a small fountain syringe in giving the enema, it being most easily controlled. The syringe should be warmed by pouring hot water through it before the food liquid is introduced, and the rectal tube made thoroughly clean, and oiled. The patient should be turned on the left side, the rectal tube gently inserted, and the fluid made to pass slowly into the rectum. After removing the tube, if the injection is likely to be expelled, press a warm towel against the anus, and hold it there until the excitement subsides. These enemata may be repeated once in four or five hours, and the cleansing water injections twice daily.

In cases where neither the stomach nor the bowels will retain food well, the writer has often found that iced food is tolerated in small amounts by the stomach,—iced milk by the spoonful, or iced beef extract and the white of egg mixed with iced water. The white of the egg beaten to a froth and taken in

that form is sometimes relished. Salt may be used in a moderate amount to make the food palatable, but other condiments would better be avoided.

The manner of serving the food is very important. It should be well cooked, and that which is intended to be taken cold should be cold, and the hot decidedly so. Nothing will disgust a fastidious palate more than a cup of lukewarm, half-cooked gruel. The dishes, tray, napkin, and silver should all be clean, and neatly arranged. Do not serve the food in large dishes or in large quantities. The patient will often take the amount of food needed if a little is brought in a pretty teacup instead of being served all at once in a large, uninviting bowl. The cup may be filled a second time with the food fresh and hot. A clean, orderly room, a neatly made bed, and a tidy nurse also help to render a meal inviting. The patient's toilet should be made, and the mouth and teeth cleansed, before he takes food or drink.

In cases of typhoid fever, the patient must take his food and drink in the recumbent position, and be fed with a spoon, from a drinking-cup with a spout, or through a glass tube. In feeding unconscious or delirious patients, who are dependent upon the nurse for food and drink, lay the patient on the back, with the head and shoulders slightly elevated. Protect the clothing from spilled food by tucking a large napkin or clean towel around the neck, and attract the attention by rubbing the spoon gently

over the lips. Be sure the food is not hot enough to burn the sensitive mouth. The spoon should be held steadily, and pushed far back over the root of the tongue, then emptied slowly, removed, and the mouth shut. The muscles of deglutition should then be excited to action by gentle massage under the chin. Never put in one spoonful of food until the previous one has been swallowed, and do not hurry the patient. After the meal is finished, wipe the mouth with a moist washcloth, remove the napkin, and let the patient rest.

Never either prepare or keep food in the sick-room. Be very careful not to offer a patient stale food or that which has been burned or injured in cooking. Everything used should be of the best quality. The nurse should be able to properly select the food and to prepare and serve it neatly, and after it has been eaten, should watch for any signs of indigestion or any evidence that the food is undergoing fermentation, such as distress in the stomach, nausea, vomiting, distention of the bowels by eructations, diarrhea, and undigested food in the bowel discharges. Remember that the patient may be poisoned from overfeeding or from taking spoiled or unsuitable food, and that he may also starve to death from underfeeding.

The nursing of convalescent patients will be continued, and the food question still further discussed, in another article.

(To be continued.)

THE CARE OF THE HAIR DURING ILLNESS.

In cases of severe illness, especially when there is high fever, it is usually best to cut off the hair, if it is long, at the beginning of the disease. When there is much congestion of the head, the hair usually becomes dead at the roots, and finally falls out, so that it is really no sacrifice to cut it off. With the hair off, the head can be kept cooler and cleaner, and this will tend to overcome the congestion, and insure a healthier condition of the hair follicles and a finer growth of new hair.

When a patient is very ill, the task of combing and untangling long hair daily is a great tax on the strength and a waste of the nerve energy of the patient. If the head has to be kept wet to relieve the heat and congestion, the hair becomes sour, and has a very disagreeable odor. This is very injurious to the patient, and it is also unwholesome for the attendants to inhale the foul odors from this fermenting mass of spoiling matter on the patient's head. I have seen a neglected head covered with one tan-

gled mass of dead hair, old epithelial scales, and other forms of dirt, the noxious effluvia from it filling the room and poisoning the air.

The head needs to be washed more frequently in sickness than in health. This is just as easily done as to wash the face, if the hair is short. If the illness is not severe or likely to be prolonged, the hair should be combed daily, the best way being to divide it evenly in the back and braid it in two braids. This arrangement will save the patient from the discomfort of lying on a hard coil of hair. Always begin to comb the hair at the ends, and work toward the head. This will prevent pulling, which is very unpleasant to nervous patients. When the hair is short, the head may be washed daily in tepid water, and soap used with it twice a week. In all cases, it should be shampooed at least once a week and carefully dried. Frequent brushing with a brush of medium stiffness will keep the scalp circulation active, and the surface clean and free from dandruff.

GOOD HEALTH

J. H. KELLOGG, M. D., EDITOR.

BATTLE CREEK, MICHIGAN.

FRUIT AND THE COMPLEXION.—Every woman who desires to have a good complexion—and what woman does not?—should know that the benefit to the complexion which may be derived from any cosmetic or lotion is not to be compared with that to be given by the use of fruit. Fruit, however, should not be taken as a luxury or a delicacy, but as a staple article of diet.

Some fruits are highly nourishing, while others are appetizing, and, one may properly say, purifying. Grapes and apples are among the most nutritious of fruits; grapes especially are easily digested, and usually agree with even the most delicate stomach. Nothing is more easily digested than a baked apple eaten without either cream or sugar. Baked sweet apples are delicious. Ripe peaches rival grapes in easy digestibility. To enrich the blood, nothing is equal to strawberries, which contain a larger percentage of iron than any other fruit.

Oranges, limes, and shaddocks are of decided value as a means of improving the complexion. With many persons, a couple of oranges eaten before breakfast furnish a panacea for inactivity of the bowels which is one of the most common causes of a muddy and dingy complexion. The grape-fruit and shaddock are but little known to those who reside in the Northern States, although the former is seen in greater abundance each year. One has to learn to like the flavor of these fruits, which is a mild acid, with a slight suggestion of bitter. A glassful of most delicious and refreshing juice may be squeezed from a large grape-fruit, or the juice may be eaten with a spoon by cutting the fruit across in such a manner as to open the segments, which are enclosed by very tough parchment-like partitions.

One suggestion should be added respecting the eating of fruit. Very acid fruit should not be taken in connection with farinaceous foods, except by persons who have very vigorous digestive powers. Those who suffer from acidity occurring soon after

eating, accompanied by tenderness in the pit of the stomach, should avoid very acid fruit at any time. Fruit with firm flesh, like apples, cherries, or plums, should be thoroughly masticated, being otherwise difficult of digestion. The skin of raw fruits should never be eaten. Before eating grapes and other small fruits, care should be taken to remove all impurities by thorough washing. Stale fruit is absolutely unfit for use. Many persons suffer after eating fruit because of swallowing a multitude of germs, which always swarm upon the surface of the fruit, and rapidly multiply under the favorable conditions afforded by warmth and moisture.

THE KOLA DELUSION.—The profession will some day repent the great confidence which is now being reposed in kola and like preparations. The therapeutic use of kola is based upon the claim that it gives increased capacity for work. The same claim has been made for extracts of cocoa or caffein, and for alcohol. It is claimed, however, that kola and allied drugs differ from alcohol in that, while alcohol gives a temporary disposition for increased effort, this effect is very quickly displaced by the opposite condition; in other words, the reaction after the use of alcohol is very rapid. Beef tea and beef extracts have been recommended on the same grounds. A careful study of this question, however, will place before any intelligent physician sufficient evidence to convince him that all the claims made for these substances are without physiological foundation.

The late Professor Lehmann, the eminent German authority in physiological chemistry, called attention to the fact that caffein is closely allied to creatin and other tissue poisons, the accumulation of which within the body gives rise to loss of energy and the disposition to work. The late Dr. Edward Smith has clearly shown that while tea and coffee produce a feeling of increased readiness for work, the fatigue experienced after the effort put forth under the

influence of these beverages is far greater than that induced by the same amount of work performed without them. Beef tea, as recently remarked by a celebrated French surgeon, "is a veritable solution of ptomaines;" and it has been shown by the experiments of Horsley and Ferrier in studying the motor areas in the brains of monkeys, that both beef tea and beef extracts are nerve poisons.

The analogy of kola to caffeine has been very clearly pointed out by those who have made a study of it. This substance is, like cocaine, opium, cannabis indica, and other allied drugs, simply what might be called a nerve-fooler, which abolishes the sense of weariness or fatigue, without giving any increased capacity for work, and without lessening the consequences of mental or muscular effort. In fact, there can be no doubt that the effort put forth under the influence of such drugs costs the body a greater expenditure of energy and vitality than the same amount of work performed under normal conditions. Nature cannot be swindled.

More damage than can be estimated is, in the opinion of the writer, being done at the present time by the use of kola preparations of various kinds. We are a drug-ridden people; and it is indeed a sad spectacle to see the medical profession lending themselves as willing tools to forward the schemes of manufacturing pharmacists.

RADICAL MEASURES FOR PREVENTING CONTAGION IN THE PUBLIC SCHOOLS.—That the public school is a nursery for infectious diseases has been proved by numerous disastrous epidemics of diphtheria, scarlet fever, and other similar maladies. In an instance known to the writer, three deaths occurred as the result of the common use of slates and pencils by the children of a small select school, one of whom contracted the disease from an older sister at home, probably by kissing.

The common drinking-cup has also, in several instances, been recognized as the means of diffusing infection. The New York board of health has recently instituted radical measures for the protection of children in the public schools of that State, which, if carried out, will doubtless result in the saving of hundreds of lives annually. One of these regulations prohibits the use of slates, pencils, and sponges, the pupils being supplied with lead-pencils and pen holders instead. No interchange or transfer of pens or pencils is allowed.

Another regulation requires the disinfection or

destruction of all books belonging to children connected with families in which infectious or contagious diseases have recently occurred. Still another and most important regulation abolishes a common drinking-place, fresh water being provided for each room at the beginning of each session in covered pitchers, from which pupils are served from individual cups, each cup being numbered, and used by one pupil only. We hope these regulations may be adopted in other States.

CAUSE OF THE INCREASE OF CANCER.—Dr. W. Allan Jamieson, F. R. C. P., physician for diseases of the skin at the Edinburgh Royal Infirmary, in discussing the causes of these diseases, calls attention to the fact that the frequency of cancer has greatly increased within the last fifty years, an opinion with which Mr. Christopher Heath, an eminent English surgeon, also agrees. The author expresses the belief that the increase in the consumption of butchers' meat, and especially the extensive use of beef, are causes of this great prevalence of cancer in modern times. Dr. Burney Yeo is quoted as declaring that "among other evils attending an animal dietary, one is, that it favors the tendency, where it exists, to the development of cancer." The excessive use of meat is also considered to be a cause of eczema.

IS TUBERCULOSIS TRANSMITTED BY MILK?—From an extended series of thoroughly scientific experiments, we learn that milk from cows with tuberculous udders is of an extremely virulent nature. Further, buttermilk, cream, and butter derived from such milk, all contain tubercular matter actively injurious to man. Since we can, as a rule, know nothing of the condition of the cows from which we obtain our milk, it must be evident that all dairy milk should be boiled before being placed upon our table.

TYPHOID FEVER.—An interesting report has recently been published commenting upon the partial disappearance of typhoid fever among the soldiers of the French army. Ten years ago, fourteen in every thousand of the regular troops were attacked with the disease. Upon the introduction of an uncontaminated water supply where possible, and the use of Pasteur filters elsewhere, these numbers were reduced to six in every thousand. The French military authorities predict a still further decrease in the next decade.



DANGER FROM NATURAL-GAS HEATERS, OR OIL AND GAS STOVES.

It should never be forgotten that a fire in a stove or a grate, or combustion anywhere, produces a greater or less quantity of poisons, besides consuming the oxygen of the air. These poisons are thrown into the air, and when they have accumulated to a certain extent, the air becomes incapable of supporting either combustion or animal life. In case of an ordinary stove connected with a chimney or an old-fashioned fireplace, a constant stream of air is maintained, by which the poisons produced by the combustion are carried away. Not long since, while calling upon a patient in the natural-gas region, I noticed that the sitting-room was heated by natural gas, which was burned in a grate especially

constructed for that kind of fuel. The outlet for gases resulting from combustion was so small that at least nine tenths of all the carbonic acid gas produced by the impurities of the burning oil were thrown directly into the air of the apartment. This arrangement seems to have been devised by the natural-gas companies as a means of saving gas, but it would be difficult to invent a more ingenious contrivance for endangering human life. The same danger is connected with the use of oil or gasoline stoves when used as heaters. The writer has known of one case in which a lady lost her life by being shut up in a room with a gasoline heater. This is a matter which should receive more careful attention.

COFFEE AND DISEASE GERMS.—A year ago a Russian bacteriologist made some experiments for the purpose of determining the influence of coffee in destroying disease germs. The conclusion was, that coffee is, to some degree, a disinfectant. The disinfectant properties of coffee depend, however, not upon the active principle of coffee, or caffein, which it contains, but upon the substances developed in the roasting of the coffee. It was found that the various substitutes for coffee are also germicides, developing disinfectant properties during the roasting process, as in the case of ordinary coffee. A watery infusion of either coffee or its substitutes was found to be capable of killing the germs of cholera within a few hours, and of typhoid fever in a somewhat longer time. The conclusion should not be drawn from these facts, that either coffee or its substitutes are to be considered as valuable, on account of their slight antiseptic properties, as they require too long a time for the destruction of germs.

LATE SUPPERS AND SIX-O'CLOCK DINNERS.—Eating late at night, when the muscular and nervous systems are exhausted by the labor of the day, and retiring to rest soon after, is one of the most positive dyspepsia-producing habits of modern times. A sleeping stomach is a slow one. Secretion must of necessity be deficient in both quantity and quality, owing to the exhausted condition of the system; and with the further obstacle afforded to prompt digestion by the slowing of the vital operations during sleep, it is almost impossible that there should be other than disturbed digestion, and restless sleep in consequence. It is under these circumstances that people often suffer with obstinate insomnia, bad dreams, nightmare, and similar troubles, from which they arise in the morning unrefreshed and unrecuperated by nature's sweet restorer, the work of assimilation, by which repair takes place, having been prevented by the disturbed condition of the nerves.

No food ought to be taken within four hours of

retiring. This will allow the stomach time to get the work of digestion forwarded sufficiently so that it may be carried on to completion without disturbance of the rest of the economy. If a third meal is taken, it should be very light, preferably consisting of ripe fruit and simple preparations of grains. The custom which prevails in many of the larger cities, of making dinner the last meal of the day, eating of foods the most hearty and difficult of digestion as late as six or even eight o'clock, is one that ought to be discountenanced by physicians. It should be tolerated only by those who convert night into day by late hours of work or recreation, not retiring until near midnight. But in such cases a double reform is needed, and so there can be no apology offered for this reprehensible practise, on any physiological grounds.

HYGIENE FOR BABIES.—A writer in the *Medical and Surgical Journal* offers the following very sensible suggestions respecting the hygiene of the nursery:—

“Regular habits, proper food, and long hours of sleep are necessary conditions to a healthy infant.

“Three prime essentials in the nursery are fresh air, good food, and pure water.

“Feeding at night, after the third month, is both inconvenient and unnecessary; sleep at night is better than food.

“Do not feed the baby because it cries; this may be due to pain, and it is hurtful to fill an infant's stomach at such a time.

“An infant's thirst is not quenched by milk; it should be given pure water to drink, with regularity.

“Plain boiled water, given between feedings, will often aid the digestion and satisfy the child when restless.

“Light and loose clothing, frequent bathing or cool sponging, are necessities for the infant in hot weather.

“Cleanliness, as applied to the body, the mouth, the food, the vessels, the clothing, the furniture, the floor, the carpets, the beds, and the atmosphere, should be strictly observed.”

THE FACE AS AN INDEX OF DISEASE.—Incomplete closure of the eyelids during sleep is usually an indication of disease of a severe type, either acute or chronic. This symptom is sometimes present in sleep which is unsound in consequence of pain. An unusual degree of movement of the nostrils in breathing indicates disease of the lungs or air-passages.

A contracted brow is indicative of pain in the head. Constriction or sharpness of the nostrils indicates pain in the chest. A drawn upper lip is indicative of pain in the abdomen. Brain affections are indicated by a contraction of the upper third of the face; chest diseases, of the middle third; and diseases of the abdomen, of the lower third.

What is known as “the Hippocratic countenance” is the precursor of death. Pallor of the face, if the tongue is also pale, indicates poverty of blood or fainting. Congestion of the vessels of the tip of the nose or the cheeks suggests obstruction of the portal circulation or a tendency to degeneration of the arteries.

A puffiness about the eyes is suggestive of Bright's disease. A bronzed appearance of the skin is a symptom of Addison's disease. Undue prominence of the eyes indicates exophthalmic goiter. A small pupil which does not contract on exposure to the light is a nervous symptom of locomotor ataxia.

A NEW FOOD.—We quote the following paragraph from an exchange:—

“A proposed substitute for cod-liver oil is being manufactured in London under the name of ‘virol,’ and is highly approved by the *London Lancet*. It is a highly concentrated, complete food, prepared from the proteids, fats, and salts of beef and eggs, combined with extract of malt in carefully adjusted proportions. It resembles honey in appearance and consistence, and has a taffy-like taste.”

This new food is doubtless a great improvement upon cod-liver oil; still there is a chance for further progress in this direction. All flesh foods contain more or less ptomains. It is impossible to combine food elements artificially in such a manner as to produce a perfect food. While some of the best nutritive results may often be obtained by a combination of foods, it is nevertheless true that pure foods are only such as have been elaborated and developed in the laboratory of nature. Easily digestible proteids and fats or salts are found in large quantities in edible nuts, and the nutritive elements derived from them must certainly be purer and greatly superior in character to those obtained from dead animals.

Bromose, manufactured by the Modern Medicine Co., is a preparation similar to that above described, except that choice nuts are substituted for beef and other meats. It is prepared with great care, and is a most excellent food for making fat and blood. Send your address for circulars or further information.

ANSWERS TO CORRESPONDENTS.

BILIOUSNESS — HYPERPEPSIA — MALT, MALTINE, ETC.— E. A. S., South Carolina, asks the following questions: "1. Why is it that a continued use of your grain preparations, such as gluten, granola, etc., produces biliousness? Is it due to the grain or to the thin cream used on the grain? 2. Please suggest a diet that will suit hyperpepsia, and at the same time prevent biliousness. 3. Are any of the preparations of malt or maltine healthful? 4. Do you consider 'Bino-Kalafra' a good medicine? 5. Is bicycle riding suitable for one who has palpitation of the heart superinduced by dyspepsia?"

Ans.—1. Biliousness is not the result of the use of the foods mentioned. It is doubtless due to the use of milk or cream; they cause biliousness in many persons.

2. A dry diet of granose, with bromose, nuttose, and sweet, but not sweetened, fruits.

3. We have found bromose, a preparation of malted nuts, especially useful in such cases.

4. We cannot recommend it.

5. Yes; but violent exercise should be avoided.

ACID STOMACH — IRREGULARITY OF THE BOWELS, ETC.— A subscriber writes thus: "I am troubled with considerable acidity of the stomach, accompanied with burning and also irregularity of the bowels. They are sometimes loose, and again very constipated. Please outline a course of diet suitable to my case."

Ans.—A dry diet should be adopted, and the use of sugar, fats, acid fruits, mushes, gruels, and other soft, farinaceous foods, and especially such indigestible articles as pie, pickles, etc., avoided. Obtain a copy of "The Stomach: Its Disorders, and How to Cure Them," published by the Modern Medicine Pub. Co., Battle Creek, Mich.

ANTI-CEREAL DIET — EATING COLD FOOD.—H. C. M., Ohio, inquires: "1. Is there any danger in adopting the anti-cereal diet advocated by Dr. Emmett Densmore of England? 2. Is there danger in eating all one's food cold, if mastication is thoroughly performed?"

Ans.—There is danger if one confines himself largely to a meat diet. Probably the most of those who adopt the anti-cereal diet are chronic dyspeptics with dilated stomachs. Those who cannot digest starch in its ordinary form, find no difficulty in eating it in the form of bromose and granose.

2. No.

PROLAPSUS OF THE OVARY.—A correspondent asks: "Is it possible to have prolapsus of one ovary without having at least a partial prolapse of some of the other organs, particularly the uterus?"

Ans.—Yes.

CANNED FRUITS AND VEGETABLES — CRACKERS — COCOA SHELLS, ETC.—C. F. M., R. 1., asks: "1. Do you consider all vegetables healthful? 2. Is there any objection to fruits and vegetables (particularly tomatoes) put up in tin cans?

3. Are ordinary crackers objectionable? 4. Is there any harm in giving steeped cocoa shells continuously to children to drink? 5. Do you consider any preparation of malt beneficial?"

Ans.—1; No; many vegetables are poisonous. Most of those ordinarily used for food are wholesome. The coarser vegetables should be avoided by the majority of people with slow digestion.

2. No, if the canning is done with care.

3. Yes, decidedly so, as they contain lard or poor butter, and are so imperfectly baked that they swarm with germs.

4. It is a harmful drink.

5. The sirupy extract of malt is possibly beneficial in special cases. However, we find bromose more satisfactory.

FAT FOR COOKING — WARMED-OVER POTATOES, ETC.—Miss H. E. H., Washington, asks: "1. What kind of fat is best to use in cooking, or in oiling bake-pans, etc.? 2. Are warmed-over potatoes healthful food? 3. I have a breaking-out on the neck and shoulders that itches and burns very badly. What is the probable cause, and what ought I to do for it?"

Ans.—1. We recommend nut butter.

2. Yes, if properly cooked.

3. Probably indigestion. The eruption is probably eczematous in character. Apply a solution of permanganate of potash, twenty grains to the ounce, two or three times a day.

INDIGESTION — CONSTIPATION — RIGIDITY OF THE MUSCLES, ETC.—C. O. T., Iowa, writes thus: "1. My daughter (aged nineteen) when six years old had scarlet fever, and since then has had more or less trouble with indigestion and constipation. Several months ago while in college she was taken with rigidity of all the muscles of the body, and was unable to move or speak for about twelve hours. This was followed by partial paralysis of the left arm, and also sudden and frequent attacks of swelling of the feet and limbs and other portions of the body, during which the skin is red, and covered with pimples and blotches. The monthly periods are irregular and painful. 2. What is the probable cause? 3. What treatment would you recommend?"

Ans.—1. The young lady probably has hysteria and nettle-rash.

2. Indigestion and disturbance of the sympathetic nerve.

3. Dry diet, warm baths, abundance of outdoor exercise. Very likely a physician should be called.

INFLAMMATION OF CONJUNCTIVA.—Mrs. M. E. C., Mo., writes: "I have had inflammation of the conjunctiva for about six weeks, accompanied by a good deal of pain at times, with a watery discharge and a small amount of pus. The eyesight is good. Have applied the spray and sulphate of zinc, which gives relief for a short time, but the eyes do not get well. Would wearing spectacles be a benefit?"

Ans.—It is quite likely that you need to wear glasses. You should consult an oculist.

CHRONIC DIARRHEA.—J. V., Iowa, writes thus: "I am a man seventy years old. I have a chronic diarrhoea, which gives me little rest day or night. It has troubled me for a number of years, and is growing worse. Please give suggestions as to diet and treatment."

Ans.—Doubtless you have dilatation of the stomach and resulting indigestion. I would recommend an aseptic diet. It would be well for you to obtain a copy of "The Stomach: Its Disorders and How to Cure Them," Modern Medicine Pub. Co.

BUNIONS—ERUCTIONS OF GAS.—Mrs. L. L. H., S. Dak., asks: "1. Is there any relief for a bunion where the great toe is thrown out of joint? The joint is so sore that it will bear no pressure, and nothing seems to allay the inflammation. 2. Questions 2, 3, and 4 asked by Mrs. E. A. H., Wis., in May number, cover my case to a large extent. There is much belching of gas, and frequent severe pain extending from the stomach through to the back. The remedies suggested afford no relief."

Ans.—1. Apply fomentations two or three times a day, a moist compress at night, and give the joint complete rest for two or three weeks.

2. You would better obtain a copy of "The Stomach: Its Disorders and How to Cure Them," Modern Medicine Pub. Co., Battle Creek, Mich., and make a careful study of your case; then write again. You will find answers to all of your inquiries.

BOILS—STIFF LIMBS, ETC.—Mrs. E. R., S. Dak., writes as follows: "1. A friend has a baby five months old whose head is covered with boils, some as large as a hickory-nut. Some one advised the mother to boil shot with the baby's milk. If this is a proper remedy, what amount should be given? 2. A little girl of six had whooping-cough when a year old, and has been lame ever since. At times she can hardly bend her arms at elbows and wrists. Her legs, too, are so stiff that she never uses them with ease. Please advise as to diet and treatment. 3. A neighbor is troubled with sweating of the left side of the face during the eating of a meal. What does this denote?"

Ans.—1. The remedy suggested is a hazardous one; it might kill the child with lead poisoning.

2. The child needs thorough treatment; a warm bath daily for two or three weeks, each bath followed by tepid sponging and an oil rub, will probably be beneficial.

3. Disturbance of the abdominal sympathetic nerve. The trouble is possibly a serious one, and should have attention. Advise the patient to visit the Sanitarium for treatment.

NEURALGIA.—Mrs. C. J. R., Conn., writes as follows: "1. My daughter is a proof-reader, and thus is closely confined indoors. She is troubled with neuralgia in the chest, shoulders, and around the heart. Is fruit good for her? 2. Should she avoid strawberries? 3. Kindly advise me as to diet and treatment."

Ans.—1. Yes, if it agrees with the stomach.

2. Not unless there is evidence of indigestion produced by eating strawberries.

3. Granose, bromose, and antiseptic tablets would doubtless be beneficial.

WHISKY TREATMENT IN DIPHTHERIA, ETC.—A Tennessee reader of GOOD HEALTH writes as follows: "1. Kindly explain the effect of whisky treatment in diphtheria, snake poisoning, etc. 2. Why is it that though large quantities of spirits are taken, the ordinary indications of intoxication are not apparent? 3. What is the cause of heart failure in these cases?"

Ans.—1. It is not likely that whisky does any good; if the patient recovers, it is in spite of whisky and virus.

2. The system is struggling with a poison more virulent than whisky.

3. The effect of the virus upon the nerve centers.

SOUR BUTTERMILK—CORN BREAD, ETC.—W. P. McC., Ala., who is a canvasser, asks the following questions: "1. The buttermilk I am able to procure is often quite sour. Would you advise me to use it? 2. Would raw beaten eggs (three or four a day) be good food? 3. Is corn bread made with only water, a healthful bread? 4. Peas and beans are often used in this section in the following way: They are ground, and the dry meal is baked in a moderate oven until each particle is slightly brown; the meal is then eaten dry or made into a pudding. Is this manner of cooking wholesome? 5. Would sour unsterilized milk be injurious to a person having catarrh? 6. Would not cane-sugar when used with sour fruits be more digestible if cooked with the fruit a few minutes before taking it off the fire, thus changing the sugar to glucose? 7. Would sulphur be beneficial taken as an antiseptic by a person troubled with indigestion? 8. I travel mostly on foot. What health foods that I could carry would be best for me?"

Ans.—1. It is not the best food.

2. Eggs are the most digestible in this form.

3. Yes.

4. Yes.

5. Milk is usually more digestible in this form than in its ordinary state.

6. The amount of change occurring under these circumstances would not be sufficient to make much difference.

7. Sulphur is in some cases beneficial in small doses; the size of the dose should depend upon the conditions present, and the dose should be determined by a physician. An excellent combination of sulphur with other ingredients is found in the antiseptic charcoal tablets.

8. Granose cakes, granola, and bromose would probably furnish the most nourishment in compact form.

CHRONIC CYSTITIS.—J. U., Ont., writes as follows: "My wife is sixty-six years of age. Her trouble began eighteen months ago. She has pain in the neck of the bladder after urinating, which continues an hour or more unless relieved by a warm-water douche. The trouble occurs only in the afternoon or evening. What is the disease?"

Ans.—The disease is doubtless chronic cystitis. It requires local treatment. Would advise a visit to the Sanitarium.

LITERARY NOTICES.

THE STORY FOR THE PEOPLE.—Everybody should read "The Workingman's Tariff," the best political short story ever written. It shows exactly how the tariff robs the working man and working woman. Price five cents. A special rate of \$2.00 a hundred copies to all committees, clubs, labor-unions, and other organizations working for the interest of honest legislation. The *Detroit Free Press* says editorially of this story: "Its wide circulation ought to aid largely in the cause of tariff reform." Send for it, but do not send stamps. Paste your nickel or dime in the letter, or send P. O. order. Address all orders to the publisher of "The Workingman's Tariff," Ann Arbor, Mich.

THE July number of the *New Crusade* maintains its usual high standard. It contains an able and scientific article on "Heredity," by Louise C. Purington, M. D., and another of Mrs. J. H. Kellogg's practical and helpful papers, "Teaching Children Self-Control." The White Cross and White Shield Departments are given up to an extract from a very forcible sermon by the Rev. Jenkin Lloyd Jones on "No Sex in Crime." This partial enumeration is sufficient to indicate the valuable character of this excellent little magazine. It should be in the hands of every parent and teacher, every young man and young woman. It deals with questions discussed by no other periodical, and does so in the most delicate, scientific, practical manner. Subscription price, 50 cents per year. Address Wood-Allen Publishing Co., Ann Arbor, Mich.

WE have received from the Vegetarian Federal Union, London, Eng., the illustrated Vegetarian Year Book for 1896. This is a pamphlet of some 90 pages, and is a complete hand-book of, and guide to, the vegetarian movement in Great Britain. The following is a portion of the contents: Vegetarian Arguments, Digestion of Foods, Interesting Facts, Physical Feats (up to date), Butchery and its Horrors, Directory of Vegetarian Restaurants, Teachers of Vegetarian Cookery, Vegetarian Boarding-Houses, Vegetarian Societies, etc, etc. This is an exceedingly handy manual for reference, and with its array of startling statistics is invaluable to one writing or speaking upon this important subject.

Table Talk, the little magazine which upholds woman's interests by being "up to date" in everything pertaining to the home, and especially everything having reference to the dining-room and

kitchen, again shows its progressiveness throughout the current issue. Its timely articles on "Camp Life for Girls," by Mrs. Van Coert Schuyler; "Kindergarten in Neighborhood Work," by Nora Archibald Smith; "German Markets," by Lucy A. S. Geise; "Summer Desserts," by Eliza Parker, in addition to the regular departments containing recipes, menus, and entertainments, make the June number of special value. Housekeepers unacquainted with *Table Talk* should avail themselves of the publishers' offer of a sample copy free to any one sending his address to Table Talk Publishing Co., Philadelphia.

THE June *Arena* opens its sixteenth volume, appearing in a new dress. It is an unusually strong number, opening with a brilliant paper by the Rev. Samuel Barrows, D. D., the distinguished editor of the *Christian Register* of Boston, on "The First Pagan Critic of Christian Faith and His Anticipation of Modern Thought."

Justice Walter Clark, LL.D., of the Supreme Bench of North Carolina, contributes an instructive and delightful paper on Mexico; while the president of the Mercantile National Bank of New York sets forth "A Proposed Platform for American Independants for 1896." Professor Parsons, of Boston Law School, continues his masterly papers on the "Government Control of Telegraph." Mr. B. O. Flower, the editor of the *Arena*, writes in a most captivating manner of Whittier, considering him in the aspect of a "Poet of Freedom," and giving many of Whittier's most stirring lines. A fine portrait of the Quaker poet forms a frontispiece to this number.

"THE PITH OF ASTRONOMY" [without Mathematics].—The Latest Facts and Figures as Developed by the Giant Telescopes. By Samuel G. Bayne. With Illustrations. 16mo., cloth, ornamental. Harper & Brothers, New York.

The writer has compiled this book for the use of those who know little or nothing of astronomy, with the hope that it may lead them further to investigate that science. Told in this condensed form, it is hoped that the lay reader can remember much that will be interesting and useful, should he go no further. It is also intended to furnish a ready reference book for those who desire to refresh their memories, and to give information, in corrected form, from the most recent observations and calculations, without the expenditure of time incurred in searching larger works for simple information.

The COAST LINE to MACKINAC

— TAKE THE —



TO CLEVELAND
MACKINAC.

2 New Steel Passenger Steamers

The Greatest Perfection yet attained in Boat Construction—Luxurious Equipment, Artistic Furnishing, Decoration and Efficient Service, insuring the highest degree of

COMFORT, SPEED AND SAFETY.

FOUR TRIPS PER WEEK BETWEEN

Toledo, Detroit & Mackinac

PETOSKEY, "THE SOO," MARQUETTE,
AND DULUTH.

LOW RATES to Picturesque Mackinac and Return, including Meals and Berths. From Cleveland, \$18; from Toledo, \$15; from Detroit, \$13.50.

EVERY EVENING

Between Detroit and Cleveland

Connecting at Cleveland with Earliest Trains for all points East, South and Southwest and at Detroit for all points North and Northwest.

Sunday Trips June, July, August and September Only.

EVERY DAY BETWEEN

Cleveland, Put-in-Bay & Toledo

Send for Illustrated Pamphlet. Address

A. A. SCHANTZ, G. P. A., DETROIT, MICH.

The Detroit and Cleveland Steam Nav. Co.

MICHIGAN'S GREAT SUMMER RESORTS.

If you have ever visited Northern Michigan, you are going again this year, and want to know about train service, etc.; if you have never been there, a description of this Summer-land will interest you. In either case, send for the G. R. & I. Red Book for '96, containing maps, descriptions and views, list of hotels, rates, and through car arrangements. Through sleeping-cars from St. Louis, Chicago, Cincinnati, Louisville, Indianapolis, and Detroit, will be run on fast trains to Petoskey, Bay View, Harbor Springs, and Mackinaw, via Grand Rapids & Indiana R. R. For further information address

C. L. LOCKWOOD,
G. P. & T. A.,
Grand Rapids, Mich.



HYDROZONE

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 its Stability, Strength, Purity and Excellency.

CURES DISEASES CAUSED BY GERMS:

DIPHTHERIA, SORE THROAT, CATARRH, HAY FEVER, LA GRIFFE,—OPEN SORES: ABSCESSSES, CARBUNCLES, ULCERS,—INFECTIOUS DISEASES OF THE GENITO-URINARY ORGANS,—INFLAMMATORY AND CONTAGIOUS DISEASES OF THE ALIMENTARY TRACT: TYPHOID FEVER, TYPHUS, CHOLERA, YELLOW FEVER,—WOMEN'S WEAKNESSES: WHITES, LEUCORRHOEA,—SKIN DISEASES: ECZEMA, ACNE, Etc.

SEND FOR FREE BOOK OF 152 PAGES GIVING FULL INFORMATION.

PHYSICIANS REMITTING TWENTY-FIVE CENTS POSTAL ORDER WILL RECEIVE FREE SAMPLE BY MAIL.

AVOID IMITATIONS.

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

GLYCOZONE

Cures

Diseases of the Stomach

Sold by Leading Druggists.

MENTION THIS PUBLICATION.

PREPARED ONLY BY

Charles Marchand

Chemist and graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

28 Prince St., New York,

PUBLISHERS' DEPARTMENT.

The Sanitarium guests and patients are enjoying the most delightful summer weather with which this State is blessed. The lawn looks more beautiful than ever; and the palms and other tropical plants have been brought out of the green-house and scattered about the grounds, giving them a fine appearance. The fruit-trees in the rear of the lawn promise a good crop of fruit.

* *

THE indictment is sustained charging that the use of ordinary tea and coffee is responsible not only for indigestion but for impoverished blood, starved nerves, bad complexion, facial eruptions, and a great variety of ailments, which will quickly disappear when Caramel-Cereal, a delightful health drink, is substituted therefor. It is not claimed for Caramel-Cereal that it makes blood, or that it is in any sense a food. This cannot be true of any beverage of this sort. It is simply a drink which is innocent in character, and hence may well be substituted for tea and coffee by those who consider a beverage at meals essential.

Caramel-Cereal does not, as do ordinary tea and coffee, interfere with starch digestion. Those who make use of Caramel-Cereal as an aid to digestion will find great benefit from the use of Granola, Granose, and others of our health foods. Battle Creek Sanitarium Health Food Co., Battle Creek, Mich. Our goods are sold by the best grocers.

* *

A PRESS OPINION.—It has been said that "while drink has slain its thousands, gluttony has slain its tens of thousands," and it would be scarcely an exaggeration to add that impure and adulterated foods have slain their millions.

It is therefore the duty of every journal which seeks to protect the popular interests, to make known the quality of food products offered to the public, and to expose the bad and commend the good in no uncertain terms. In keeping with these principles, we take the greatest pleasure in fully and freely endorsing in unqualified terms the health foods, "Granola" and "Granose," and the delicious substitute for coffee, "Caramel-Cereal."

This last product is so far above the average, so utterly free from adulterants, so palatable, wholesome, and beneficial, that we esteem it worthy of special note and editorial

endorsement. That it is absolutely pure we have satisfied ourselves.

All of these superior food products are manufactured by the Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.—*American Trade Journal of Feb. 11, 1896.*

* *

PLAN your summer outing now. Go to picturesque Mackinac via the Coast Line. It only costs \$13.50 from Detroit, \$15.50 from Toledo, \$18 from Cleveland, for the round trip, including meals and berths. One thousand miles of lake ride on new modern steel steamers for the above rates. Send 2c. stamp for illustrated pamphlet. Address A. A. Schantz, G. P. A., Detroit, Mich.

* *

ONE THOUSAND FARMERS WANTED to settle on one thousand choice farms on the line of the Chicago, Milwaukee & St. Paul Railway in Dakota.

These lands are located in twenty different counties, and are to be had now at prices ranging from \$7 to \$15 per acre; a few months hence their value will be doubled.

For a home or for investment, no luckier chance in the West has ever before been offered. Now is the time to invest. No better farming land exists anywhere. No greater results can be obtained anywhere.

Schools and churches abound everywhere. Near by are markets for all farm products. South and North Dakota are the banner diversified-farming and stock-raising States of the West. Everything grows in Dakota except ignorance and intemperance. A new boom is on. Take advantage of the tide which leads to Dakota and to fortune.

For further information, address or call upon W. E. Powell, General Immigration Agent, 410 Old Colony Building, Chicago, Ills.

* *

D. & C. SUMMER SERVICE TO MACKINAC.—Their new steel passenger steamers are all in commission, making four trips a week between Toledo, Detroit, Mackinac, the Soo, Petoskey, Duluth. If you are contemplating a summer outing, send 2c. stamp for illustrated pamphlet. Address A. A. Schantz, G. P. A., Detroit, Mich.

Caramel = Cereal,

for the last twenty years, has been used by the thousands of invalids who annually visit the great Sanitarium at Battle Creek, Mich.

UNCONSCIOUS POISONING.—An old physician of Chicago remarked the other day: "Thousands of people are poisoning themselves daily with tea and coffee without knowing it. A great number of nervous maladies, and indigestion in various forms, are the result of the deleterious effects of the poison of tea and coffee upon the system. I myself made the discovery a good many years ago, that the headaches from which I had suffered for years, were due to the use of tea and coffee. I found whenever I took a cup of strong coffee, I had a headache as the result, and I had headaches now and then in spite of what I considered my great moderation in the use of tea and coffee. I concluded to dispense with them altogether, and when I did so, my headaches disappeared and did not return. I have cured scores of chronic headaches by forbidding the use of tea and coffee."

CARAMEL-CEREAL is a perfect substitute for tea and coffee. It is aromatic, delicious to the taste, and so nearly resembles coffee as to be easily mistaken for veritable Mocha, although, of course, not by a connoisseur.

For illustrated catalogue and prices, address,

BATTLE CREEK SANITARIUM HEALTH FOOD CO., Battle Creek, Mich.

DIRECTORY OF SANITARIUMS.

THE following institutions are conducted under the same general management as the Sanitarium at Battle Creek, Mich., which has long been known as the most thoroughly equipped sanitary establishment in the United States. The same rational and physiological principles relative to the treatment of disease are recognized at these institutions as at the Battle Creek Sanitarium, and they are conducted on the same general plan. Both medical and surgical cases are received at all of them. Each one possesses special advantages due to locality or other characteristic features.

ST. HELENA SANITARIUM, OR RURAL HEALTH RETREAT,

ST. HELENA, CAL.

W. H. MAXSON, M. D., Superintendent.

IRVING E. KECK, Business Manager.

THIS institution is beautifully located at the head of the Napa Valley. It is a fine large building, with excellent appointments, and all facilities required for the treatment of chronic invalids of all classes. It has also a record for a large amount of successful surgical work. There are several able physicians connected with the institution. The scenery is delightful, the climate salubrious; the water supply which is furnished by mountain springs, is pure and abundant. Hundreds of cases of diseases generally considered incurable have been successfully treated at this excellent institution during the twenty years of its existence.

CHICAGO SANITARIUM,

28 COLLEGE PLACE, CHICAGO, ILL.

THIS institution is a branch of the Battle Creek (Mich.) Sanitarium. It is favorably located near Lake Michigan, in the southern portion of the city, close to Cottage Grove avenue, and facing the old Baptist University grounds. A few patients are accommodated. Facilities are afforded for hydrotherapy, and the application of massage, electricity, Swedish movements, and other rational measures of treatment.

NEBRASKA SANITARIUM,

COLLEGE VIEW (LINCOLN), NEB.

A. R. HENRY, President.

A. N. LOPER, M. D., Superintendent.

COLLEGE VIEW is a thriving village located in the suburbs of Lincoln, with which it is connected by an electric railway. College View is the seat of Union College, one of the leading educational institutions of the West. The Sanitarium has a beautiful location, facing the spacious college grounds, and gives its guests the advantages of a quiet, homelike place, combined with appropriate and thoroughly rational treatment. It has a full equipment of excellent nurses, and has already won for itself an enviable reputation in the West.

PORTLAND SANITARIUM,

PORTLAND, ORE.

L. J. BELKNAP, M. D., Superintendent.

THIS institution is beautifully located in the center of the city, in a fine building with spacious grounds; and although it has been in operation scarcely more than a year, it already has a good patronage, and has evidently entered upon a successful career. Facilities are provided for the dietetic and medical treatment of chronic ailments of all kinds. The advantages for treatment include, in addition to various forms of hydrotherapy, electric-light baths, and apparatus for the application of electricity in its various useful forms, manual Swedish movements and massage.

COLORADO SANITARIUM,

BOULDER, COLO.

O. G. PLACE, M. D., Superintendent.

THIS institution is located on a beautiful site of one hundred acres, including a fine mountain peak, and commanding extensive landscape views which, for variety and beauty, can hardly be equaled. The site adjoins the thriving city of Boulder, and is about one hour's ride by rail from Denver, the streets and principal buildings of which are easily discernible from the peaks around Boulder. The equipment consists of a large building especially erected for the purpose, two fine cottages, and every appliance for the application of hydrotherapy, and for the special treatment of pulmonary ailments, to be found in the best establishments of like character. Particular attention is given to the dietetic treatment of patients, and to systematic exercise, in addition to the special treatment for specific ailments. The altitude is between five and six thousand feet, just that which has been determined to be the best for pulmonary troubles. Though but a few months have elapsed since the work of this institution was fairly begun, a large number of persons suffering from pulmonary tuberculosis have already been cured, and are now rejoicing in sound health. The rational hygienic treatment, with the climatic advantages, has proved effective in the cure of cases which, without the combined advantages of these superior measures, must certainly have succumbed to the disease.

GUADALAJARA SANITARIUM,

STATE OF JALISCO, MEXICO.

D. T. JONES, Superintendent.

ADDIE C. JOHNSON, M. D.,

J. H. NEALL, M. D.,

} Physicians.

THIS institution, established in 1894, is the first and still the only one of the kind in Mexico. It affords, in addition to the unsurpassed climatic advantages of the region in which it is located, facilities for the employment of hydrotherapy, electricity, massage, manual Swedish movements, and dietetics, in the treatment of all forms of chronic disease. The altitude is the same as that of Denver,—from five to six thousand feet. Guadalajara has the advantage of a climate more nearly uniform than any other with which we are acquainted. Located in the tropics, it enjoys almost perpetual sunshine, while its altitude is such as to prevent excessive heat. There is probably no better place on earth for a pulmonary invalid. It is only necessary that the advantages of this institution should become known to secure for it extensive patronage.

INSTITUTE SANITARE,

BASEL, SWITZERLAND.

THIS institution affords the only place in Europe where patients can receive the advantages of a thoroughly hygienic diet, baths, electricity, Swedish movements, massage, and various other methods of treatment, applied after the manner and in accordance with the same principles which govern the Battle Creek Sanitarium and its several branches. The physicians are persons who have received a thorough training in the institution at Battle Creek. Terms are moderate. No better place for sick persons or semi-invalids abroad than the Institute Sanitare.

Address, 48 Weiherweg.



BATTLE CREEK (MICH.) SANITARIUM

HEALTH FOODS

ESTABLISHED 1876

Granola,

An Invalid Food prepared by a combination of grains so treated

as to retain in the preparation the **Highest Degree of Nutrient Qualities**, while eliminating every element of an irritating character.

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 KALAMAZOO BOOK HOLDER.

Best For Webster's.
For Standard.
For Bradstreet's.
For Dun's.

BEST FOR ANY LARGE BOOK.

For Sale by . . .
Leading Booksellers
all over the
Country.

For Catalogue, Address

IHLING BROS. & EVERARD, Man'rs,
KALAMAZOO, MICH.

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.

Modern Medicine Company,
Battle Creek, Mich.

Modern Medicine Library.

\$1.00 a Year.

THE publishers of MODERN MEDICINE will issue each month during the year 1896, under the above title, a brochure on some practical medical topic. The first number consists of a paper by Dr. J. H. Kellogg, entitled, "**What is the Matter with the American Stomach?**" which presents the results of new and interesting inquiries respecting the morbid conditions of the stomach, and their causes.

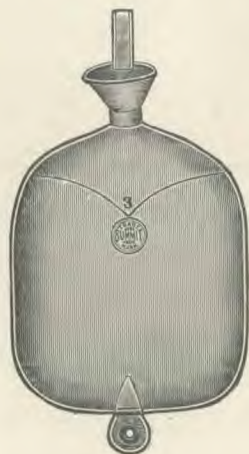
The following additional numbers are already in preparation:—

- "**The Liver: Its Diseases and Modern Methods of Treatment,**" by Dujardin-Beaumetz.
- "**Auto-Intoxication and Its Relations to Diet and Therapeutics,**" by Bouchard and Rogers.
- "**The Importance of Intestinal Asepsis and Antisepsis in Abdominal Surgery.**"
- "**Scoliosis: Its Etiology, and Rational Treatment by Massage, Swedish Movements, Gymnastics, and Electricity,**" by Dr. T. J. Hartelius, Director of the Central Institute of Gymnastics, Stockholm, Sweden.
- "**Diabetes: Its Causes and Successful Modes of Treatment.**"
- "**Enteroptosis, or Dislocation of the Abdominal Viscera and Its Relation to Neurasthenia, Indigestion, Constipation, Rheumatism, Bright's Disease, and other Chronic Maladies; Its Cause and Rational Methods of Cure,**" by Trastour, Glenard, and others.
- "**The Value of Strength Tests in the Prescription of Exercise, and a Comparative Study of the Strength of Individual Groups of Muscles, and of Homologous Muscles, in Men and in Women,**" by J. H. Kellogg, M. D.

Several of these brochures will be good-sized pamphlets, any one of which will be well worth the price charged for the entire series.

MODERN MEDICINE PUBLISHING CO., Battle Creek, Mich.

HOT-WATER BAGS.

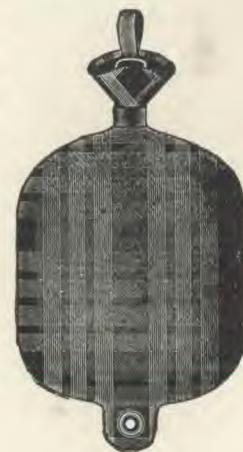


Style A.
WHITE RUBBER.

As a foot-warmer, or for applications of either moist or dry heat, this bag is invaluable. For moist heat, wring a flannel cloth from hot water, and lay on the bag. It is a durable article, and one not willingly dispensed with after once using.

STYLE B. FLANNEL COVERED.

The same bag covered with flannel or sateen, which to many makes it much more agreeable as a foot-warmer.



Style B.
FLANNEL COVERED.

SPINE BAGS.



RUBBER SPINE BAGS. Very strong and durable; essential in the treatment of some forms of Dyspepsia, Spinal Irritation, and many nervous diseases.

SEND FOR CATALOGUE

SANITARY AND ELECTRICAL SUPPLY CO., Battle Creek, Mich.



CHICAGO & GRAND TRUNK R. R.

Time Table, in Effect March 20, 1896.

GOING EAST. Road down.					STATIONS.	GOING WEST. Road up.					
10 Mail Ex.	4 P. M. Ex.	6 A. M. Ex.	6 MIXED Tr'n.	42 P. M. Pass.		11 Mail Ex.	1 Day Ex.	3 P. M. Ex.	23 R. A. L. V.	23 B. C. Pass.	5 P. M. Ex.
10.00	8.10	8.15			D. Chicago, A.	6.45	1.50	9.10			6.30
11.25	5.05	10.30	6.00		Valparaiso.	5.05	11.35	7.10			4.30
					South Bend.	3.10	10.15	5.44			3.07
					Cassopolis.	2.15	9.40	5.13			2.25
					Schoolcraft.	1.20					
					Vicksburg.	1.10	8.52				1.30
					Battle Creek.	12.15	8.15	3.55	9.35	12.50	
					Charlotte.	11.11	7.29	3.07	8.40	11.55	
					Lansing.	10.40	6.55	2.40	8.00	11.25	
					Durand.	9.35	6.05	1.55	6.50	10.25	
					Flint.	8.35	5.35	1.28	5.47	9.30	
					Lapeer.	7.49	5.02	1.00	5.10	9.05	
					Trlay City.	7.25				4.48	
					Tunnel.	6.50	3.55	11.55	3.50	7.55	
					Detroit.				10.40	4.05	8.00
					Toronto.				9.20		1.00
					Montreal.						
					Boston.				8.30		
					Susp'n Bridge.				10.15	7.05	2.05
					Buffalo.						1.00
					New York.				8.15	6.10	9.00
					Boston.						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.

The New Crusade.

(FORMERLY THE "MOTHERS' FRIEND.")

A Monthly Periodical Issued in the Interest of the Home and Society.

EDITED BY MARY WOOD-ALLEN, M. D.

The success of the "Mother's Friend" in the first year of its existence, induces the publishers to enlarge its size and broaden its scope.

While continuing to emphasize the educational phase of Purity Work, it will also discuss the Rescue Work, the questions of legislation in behalf of morality, and all topics of health and heredity.

It will aim to present in a plain and practical way, an answer to the many moral problems that are continually presenting themselves to parents, and are not treated in other periodicals.

The NEW CRUSADE will wage a peaceful war against all forms of evil, and strengthen the good name which it has earned as the "Mother's Friend."

Send for circular concerning club rates and advantages secured to those who desire to club with other periodicals.

Personal problems can be presented to the editor, and if of general interest, will be answered through the publication.

Single Copy, 5 cts.

Subscription, 50 cts. per Year.

For sample copy or further particulars, address the publishers,

WOOD-ALLEN PUBLISHING CO.,
 ANN ARBOR, MICH.

MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected June 21, 1896.

EAST.		*Night Express.	Detroit Autom.	†Mail & Express.	*N. Y. & Bos. Spl.	*Eastern Express.	*Atlantic Express.	
STATIONS.								
Chicago	pm 9.40			am 6.50	am 10.30	pm 3.00	pm 11.30	
Michigan City	11.25			8.48	pm 12.08	4.50	am 1.14	
Niles	am 12.28			10.15	1.00	5.55	2.25	
Kalamazoo	2.16	am 7.20		11.52	2.08	7.16	4.12	
Battle Creek	2.55	8.10	pm 12.50	2.42	7.55		4.53	
Jackson	4.30	10.00		2.35	4.05	9.20	6.30	
Ann Arbor	5.40	11.05		3.47	4.58	10.17	7.35	
Detroit	7.10	pm 12.20		5.30		11.20	9.00	
Buffalo			am 12.10		am 6.45		pm 5.30	
Rochester					3.00		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	10.45	
WEST								
STATIONS.		*Night Express.	*N. Y. Ros. & U. S. Sp.	†Mail & Express.	*S. Shore Limited.	*West'n 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	2.15	am 7.20
Rochester				10.37		1.20	4.10	am 9.55
Buffalo				11.45		2.20	5.30	pm 3.25
Detroit	pm 8.30	am 6.30	am 7.15	8.30	pm 12.55	pm 1.45		11.05
Ann Arbor	10.10	7.35	8.38	9.25	1.55	5.55	am 12.15	
Jackson	11.30	8.35	10.43	10.30	2.57	7.35	1.25	
Battle Creek	am 12.45	9.48	pm 12.15	11.40	4.14	9.11	2.55	
Kalamazoo	1.35	10.37	1.07	pm 12.17	4.52	10.00	3.45	
Niles	3.30	11.48	3.10	1.45	6.27		5.08	
Michigan City	4.35	pm 12.50	4.32	2.45	7.25		6.01	
Chicago	6.30		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 12:25 p. m. and 6:35 p. m. daily except Sunday.
 O. W. RUGGLES, General Pass. & Ticket Agent, Chicago.
 GEO. J. SADLER, Ticket Agent, Battle Creek.

THE CYCLONE WASHER



Stands Without a Rival.

Gives more satisfactory results with less expenditure of energy than any other washing machine. Buy a "Cyclone" and save your strength, is what the people say. We give the following from among the testimonials we are receiving daily.

TERRA CEIA, FLA., Jan. 29, 1896.

CYCLONE WASHER CO.,

I received the washer some time ago, and to say that I am pleased with it is too tame. I am perfectly delighted with it. Have shown it to several, and they are all pleased with the work and talk of buying one. Shall begin for orders and will want a dozen in a few days.

Yours truly,

MRS. E. A. LENNARD.

BATTLE CREEK, MICH.

MESSRS. COON BROS.,

Gentlemen: It gives me pleasure to add one more to your list of testimonials for the "Cyclone Washer." We have one in our family, and do not see how we could get along without it. The washing, instead of a drudgery, has become a mere pastime. It ought to be in every family.

Sincerely,

FRANK ARMSTRONG.

MANUFACTURED BY COON BROS.,

20 HANOVER STREET, BATTLE CREEK, MICH.
 Agents Wanted Everywhere.

The Stomach: Its Disorders and How to Cure Them. ❀❀❀❀

By J. H. KELLOGG, M. D.,

Superintendent of the Battle Creek (Mich.) Sanitarium, Member of the British and American Associations for the Advancement of Science, the American Microscopical Society, the Society of Hygiene of France, Author of the Home Hand-Book of Domestic Hygiene and Rational Medicine, Etc.

A BRIEF, practical treatise on the most common of human ailments, in which the causes and cure of the functional disorders of digestion are dealt with in a clear and practical manner.

The Following are Leading Chapter Headings:

The Organs of Digestion,
Foods,
The Digestive Fluids,
General View of the Digestive Process,
The Maladies of the Modern Stomach,
Important and New Discoveries Relating to Digestion,

The Symptoms of Dyspepsia,
The Systematic Treatment of Indigestion,
Treatment of Dyspepsia,
Remedies for the Home Treatment of Dyspepsia,
Quacks and Nostrums.

The work is illustrated with more than one hundred and thirty cuts, including eleven full-page plates, three colored plates, etc.
This work ought to be in the hands of every dyspeptic.

MODERN MEDICINE PUBLISHING COMPANY.

The "Natural Abdominal Supporter"



Especially designed for persons of both sexes who are suffering from prolapse of the bowels or stomach, floating kidney, and other abdominal or pelvic displacements. The "Natural Abdominal Supporter" is more

Efficient, Comfortable, and Convenient



than any other which has been devised, and supports the organs of the abdomen in a natural way. No other single measure is so valuable in the treatment of the diseases of women and many forms of dyspepsia and constipation. Obviates the necessity for internal supports, and for surgical operations in many cases.

Does not interfere in any way with any bodily movement nor with the clothing. For descriptive circular, address,

MODERN MEDICINE COMPANY, Battle Creek, Mich.

Battle Creek (Mich.) Sanitarium

HEALTH



FOODS.

Food Cure for Constipation.

AN inactive state of the bowels is one of the most common causes of many serious maladies. Chronic headache, biliousness, hemorrhoids, backache, and perhaps more serious constitutional ailments, may be readily attributed to habitual constipation.

**Mineral Waters, Laxatives, "After-Dinner" Pills, do not Cure.
Orificial Surgery does not Cure.**

Constipation is due, in the majority of cases, to errors in diet, and hence can be best cured by diet. An excellent remedy for this common malady has been found in **GRANOSE**, a new food recently invented at the Battle Creek Sanitarium, where it is extensively employed as a food remedy in many forms of indigestion, especially in cases of constipation.

GRANOSE CURES CONSTIPATION, not by producing a laxative effect, but by removing the cause of the disease. Granose is prepared from wheat. It is not a medicine, but a food so delightfully crisp, delicate, and delicious, that everybody likes it. **TRY IT.**

A well-known Boston merchant writes of Granose: "The Granose is splendid; everybody is after it at our table."

For Circulars, etc., address **BATTLE CREEK SANITARIUM HEALTH FOOD CO.**, Battle Creek, Mich.

J. FEHR'S

"COMPOUND TALCUM"

"BABY POWDER,"

The "Hygienic Dermal Powder" for Infants and Adults.

Originally investigated and its therapeutic properties discovered in the year 1868 by Dr. Fehr and introduced to the Medical and the Pharmaceutical Professions in the year 1873.

COMPOSITION —Silicate of Magnesia with Carbolic and Salicylic Acid.

PROPERTIES —Antiseptic, Antizymotic, and Disinfectant.

USEFUL AS A GENERAL SPRINKLING POWDER,

With positive Hygienic, Prophylactic, and Therapeutic properties

GOOD IN ALL AFFECTIONS OF THE SKIN.

Sold by the Drug Trade generally. Per Box, plain, 25c.; perfumed, 50c.; Per Dozen, plain, \$1.75; perfumed, \$3.50

THE MANUFACTURER:

**JULIUS FEHR, M. D., Ancient Pharmacist,
MOBOKEN, N. J.**

Only advertised in Medical and Pharmaceutical prints.



Battle Creek Sanitarium

is acknowledged to be the
Oldest and Most Extensive
 Sanitarium conducted on Rational Principles
 in the United States. It has the special ad-
 vantages of an

Elevated and Picturesque Site, and

Remarkably Salubrious Surroundings. The buildings are lighted by 1700-light plant, Edison incandescent system. Safety hydraulic elevators. General parlor, 40 x 50 feet. Dining-room with a seating capacity of 400. Cuisine unsurpassed.



Everything an Invalid Needs.

Special dietaries prepared as directed. The institution affords facilities for

Baths of Every Description:

Turkish, Russian, Vapor, Electric, Water Baths of all kinds, the Electric Light Bath, and a large Swimming Bath.

Scientific Hydrotherapy.

Electricity in Every Form.

Massage and Swedish Movements

(by Trained Manipulators).

Mechanical Appliances of all sorts.

A Fine Gymnasium (with Trained Directors).

Classified Dietaries.

Unequaled Ventilation, and

Perfect Sewerage.

Artificial Climate

for those needing special conditions.

Thoroughly aseptic surgical wards and operating rooms.

All conveniences of a first-class hotel. Incurable and offensive patients not received.

Trained Nurses of either sex furnished at reasonable rates.

For Circulars, address **Battle Creek Sanitarium,** Battle Creek, Mich.