

MARCH, 1891.

GOOD



HEALTH

CONDUCTED
BY

J. H. KELLOGG M.D.

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TRACTIONS
FOR 1891.

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DR. FELIX L.

OSWALD,

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General Articles, Devoted to practical hygiene and popular medical papers.

The Home Gymnasium. This department will present, during the year, instruction which, if carefully followed, will in a few months give to any young man or woman a good figure and a graceful and dignified bearing. Illustrations each month.

Dress. In the interest of rational "dress reform," this department will oppose extreme notions, and by practical illustrations and suggestions point out the way to a sensible conformity with the laws of health.

Social Purity. This department represents the interests of all that pertains to the purity of morals in the individual, the home, and society.

Medical Frauds. This department will contain, each month, reports upon the results of the most recent authentic and original investigations of the nature and composition of secret nostrums, and the methods of secret systems of medical treatment. The exposures already prepared for this department for 1891, are of THE MOST STARTLING CHARACTER.

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J. H. KELLOGG, M. D.

A Doctor's Chats with his Patients. This department will contain, each month, a racy discussion of live medical topics, such as Koch's new discovery for the cure of consumption, new ideas in medical philosophy, simple remedies for disease, new theories of disease, etc.

Household Science. In this department Mrs. Kellogg will continue to give to the readers of GOOD HEALTH the invaluable results of years of work in her experimental kitchen, and experience gained in the management of the cuisine of the largest Sanitarium in the world, and the instruction of classes in the Sanitarium School of Domestic Economy. Other writers will also contribute to this department.



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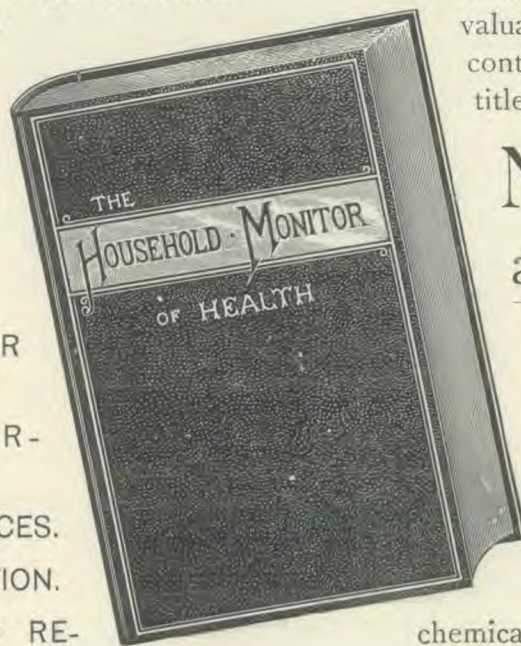
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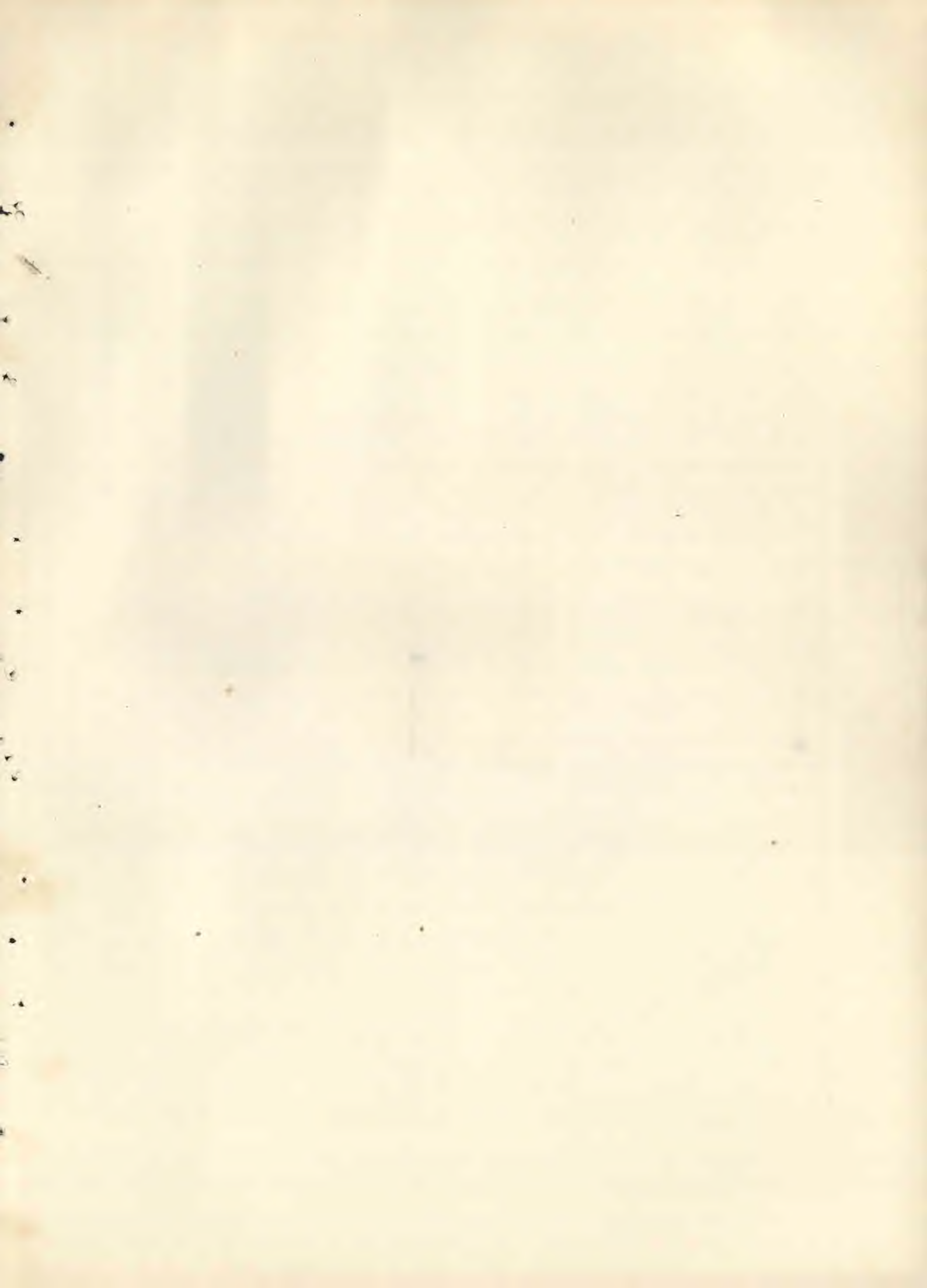
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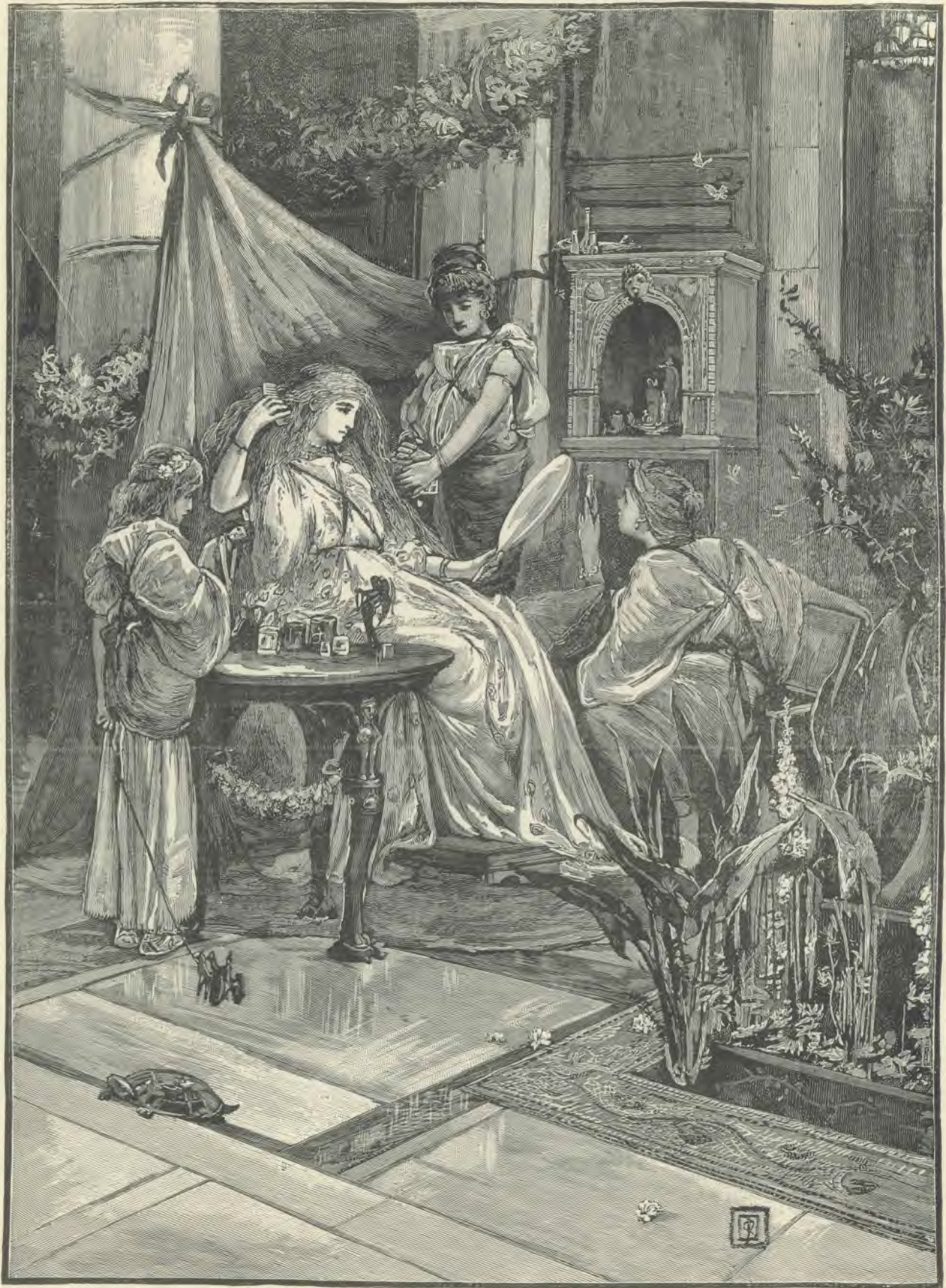
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A LADY OF POMPEII.



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MARCH, 1891.

INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

23.—New Zealand.

THE British geologist, Murchison, once received a collection of minerals from New South Wales, and at the first glance at certain varieties of quartz stones, predicted that the Australian colonies would one day be excited by the discovery of rich gold mines.

If the principles of analogy could with equal certainty be applied to the moral influence of climate, a glorious national future might be predicted for the colony of New Zealand. The latitude of the three large islands comprised under that name corresponds almost exactly to the twelve degrees from the northernmost point of Italy to the southern cape of Greece (35-47°), thus comprising the region which in the Old World developed the fairest flowers of human prosperity. The climate of that region, too, bears a striking resemblance to that of Southern Europe. In North America, such analogies are rather deceptive; Boston, under the parallel of Rome, has the winter frosts of St. Petersburg; and St. Louis, several hundred miles further south, is subject to blizzards that would appall a Swedish hunter. But in New Zealand, the temperature of the principal towns and settlements can be nearly exactly ascertained by a comparison with places under the same parallel on the map of Europe. Moreover, the principal mountain-ranges of the three islands are covered with primeval forests almost up to the border of perpetual snow, and thus insure immunity from the plagues by which nature has avenged the sin of tree-destruction in many regions of the Mediterranean peninsulas. Droughts are rare, siroccos unknown, and no fever-

swamps skirt the depths of the river valleys. Almost anywhere along the six thousand miles of coast line, the sea can be approached by dry land roads, thus encouraging the propensity of marine excursions, the "adventure trips" by which Helvetius explains the prowess of the ancient Greeks. Those advantages were not wholly lost upon the aborigines of the island empire. The first explorers of New Zealand, indeed, encountered a race of natives so unmistakably superior to the autochthons of the Australian continent that they doubted their affinity with any of their South Sea neighbors, and indulged in all sorts of fanciful theories as to the possible origin of the valiant Maoris.

That question has never yet been satisfactorily solved, at least not upon the hypothesis of a common Asiatic origin of the human race. The natives of New Zealand have neither the frog skulls of the Eastern Mongols, nor the flat noses and thick lips of the Malays; but on the other hand, approach a little closer to the Ethiopian type by the curious frizzle-curls observed in the hair of some of their tribes. Straight, almost Grecian, profiles prevail, and together with jet-black, expressive eyes and faultless teeth, more than outweigh such defects as slightly projecting cheekbones and rather narrow foreheads. The chin is more prominent than in any other tribe of so-called savages, and the complexion, though dark, would not answer the description of "copper-colored," but rather resembles the peculiar olive-brown of Southern Europe.

Should these characteristics indicate an admixture

of Caucasian blood? The naturalist Lesson, who spent many years among the natives of North Island, remarks that their ideals of beauty agree pretty nearly with those of our own countrymen, and that slender, small-mouthed, and straight-nosed females are in special request; while in Western Africa, baboon-snouts and pot-bellies are at a premium. And even among their enemies, the Maoris are always ready to admire exemplars of manly vigor. The fugitives of their poor, harassed hill tribes, vanquished by land-greedy swarms of the British colonists, and paying

six or five feet eight, who managed to hold their own against burly British wrestlers, and without an apparent effort walked off with weights that would have taxed the combined strength of four ordinary European porters.

In leaping, too, the visitors of the native camps have witnessed astonishing feats, but the chief *forte* of the aborigines is in aquatic gymnastics. The idea that a full-grown, able-bodied man should be unable to swim, is so altogether inconceivable to the Maoris that they often have been known to witness the life-and-death struggle of a drowning foreigner with silent surprise, puzzled at the antics of the shrieking swimmer, and never suspecting that he could be in need of help. Their own children are at home in the water from five years up, and a coast dweller, during his evening bath, will consider it a rare chance for sport to dodge and dive about a hungry shark, and aggravate the would-be man-eater by all sorts of mischievous pranks. The "war canoes" of the natives are often large enough to hold forty men, and being hollowed out from a single tree, are necessarily somewhat clumsy and heavy; yet if a boat of that sort should be capsized in the breakers, the occupants will right it in less than a minute, besides recovering whatever odds and ends may have been dropped in the spill.

A North Island canoe presented to the British Museum, displays an amount of carving which seems to indicate that the natives must either have a large assortment of wood-working tools or a great deal of leisure; but the true explanation is that the instinct of ornamentation has assumed the strength of a hereditary passion among the Maoris. The females of rival households will spend months in elaborating new patterns of gaudy colors in the braiding of mats and screens woven from the tough fiber of the *phormium tenax*; and forks carved from human arm bones, are adorned with raised ornaments in white and greenish-blue mother-of-pearl, as tastefully grouped as on any cameo from the workshop of an Italian lapidary.

Still more labor is expended in personal decoration, and the tyranny of fashion reaches its *ne plus ultra* in the tattooing practice of the New Zealand natives. Wasp waists, corsets, and Chinese foot-screws are bad enough, but neither among the Mongols nor Caucasians could many individuals be found who would ever submit to the torments which a Maori dandy undergoes every year, and sometimes twice and three times a year. A professional tattooer will produce a groundwork of indelible colors at the first attempt, but fashion requires that, besides, the patterns should stand out in raised designs; and in order to bring that alto-relief to the requisite degree of perfection,



NEW ZEALAND CHIEF.

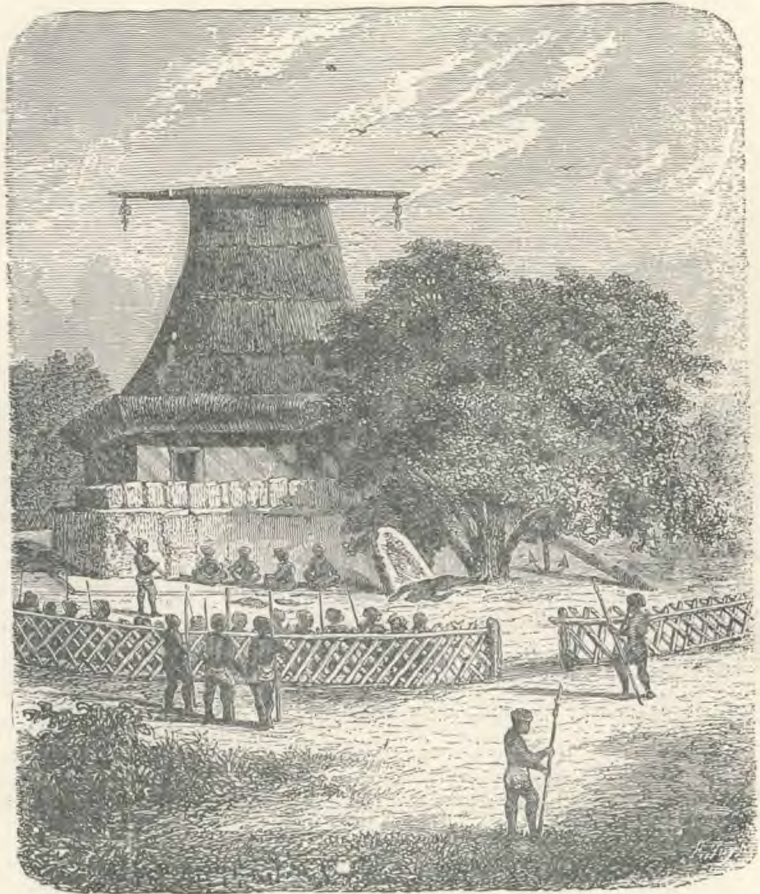
the penalty of defeat by cruel privations, would crowd about the settlements of their oppressors to witness a foot-race or a wrestling-match, and swell a shout of applause with all the self-forgetting enthusiasm of Spartan athletes in the camp of their Macedonian enemies. Slade, the "Maori," was not even a half-breed, and the New Zealander Fitzsimmons is a full-blooded Caucasian; but the natives of the three islands have turned out countless "light-weight champions,"—slender, small-handed fellows of five feet

the martyrdom has to be repeated from twelve to twenty times, possibly oftener, if the artist operates upon a victim of his own family. One favorite pattern is the emblem of concentric rings punched upon the cheeks and repeated on the legs and arms. Figures like spear heads are stamped, sharpest angle downward, upon the chin, with similar but smaller designs at the points where the lips touch the cheeks, and sometimes supplemented with a fourth copy, point up, between the eyebrows. Women glory in a belt of lozenge-shaped figures around the waist, and one tribe of hill dwellers is distinguished by an emblem resembling a butterfly, or rather a "mosquito-hawk," stamped midway between the eyes, with its wings overarched the eyebrows right and left, and the long body extending along the ridge of the nose. The braves of that tribe reserve the privilege of displaying that design in black, leaving their females to choose among the more frivolous colors — red or sky-blue.

It may be imagined that conspicuous designs of that sort give the countenance the oddest kind of expression — expressions often quite at variance with the real character of the wearer, who may be a light-hearted, jovial kind of fellow, while the black ridge between his eyes stamps him with the appearance of a perpetual scowl. Spear-head lines drawn upward from the corners of the mouth, may impart the still stranger look of a stereotyped grin, and the butterfly wings, half encircling the eyebrows, suggest the rims of old-fashioned spectacles, balanced on the bridge of the nose.

But the mandates of fashion which act as an anæsthetic against the tortures of a tight corset, seem as effectually to fortify the New Zealanders against the arguments of the looking-glass. "I would as soon persuade the natives that they must renounce the world and do penance in hair shirts and cowls," says an English traveler. "They will abstain from war, they will forgive their enemies and almost forgive their renegade friends, they may be induced to spend the Sabbath in Quaker fashion, and exchange their reed pipes for tracts, but they would as soon part with their eyes as with their tattoo marks. My first theory was that the very misery of the tattooing process had made them unwilling to admit that they had undergone all that trouble in vain; but private con-

versation with intelligent natives has inclined me to adopt a different mode of explanation. The truth seems to be that rules of etiquette, handed down through many generations, have incurably impressed these poor folks with the notion that it is indecent for a full-grown person to exhibit himself or herself in an untattooed face. They blush, they wince at the mere idea of thus being seen in public, and marvel at the hardihood which enables foreigners to defy public opinion in that respect. A native boy who



A TEMPLE OF CANNIBALISM.

had been educated at Auckland was restored to his parents, and redeemed by a preliminary tattoo during the first night after his return. 'They laughed at his boots and at his funny coat,' said the boy's mother, 'and I would n't mind all that; but it would just knock me down to hear the jeers if he were to enter an assembly of our folks *with his face undressed*. I could not get over it; I know I could n't. The shame of it would kill me.' They tolerate an 'undressed face' only in babies, just as in certain parts of Southern Europe young children are permitted to go about in complete undress; but native chieftains

with a sense of propriety would think it a scandal to keep even an untattooed slave, unless he should be a son of a hostile tribe whom they might desire to humble by a special disgrace."

Freedom from prejudices is an outcome of the highest civilization, but also of the lowest, and the veriest savage may defy the opinion of his neighbors as successfully as the self-dependent philosopher; the one is below, as the other is above, the reach of social ostracism. The tattoo and etiquette-worship of the Maoris, in fact, is a proof that they have already emerged from the lowest depths of barbarism. Additional evidence of that fact is their respect for the law of *taboo*. "Religious interdict" would perhaps be the best translation of that much misconstrued word. A plot of ground, consecrated by the burial of a venerable chief, is "tabooed" for all time to come, and exempted from taxes and tillage; the scene of a treaty or of a victorious battle is tabooed for a certain number of years. But on the other hand, persons who have made themselves obnoxious to the priests or chieftains, may be "tabooed" in a sense suggesting the "boycotts" of Irish tenants. Whole British settlements were tabooed by the neighboring tribes of natives, and could neither hire laborers nor buy provisions till the interdict had been revoked; and it speaks well for the sanitary instincts of the native New Zealanders, that many of their tribes tabooed European stimulants—tobacco, beer, and brandy. "Touch not, handle not," was in that case a rule so literally construed that native teamsters refused even to pollute themselves by the transportation of rum barrels, and native coolies declined to work in the tobacco fields.

The aborigines of the South Island seem in that respect to be rather less scrupulous. They smoke, and have become fond of a vile liquor prepared from the fermentation of fern roots; but that conformity to foreign customs has failed to conciliate the good will of their conquerors. The sloth and the filthy habits of the "bush-niggers," as their white

neighbors call them, is a favorite topic of fireside jokes among the colonists of Southern New Zealand, and some of the most astonishing anecdotes seem really to have a substratum of fact. Our Western backwoodsmen have a tradition of an old squatter who was tormented by chronic rheumatism, and whose medical man sentenced him to take a bath—the first in his life. The old fellow swore and protested, but his relatives chucked him into a tub of warm water, and went to work with soap and scrubbing-brushes. Four times the water in the tub had to be renewed, and the brush brigade was still busy, when all at once the old man's daughter made a grab at the tatters of some object near his knee, and bawled out, "Fo' massy's sake, dad, here 's them drawers you lost five years ago!"

If that episode ever occurred on this planet, the local conditions of its possibility seem actually to exist among the natives of South Island, New Zealand, where a good rubbing down with porpoise-grease takes the place of our Saturday-night bath, and where tanned leather garments with a lining of bird-skins are frequently worn till they come off in shreds by sheer length of wear and tear. Cannibalism, too, lingered here, or still lingers, as persistently as among the Fiji Islanders; but like other cold land nations, the aborigines atone for many sins by their humane treatment of their women and children. They still buy their wives, but they at least buy them at a liberal price and treat them with corresponding care.

Children of twelve years are still exempt from work, but are expected to discharge their debt of gratitude by eventually taking care of their decrepit parents; but the scrupulous fulfillment of that duty has in their case failed to bring the promised reward of longevity. North and South, the natives of New Zealand are dying out at a rate which in another half century will reduce the survivors to a few isolated highland tribes, and almost justifies the charge of our Spanish-American neighbors that Anglo-Saxon civilization is fatal to the welfare of the primitive races of our fellow-men.

(To be continued.)

GERMS IN HAILSTONES.—Dr. Abbott, according to the *Johns Hopkins Hospital Bulletin*, has recently observed microbes in hailstones. According to Dr. Abbott's observations, the germs are present in great numbers, averaging from six to ten thousand per cubic inch. This may account for the occasional appearance of some disease in a locality where it has previously been unknown. Germs may be brought down by the rain, by hailstones, or possibly by cyclones or other atmospheric movements. J. H. K.

BILE MAKING.—Some recent experiments made by Dr. Rosenberg, on dogs, have thrown considerable light upon the process of the secretion of bile. One remarkable circumstance observed when food was withheld, was that the flow of bile increased and decreased at the same period of day that it did when the dogs were fed in their ordinary meals, showing that the normal rhythm of the body is maintained even when the cause, the taking of food at regular times, is no longer acting. J. H. K.

DIET FOR NERVOUS GIRLS.

No department of science has witnessed the development of a greater number of revolutionary ideas within the last quarter of a century than has medicine. It is probable, also, that the number of new and startling theories which have grown out of modern medical investigations, is quite equal to the product of the original research in any other department of science. We give below a free translation of the views expressed by an eminent French physician, Dr. M. Leven, of Paris, in a recent work entitled, "*L'estomac et Cerveau*" ("The Stomach and the Brain").

We feel sure that the sensible views advanced by this eminent physician will receive a cordial indorsement by a large proportion of our readers, and although they are somewhat at variance with what is to be found in most standard medical works at the present time, they must be deemed worthy of careful consideration, even by those who heretofore entertained very different views. In the work referred to, Dr. Leven traced in the most interesting manner the relation between the solar plexus and other abdominal sympathetic nervous centers and disordered conditions of the stomach and brain. We freely translate a few paragraphs of his discussion of this subject, as follows:—

"An exaggerated alimentation excites the plexus and the brain, and produces a nervous state. The following example is a proof of this statement. A young girl of nine years presented herself with her mother at my consulting room. She had been sickly for many months. The skin was yellow, and she suffered continually with pain in the head, was sad, weeping much of the time, and unable to work. The skin and muscles of the entire body were very sensitive to the touch. She suffered continually from nausea and constant eructations of gas during the entire day.

"I questioned her mother respecting the treatment which she had been following for some months, and I learned that her physician had administered iron, quinine, and flesh food three times a day. This regimen produced in the child excitability of the solar plexus, and consequent excitement of the brain. I completely changed the medication and the food. The food which produced irritation of the plexus and caused the disease, was replaced by the following: a quart of milk each day, with a couple of eggs and simple soups. I allowed flesh food only twice a week, and then only fowl, avoiding such stimulating meats as beef or veal. After two months and a half of

this regimen, the young invalid was again brought to my office. She was so transformed as to be unrecognizable. In place of her pale countenance, she had rosy cheeks, and had recovered freshness and vigor. The headaches, tenderness of skin and muscles, nausea and gas had disappeared. Her appetite had returned, and the little girl was so well satisfied with the regimen that she requested it should be continued. I might cite a great number of facts of the same sort. I have cured a large number of invalids by similar regimen.

"The physician who prescribed for the child the improper regimen to which I have referred, had evidently an incorrect idea of her disease. Observing a great number of nervous symptoms and a pale countenance, he concluded that the condition was one of impoverished blood, and prescribed iron, quinine, and meat three times a day. Poverty of the blood is in vogue in our day, as were inflammations in the beginning of this century. For sixty years everybody believed himself threatened with congestion and inflammation. Everybody was bled. To-day, another error has become popular. Every one believes his blood impoverished, and thinks himself obliged to take iron and quinine,—to fortify himself, according to the popular term. Impoverishment of the blood has certainly produced as many errors from a dietetic point of view as did the inflammation of Broussais. They stuff the child with raw flesh, with cooked flesh, and with pure blood. Everybody eats and drinks to excess, and in all classes of society, people make themselves sick under the pretext of avoiding anæmia, or impoverished blood. The excess creates not only organic diseases of the stomach, liver, kidneys, and heart, but has a pernicious influence on the brain, thanks to the relation of the brain to the plexus.

"Up to the present time, we have had no knowledge upon the subject of dietetics; we have known only that man loses in twenty-four hours certain quantities of nitrogen and carbon, in consequence of which he is obliged, in order that he should not lose weight, to take each day a mixture of these elements. The quantity of food which we really need to repair the losses of the body is very small; for example, two pounds of bread, or two quarts of milk, associated with two or three eggs, is sufficient to nourish an adult. I have observed in a great number of invalids that the last-named regimen is sufficient even to increase the weight. I am now treating a woman who, within a few months, has gained 36 pounds. Her food consists of one quart and a half of milk

each day, five or six eggs, and a biscuit. The quantity of food which we need to take, then, is quite small. The quantity usually taken by both rich and poor is much greater than necessary. The greater part is useless, must be eliminated, and is only a burden to the body.

"Chemistry teaches us what the body loses each day in nitrogen and carbon, and how much food is necessary to repair the loss, but it says nothing about the nature of the foods which should be supplied the body to preserve health. Is the nature of our food a matter of indifference to the body? Can man nourish himself according to his tastes, his caprices, his fancies? Can he, as he finds convenient, adopt a flesh diet or a vegetarian regimen, eat of flesh or legumes? Can he replace the nitrogen and carbon

which his body consumes, by milk exclusively? Many opinions without foundation have been expressed upon this question. Certainly there is a tendency to the abuse of flesh foods, for the double reason that they are easily procured, and that they are believed to be necessary, even indispensable, elements of a complete dietary. It is certain that lentils, beans, potatoes, bread, and milk are able to supply us all the nitrogen and carbon necessary, as well as is flesh food.

"Flesh certainly is necessary not more than once or twice a week. The use of flesh or fish repeated twice a day, is harmful to the digestive organs and to the brain. The peasantry of the South take meat only once a week, and enjoy excellent health, and are able to endure the hard labor of the fields."

THE EAR, THE EYE, AND THE NOSE.

BY A DOCTOR.

3.—The Eye: Its Diseases and Care.

THERE are certain very common disorders of vision, a knowledge of the nature and the significance of which is of very great practical importance. The chief of these are the conditions known respectively as myopia or near sight, hypermetropia or far sight, astigmatism or unequal sight, and presbyopia or old sight. In these conditions there is often no recognized disease of the eyes, although not infrequently there are present evidences of irritation resulting from the excessive strain brought upon the eye in consequence of its abnormal condition. Redness of the eyes, dilatation of the lids, a feeling as of sand in the eye, involuntary squinting, pain in the eye or in the region of the head near it, headache, dizziness, or in some instances still more remote nervous symptoms, may be directly traced to some of the disorders or conditions mentioned.

Myopia, or Near Sight.—The term *myopia* is derived from a Greek word which refers to the fact that persons suffering in this way are much addicted to squinting. The reason for this is that nearsighted persons usually have large eyeballs and very large pupils. The pupils admit so large an amount of light as to interfere with distinct vision, and the eyes are partially closed to obviate this difficulty. Myopia is sometimes a congenital defect, but it is most often acquired as the result of abuse of the eye. It is not common among savages or lower animals, although it has occasionally been found to exist in various classes of the latter. Not long ago, a valuable horse was made happy by having a pair of spectacles fitted

to his eyes, which corrected a nearsightedness which had previously seriously interfered with his usefulness.

One of the most common causes of nearsightedness is the excessive use of the eye in looking at near objects, as in prolonged study. The recognition of this fact has led to the remark that the intelligence of a nation can be to some degree determined by the number of nearsighted persons found in it.

As before remarked, nearsighted persons have large and prominent eyeballs. Undue use of the eye, particularly in looking at near objects, causes a strain which brings to it an oversupply of blood, and as a result induces excessive growth. In persons whose eyeballs have naturally rather weak coverings, this abnormal growth may occur more easily than in others, consequently the former are likely to become nearsighted in using the eyes in a bad light, or in an overheated or poorly ventilated room, which causes congestion of the head. Reading or studying in a bad position, particularly with the head bent forward, is doubtless another cause of congestion of the blood-vessels of the head, and hence may lead to the development of myopia. An inactive state of the bowels, leading to excessive straining, must also be mentioned as a cause of this condition.

The use of the eyes too soon after recovery from scarlet fever, measles, or other of the diseases incident to childhood, are common causes of myopia. It is important that mothers should be informed upon this point, and that they should insist that chil-

dren convalescing from these diseases should not use their eyes with any taxing work, such as reading, or looking at small objects, until their health is fully restored.

The erroneous notion that the nearsighted eye is stronger than a normal eye, apparently leads to neglect to correct the difficulty. A nearsighted eye is always diseased and weak, although nearsighted persons are sometimes able to see fine objects better than persons whose eyes are normal. Not infrequently, however, nearsighted persons, especially in cases in which the degree of myopia is very considerable, find near as well as distant vision very imperfect. A neglect to correct the difficulty by proper glasses may lead to the development of cataract, or other disorders of the eye which may result in total blindness.

Nearsightedness usually makes its appearance between the ages of ten and fourteen years, probably for the reason that at this time, in schools, the tasks of pupils are increased to such a degree as to require a much larger amount of study than in previous years. As soon as defective sight is discovered, it should be promptly corrected. If the myopia is not corrected, it may continue to increase until some more serious disease of the eye has developed. Early correction of a defect of this sort is always important, as it is possible in childhood and early youth to train the eye and strengthen it, when the conditions are such that sight is improved by the wearing of proper glasses.

The condition of the eyes known as squint-eye, in which one or both eyes turn from the median line, may also be prevented in most cases by the use of proper glasses, as this difficulty is due to excessive strain of the muscles in looking at near objects.

Hypermetropia.—This is a condition in which the eyeball is too small and flat. A person suffering from hypermetropia usually has very deep set eyes and small pupils. The eye itself appears to be smaller than usual. A person suffering from hypermetropia of a pronounced character finds it impossible to read fine print or to undertake any sort of work that must be held close to the eye, although objects at a distance may be seen without difficulty. This condition is usually a congenital one; that is, a person suffering from hypermetropia is probably born so. Hypermetropia is a condition almost universal among lower animals. It is exceedingly common among savages; and among civilized nations, young children are usually found to be more or less hypermetropic. As the child becomes older, the eyeball develops, and thus the hypermetropia is cured. It will thus appear that an arrested development in the eyeball may be one of the causes of this disorder of vision. This

condition, although now recognized as very common, much more common, in fact, than near-sightedness, or myopia, has been understood only within a comparatively short time. A quarter of a century ago, physicians occasionally noticed that a child was sometimes able to see better with its grandmother's glasses than without them; but the nature of these cases was not then understood.

Although hypermetropia is a condition so common, it is probable that the majority of persons suffering slightly from it, go through life without becoming aware of the difficulty. Young persons, in particular, often have a very considerable degree of hypermetropia without being aware of the fact, as their young eyes are able to act with sufficient vigor in focusing for near objects to conceal the defect. The eyes are strained, however, in the effort, and a very common result is a condition known as cross-eye, in which the eyes are turned inward toward the nose to an abnormal extent. A large proportion of persons suffering from hypermetropia attain the age of twenty or thirty years before they become aware of any serious disturbance of vision. The reason for this is that at this age the power to correct the sight becomes lessened, and rapidly diminishes as the individual increases in years, so that any hypermetropia which may be present becomes more and more marked as age advances.

Astigmatism.—In this condition of the eyes, objects are not distinct at any distance. The cause is usually an unequal curvature of the cornea in its different diameters. In cases of unequal sight, one eye may be hypermetropic, while the other is myopic.

Presbyopia, or Old-Sight.—This deficiency in sight occurs when the eye has lost to some degree its ability to accommodate itself so as to form perfect images of objects at different distances, and also requires the wearing of glasses.

One of the reasons frequently given for objecting to the wearing of glasses is that when once used they must always be worn. This is an error, especially with reference to hypermetropia. This condition, while most frequently inherited, is susceptible of very great improvement by proper treatment, and it sometimes happens, indeed, that the prolonged wearing of suitable glasses will practically effect a cure. While this is not true in the case of myopia, it is true that an early adjustment of glasses may secure an arrest of the disease, and prevent a development of still more serious affections of the eye.

While the correction of a disorder of vision by the use of proper glasses is a matter of great importance, the prevention of these disorders, so far as they are

preventable, is a matter of still greater importance. Young children, particularly school children, should be surrounded with conditions favorable to the preservation of a healthy condition of the eyes. The most important preventive measures are attention to the general health, abundant and suitable light (such as will not dazzle the eyes), and the use of desks so constructed as to favor a proper position on the part of pupils. These are matters of no small consequence. Another preventive measure which would undoubtedly prove exceedingly serviceable in this direction, and which we urgently commend to teachers and school boards, is instruction in gymnastic exercises, particularly the system known as Swedish gymnastics, which requires no special apparatus, and can be taken in an ordinary school-room. Young pupils, especially, should not be permitted to use their eyes more than a half hour at a time, and at intervals of half or three quarters of an hour should spend a few minutes in active gymnastics, so as to rest the eyes, expand the lungs, and relieve the head of congestion, a condition very common in young children as the

result of bending the head down and forward in study.

We must, however, in conclusion, warn our readers against the purchase of glasses of traveling spectacle vendors. Indeed, the ordinary jeweler who sells glasses just as he sells watches, jewelry, etc., to suit the wishes of his customers, is seldom prepared to make a proper adjustment of the article to the morbid conditions of the eye. If spectacles are to be worn, it is important that they should be selected and adjusted under the supervision of a first-class oculist, when the services of such a specialist can possibly be obtained. It is quite possible for great mischief to be done by an imperfect adjustment of glasses. Those which are not strong enough, are likely to give little or no relief; while in certain cases, those which are too strong may be productive of the most serious injury. The selection of too strong glasses is an error which the patient himself or an inexperienced spectacle vender is likely to fall into. The result of such an error may be a total loss of vision. In some future number we will consider the subject of spectacles at greater length.

"ONHEALTHY."

As the springtime is coming on, the following bit of satire, the authorship of which we have not been able to ascertain, will not be out of place:—

"Wayout, May 26.

"DEAR SIR:—

"I rite this with a feelin' of deepest pane horrowin' my innards. This pane is caused by an article wat I 've jest read in your vallable paper. You hav bin sayin' hard things of us honest and hard-workin' folks wat are tryin' to earn sumpin by keepin' summer boarders. Now, I do n't want to say no hard things myself, but the fact is, you doctors think you know too much. Now, I'd jest like to know how long you've been in the bizness of keepin' summer boarders. Most likely, you haint never kep none, and yet you think you know more about it than a practicle man wat's had twenty years' experience. That 'ud be jest like you city folks.

"Fust, you say that it aint healthy to have hogpens, barn-yards, and sich clust to the well. You say it aint good for the drinkin'-water. Mebbe you wont believe it, but wat I'm goin' to tell you is true. My grandfather lived to be eighty year old, and he lived all his life in this very house, and that wus fore the barn-yard and hogpen wus moved to war they air now. But mebbe you city folks thinks eighty years aint long enough, and you'd like to live a cupple er hunnerd. I dunno. Should'ent wunder. Wen city

folks cums in the country thar aint no tellin' wat they wont expect, and that's a fact.

"The truth is, hogpens and barn-yards have an amazin' good sannitary effect on water. They makes it twist as nurrishin' as it wood be without 'em. Perhaps you city fellers do n't know it, but thar aint no place about a farm war the grass grows as thick an strong as about them very places. It stans to reason that wats good fur grass is good for critters, human or otherwise; but you city doctors do n't seem to have no reasonin' facurlties.

"Then, again, you say in anuther place, thar's toads in the wells. So thar be, and I do n't argee it. But so fur from doin' hurt, them thar critters sweetens up the water wonderful. This is shone by a peese er potry wat was learned me wen I were yung:—

'If thars toads in the well

Thar wont be no smell.'

"Now I wont deny that a lot er my boarders wuz took sick last summer, but that wuz cause they would lay on the grass in the orchard on sunshiny days, and they sot out on the front porch after dark, singing "Baby mine." I sez to em, sez I, "You'll get the fevernager if you set out thar," sez I. Sez they to me, sez they, "Rats," sez they. Wall, they took sick, and went and blamed it onto the well water, and that thar swamp down in the holler back er the house, zif that had anything to do with it!"

ETHER DRUNKENNESS.

THE practice of ether drinking, according to Dr. Norman Kerr, in a recent article contributed to the *New Review*, originated at Draperstown, Ireland, about forty-eight years ago. It has since extended to various parts of Ireland, and at the present time several thousand gallons of ether are used in this manner in a comparatively small district. The advantages of ether drinking, from the standpoint of the lover of intoxicants, are chiefly two:—

1. It is a much less expensive intoxicant than alcohol, four pence being amply sufficient to purchase all the ether necessary to produce profound intoxication, recalling, as Dr. Kerr suggests, the palmy days of old England, immortalized by the classic sign, "Drunk for a penny, dead drunk for twopence, clean straw free."

2. Another advantage enjoyed by the ether drinker is that the intoxicating effect is very quickly produced and swiftly passes off. While it requires considerable skill on the part of the alcohol toper to sober off and get drunk again twice in twenty-four hours, the ether drinker can become alternately drunk and sober six times in the same space of time. A sedate Judge, sober at noon, became ostensibly drunk on ether in twenty-five minutes, and by a quarter past one was thoroughly sober again, and was able to take his seat at the bar without giving any indication of having suffered any unusual disturbance.

We quote from the article by Dr. Kerr, as follows:—

"The outward and unmistakable signs of this form of inebriety are manifest to the senses—indoors at social and other gatherings, out-of-doors where the people congregate. On market and fair days, wherever there is a crowd, the atmosphere is 'etherial.' The air literally reeks with the fumes of ether. In the third-class railway carriages, the smell of the drug from the women traveling to and from market is described by a guard as 'disgusting and abominable.' Even the most sacred edifice, notwithstanding strong rebukes from the altar, is not free from this pestiferous pollution. To any one unaccustomed to this unique, unpleasant experience, the odor from the ether-laden breaths is sickening and repulsive. I shall never forget the first time I inhaled this contaminated air. The thousand classic 'scents' of Cologne were a perfumed gale from Araby the blest compared with this overpowering, nauseating, loathsome blast. Within, only a rush to an open window, and without, only a sudden

bolt from the dense and horrid air of the reeking street, has warded off as good an imitation of *mal de mer* as might have provoked even an Irish saint to a torrent of indignant eloquence. At dances, where ether is drunk, it can readily be imagined that the fun waxes fast and furious. Owing to the frequency of frenzied outbursts, both at dances and wakes, the scenes at times are neither decorous nor peaceful. The baneful potion is freely sold at public-houses and groceries.

"Though affected mainly by the poorer classes, persons of comfortable means and respectable position are in no way shamefaced in their acknowledgment of the habit when they are detected. Ether-takers of this class, like *habitués* of other forms of inebriety, rarely avow the true reason for their wrongdoing. They, if they are to be believed, take ether as others take alcohol, for 'spasms,' 'stomachic troubles,' 'wind,' and various other mundane ills. To judge from the frequent resort to this alleged ether panacea, not a few well-to-do and highly educated individuals are apparently subject to almost incessant bodily ailments. When prostrate from the effects of a debauch, it is the cucumber or the salmon, never the ether nor the alcohol, that has been to blame.

"Among ether inebriates have been members of the learned professions. Though ether has not laid hold of the young to anything like the proportional extent that alcohol has done, it is consumed by too many of the exuberant and youthful Irish population. At an inquest held a few months ago, on a child in Tyrone, the father testified that he took ether himself, and that the deceased would take a teaspoonful occasionally. The children, he went on to say, often bought half a pint for him when they were at the market. Persons of both sexes and of almost all ages have become slaves to this degrading and intractable disease. As in England with alcohol, the women unhappily vie with the men in this unholy rivalry, and their prowess is remarkable. Can it be that the female members of the incriminated communities have felt it incumbent on them to show by their ether exploits that they can do this thing, like everything else, as thoroughly as 'the lords of creation'? Whatever the reason, the fair sex have taken their full share of this latter-day debasing debauchery. The poisonous stuff is actually often taken around to balls, meetings of lodges, and other assemblies, and there sold by women."

An eccentric divine once said to his audience, "My hearers, there is a great deal of ordinary work to be

done in this world, and, thank the Lord, there are a great many ordinary people to do it."

HEALTH IN THE SUNSHINE.

ALEXANDER THE GREAT once went to Diogenes as he was reposing in his tub, and asked him what he could do for him. Diogenes replied, "Stand out of my sunshine." The conqueror of the world, offering a choice of gifts to a man who had not even a roof to cover his head, and yet who chose nothing but the sunshine, which was his already! Considered from a hygienic point of view, the story contains a striking moral.

"One of the great mistakes of the winter season," says Dr. Hamilton Osgood, "is indifference to sunshine when it is possible to live and sleep in sunny rooms. Such indifference is attended with serious danger. In the choice of apartments, anything and everything within reason ought to be sacrificed to the necessity of having the living and sleeping rooms where they can every day be purified by the sun. Instead of having the guest-chamber and the parlor in the sun, they should be given the shady side of the house; for, in comparison to the family rooms, they are but little used.

"In the health of women, children, and invalids, who, during the cold months, spend so much time indoors, it makes a vast difference as to whether the rooms in which they live are in sunshine or in shadow. Look at the faces of miners, of clerks who are immured in dark offices, of women and children who hardly see the sun in the winter. How faded, colorless, and unhealthy they are, in comparison with the faces of those who will have sunshine indoors and out!"

A New York merchant noticed in the course of years, that each successive book-keeper gradually lost his health, and finally died of consumption, however vigorous and robust he was on entering his service. At length it occurred to him that the little rear room where the books were kept, opened into a backyard so surrounded by high walls that no sunshine came into it from one year's end to another. An upper room, well-lighted, was immediately prepared, and his clerks had uniform good health ever after.

A BURLESQUE BUT TOO TRUE.

THE frequency with which the converted heathen lose their native vigor and vitality when they abandon their simple habits of life and adopt those introduced by the missionaries, has attracted the attention of many, and has led to the assertion, by not a few persons of high position and great intelligence, that the heathen would, on the whole, be far better off if the missionary had never found him. We cannot indorse this statement, of course, for the evidences of improvement as the result of missionary work are too great, it seems to us, to be ignored, even by those who have no interest in missions. Nevertheless, it must be admitted that not infrequently the first thing that happens to the native Christian after he becomes converted, is a decline in health and vigor. Through the giving up of the simple habits of life to which he has been accustomed, and adopting the less healthful dietary of the missionary, his physical health falls

into decay, notwithstanding the improvement in his moral character.

The following, which we copy from a Western newspaper, although written in a spirit of burlesque, is evidently based on facts which are well worthy the serious consideration of missionaries and mission boards:—

"African Missionary writing to Board of Missions, New York:—

"FIRST LETTER.—'We are doing nobly. Send us a shipload of clothes for our converts, also some materials for civilized dishes, such as pork, corn, butter, bacon, lard, etc. Also some more Bibles.'

"SECOND LETTER.—'All the savages are now dressed in civilized garb, and are learning to eat Christian food. They are particularly fond of hot cakes and sausages.'

"THIRD LETTER.—'Send us a shipload of bilious pills and five hundred coffins, quick.'"

CHARACTER is a diamond that scratches every other stone.

"My husband is so poetic," said one lady to another, in a street-car the other day. "Have you ever tried rubbin' his joints with hartshorn liniment, mum?" interrupted a beefy-looking wo-

man, with a market-basket at her feet, who was seated at the lady's elbow, and overheard the remark.

It is currently reported that Edison, the great inventor, maintains his great activity and endurance on an exclusively vegetarian diet.

THE KISSING HABIT.

ATTENTION has been called again and again to the dangers which lurk under the seemingly innocent practice of kissing. A dentist tells the story that once when riding on a steamboat he observed a stranger pick up a child and kiss it. The mother of the child, who was the wife of Horace Greeley, said, "Sir, I do not allow you or anybody to kiss my child;" and taking her handkerchief, she spat upon it and vigorously rubbed the lips of the child. Mrs. Greeley's protest was not more vigorous than the subject demanded.

Not long ago, when riding in a crowded sleeper, we observed a child whose mother allowed it to run about the car without restraint, making the acquaintance of the various passengers, by nearly all of whom the child, a very winning little girl, was kissed, the number including several men whose conversation in the smoking-room indicated that they were not very unlikely to be suffering from some loathsome disease.

Cases have frequently occurred in which the lives of innocent children have been forever blighted through the carelessness of mothers in this regard. A physician in the *International Dental Journal*, in calling attention to the danger of communication of grave diseases in this way, remarks:—

"I know of a case where, a few days ago, a lady kissed every female in the room, and one of the persons in that room I know had syphilis. Some people make a business of kissing everything,—kissing animals, birds, dogs, and cats,—and it is very suggestive of the transmission of disease.

"The habit that some people have of putting money into the mouth, is one that might lead to syphilitic infection. A butcher or grocer will often hold half a dozen bills in his mouth, and grown people will put silver pieces and pennies in their mouths; and I have wondered that the habit has not been more productive of disease than we have observed." J. H. K.

"GOOD HEALTH" IN JAPAN.

THE editors of GOOD HEALTH recently received the following letter from a native Japanese, Mr. Masatoshi Ohara. He says:—

"I have received a number of copies of your valuable magazine, for both of which I heartily thank you. I have read them with immense interest, and translated some articles in your paper for our Japanese journal.

"I shall be glad to become a constant reporter for your paper about vegetarianism in my country. I regret heartily that so many pressing businesses are now upon me, that I am not able to write you this time about it, but will a few days later.

"Please be kind enough to continue sending me your valuable paper. It is indeed an interesting magazine. I remain,— Yours faithfully,

"Masatoshi Ohara."

The publishers of GOOD HEALTH will be pleased to continue sending the journal to Mr. Ohara, and hope to receive frequent communications from him, which will, we trust, be of interest to our readers. It is also gratifying to know that the principles advocated in this journal have found so warm an admirer in that distant land, Japan; and that the natives of that country are to have an opportunity of reading some portions of our publications, in their own language.

THE INCONVENIENCE OF HYPNOTISM.—So much has been written respecting hypnotism in the last few years, and so much has been claimed for its virtues as a healing agent, that many have been induced to experiment with this peculiar mental state, or to seek relief through its agency. Dr. Kerr recently called attention to the fact that the hypnotic state is a state of disease, and a case which recently occurred in Rome strongly confirms this idea. A young man who afterwards proved to be a German physician, who had recently graduated from Munich, was found one day in one of the churches of Rome gazing in a fixed manner at a picture of St. Francis. He remained perfectly motionless until the time for closing the

church arrived, when it became necessary to carry him bodily out of the place. He was taken to the station house, and then to a hospital, where he was finally brought out of the hypnotic state by hypodermic injections of ether. The Roman press, commenting upon this circumstance, remarks:—

"Two or three centuries ago the same phenomenon would have been regarded as treasure-trove by the Church, and the chapel of St. Francis of Assisi, in the Ara Cœli, would have attracted crowds of pilgrims eager to come under the direct influence of the saint. Medical science, however, may now say, '*Nous avons change tout cela*' (We have changed all that)."

J. H. K.

The HOME GYMNASIUM.

EATING FOR STRENGTH.

THE human body may be aptly compared to a machine,—a locomotive, for example. Considered as a working machine, it consists, as does a locomotive, of two parts: first, a mechanism for generating force; second, an apparatus for applying force. In a locomotive, the furnace in which the coal is consumed, and the boiler in connection with it, constitute the force-generating apparatus, while the pistons, wheels, and levers constitute the force-applying mechanism. In the body, the stomach and other digestive organs, the lungs, the heart, and the organs by which food is converted into blood and assimilated, constitute the force-generating mechanism, while the nerves and muscles, acting in connection with the bones, which serve as levers, constitute the force-applying apparatus. In the locomotive, the real source of energy is the coal, which by the process of combustion is made to give up the energy which was stored away centuries ago by plant growth. The energy thus liberated is utilized by the locomotive for useful purposes. In the human body, food serves the same purpose as does the coal for the locomotive. All the force manifested by the body, no matter in what form, has its origin in the substances which we consume as foods.

The food serves to the body another very important purpose. The locomotive must sometimes go to the repair shop to have its machinery overhauled,—nuts and bolts have been lost, bearings have been worn, various parts must be repaired or replaced. The coal which constitutes the food of the locomotive serves only as a source of energy; it furnishes nothing for repair. The food substances consumed by human beings, however, serve the double purpose of supplying material to be consumed in the production of energy, and also material to be used in repairing the injuries and losses sustained by the tissues through their activity in the application of energy, as in nerve and muscle work.

All food substances capable of sustaining life contain these two classes of elements, which may be called, respectively, force-producing and tissue-building elements. In animal food, the force-producing elements are represented by fat, the tissue-building by the lean meat. In milk, the cream and milk sugar represent the first class, the caseine, or curd, the second. In wheat and other grains, indeed in most vegetable foods, the force-producing elements are chiefly represented by starch and sugar. Also vegetable fats, which are found in most vegetable foods, belong to this class, as in the case of animal fats. The tissue-building elements are represented in wheat and rye by gluten; in oatmeal, by vegetable albumen and caseine; in peas and beans, by vegetable caseine.

It is apparent, then, that both animal and vegetable foods contain both classes of elements needed for strength,—the force-producing and the tissue-building elements. The question of vital interest is, Which of these classes of foods is the best practical source from which to replenish one's store of energy-producing elements, and to obtain material for repair of wasted tissues? The erroneous character of the popular supposition that flesh food is necessary for the maintenance of strength, at once becomes apparent when one makes a careful examination of the food values of various classes of food substances, as will appear by an examination of the following samples of the two classes of foods, which we select from the tables of nutritive value of foods prepared by Parkes, Letheby, and various prominent authors on foods:—

FLESH FOODS.

	Percentage of force-producing elements.	Percentage of tissue-repairing elements.	Total nutritive value including salts.
Lean beef,	3.6	19.3	28.
Lean mutton,	4.9	18.3	28.
Poultry,	3.8	21.	26.
White-fish,	2.9	18.1	22.

VEGETABLE FOODS.

Wheat flour,	72.5	10.8	85.
Barley,	76.7	6.3	85.
Oatmeal,	69.4	12.6	85.
Indian meal,	73.2	11.1	86.
Rice,	80.2	6.3	87.
Peas,	60.8	23.8	86.7
Beans,	50.4	30.8	84.5
Lentils,	58.6	26.2	86.1
Potato,	22.2	2.1	25.
Banana,	20.2	4.8	25.8
Date,	58.	9.	67.

MILK AND EGGS.

New milk,	9.1	4.1	14.
Cream,	29.5	2.7	34.
Skimmed milk,	7.2	4.	12.
Entire egg,	10.5	14.	26.
Yolk of egg,	30.7	16.	48.

By reference to the above tables it will appear that all the vegetables contain a much larger amount of force-producing elements than does any one of the meats most commonly used, and which are supposed to be so essential for strength. It will also appear that several of the vegetables, as peas, beans, and lentils, not only contain a much larger proportion of force-producing elements, but also far excel the meats in tissue-repairing elements. It is necessary that we should recall at this point the fact that the tissue-repairing elements are not needed in so large a proportion as the force-producing elements. As in the case of a locomotive, a much smaller amount of material is needed for repair of the mechanism than for supplying it force during work; that is, the amount of coal consumed far outweighs the iron or other material used in repairs. So with the body. The amount of force-producing material required for use in the body is about seven times that needed for tissue repair. We thus see that while we have in wheat flour exactly the proportions, that is, about one of tissue-repairing to seven of force-producing material, we have in lean beef between five and six times as much tissue-repairing as force-producing material, which is exactly the reverse of the proper proportion. Even the banana, a fruit, is from this standpoint found to be a better food than beefsteak, as its total nutritive value is almost equal to that of beef, while the proportion is more nearly that required for the healthy maintenance of the body.

It may be suggested, however, that flesh foods are more easily digested than grains and other vegetable foods, and hence their lower nutritive value may be compensated for by their greater digestibility. A glance at the following comparative tables, which are compiled from those prepared by Dr. Beaumont

from his observations on the stomach of Alexis St. Martin, will show this to be wholly erroneous:—

VEGETABLE FOODS.		FLESH FOODS.	
	Time required for digestion.		Time required for digestion.
Rice, boiled,	1:00	Salmon, salted, boiled,	4:00
Bean soup, boiled,	3:00	Oysters, fresh, stewed,	3:30
Barley, boiled,	2:00	Beef, fresh, roasted,	3:30
Barley soup, boiled,	1:30	Beef, salted, boiled,	4:15
Beans, pod, boiled,	2:30	Pork, roasted,	5:15
Apples, sour, raw,	2:00	Mutton, roasted,	3:15
Apples, sweet, raw,	1:30	Mutton, broiled,	3:00
Parsnips, boiled,	2:30	Fowl, boiled,	4:00
Potatoes, baked,	2:30	Duck, roasted,	4:30

By a little computation it will be found that the average length of time required for the digestion of the nine commonly used vegetable foods is two hours and three minutes, while the average length of time required for the nine flesh foods is three hours and fifty-five minutes. It thus appears that flesh foods are not only less nutritious, their average nutritive value as given in the above table being only twenty-five per cent of that of an equal number of vegetable foods, but they are also less digestible than are the better class of foods furnished by the vegetable kingdom. In other words, vegetable foods not only furnish a larger amount of force-producing material, but provide this necessary material in a form more readily available for use in the body, on account of the greater digestibility of vegetables.

Another grave error which it is important to combat is the idea that hearty foods are the most useful as strength producers. By hearty foods is generally meant foods difficult of digestion. The lumberman considers fat pork a necessary article of diet, because, as he says, "it sticks by the ribs," an assertion which is fortified by the table above given, according to which pork requires five hours and fifteen minutes for its digestion; in other words, it remains for more than one half the working day lodged in the stomach, sticking by the ribs instead of undergoing prompt digestion and absorption, and thereby becoming available for use in replenishing the forces of the body. Rice, on the other hand, which has a nutritive value much greater than that of fat pork, is digested in an hour, thus not only taxing the digestive organs far less, and so entailing a smaller expenditure of energy in the process of preparation for use by the body, but becoming almost immediately available for replenishing the wasted energies of the system. The so-called hearty food is simply food hard to digest. Such food has nothing whatever to commend it to one who wishes to develop and employ, to the highest degree possible, his bodily energies.

The facts above stated, which are deduced from our knowledge of the nature of foods, their composition and digestibility, are wholly verified by the experience of thousands of human beings. The strength of the coolies of China, who carry for long distances, upon their heads and shoulders, loads such as beefed Englishmen could not even lift; the agility of the swift-running messengers who make long journeys across the arid plains of South America; the endurance of the Trappist monks; the hardihood of the Scotch, Irish, and Italian peasantry; the longevity of the Brahman of India,—indeed, the experience of at least nine tenths of the entire civilized and uncivilized

world, proves most conclusively that he who wishes to nourish his body in such a way as to develop the greatest amount of strength, energy, and endurance, will select his food substances from the generous bill of fare provided for him by his Creator, and described in Genesis 1: 29, instead of shedding the blood of innocent dumb creatures who were destined by the Creator to serve him in the capacity of laborers, and to minister to his wants in other ways; but were never intended to be slain and devoured by him. Both nature and Revelation declare most emphatically that man's diet was in the beginning intended to be wholly vegetarian in character.

HEALTH, GRACE, AND BEAUTY. — THIRD PAPER.

EXERCISES FOR STRENGTHENING THE MUSCLES OF THE TRUNK.



FIGURE 1.

WEAKNESS of the muscles of the trunk is perhaps the chief cause of incorrect carriage of the body. Weakness of the muscles at the sides of the waist produces a swaying gait. Weakness of the muscles of the back causes curvature of the spine and an unevenness of the shoulders. In persons having this deformity, one shoulder is lower than the other, and the hip of the corresponding side more prominent than that of the opposite side. This deformity is so common among young women that the reputation of many dressmakers is based upon their ability in padding out the figure, and in various ways concealing these deformities. Weakness of the muscles of the trunk causes loss of the natural curve of the spinal column, the hollow of the back disappears, the spine becomes straight, and the chest flattened. As the result, the lower abdomen protrudes. Some of the resulting deformities are indicated in Figs. 1 and 2.

Women in particular suffer in consequence of neglect of exercises which develop the muscles of the trunk. In the weakness of these muscles is to be found the real cause of a large share of the backaches which render miserable the lives of many women, and of which so many school-girls complain. The real cause of backache, and of many internal disorders which are frequently connected with this very annoying symptom, is to be found, not in the stair-climbing, the extra long walk, baby-lifting, or other form of exercise to which these troubles are so much attributed, but rather in neglect to develop this portion of the body. The wearing of the clothing tight, and especially the wearing of tight bands and corsets, is a practice productive of great mischief as regards the development of the muscles of the waist and trunk. The wearing of belts or tightly buttoned pantaloons works the same mischief in men which corsets and tight skirt bands do in women. The majority of women of adult age have become so accustomed to the support of the corset, or of some substitute by which the trunk is braced up, that when some prop of this kind is not afforded, they are quite incapable of holding themselves up. It is certainly much better to rely upon those natural stays which nature has



FIGURE 2.

provided—the ribs, well braced up by tense, firm muscles—than to rely upon the artificial support afforded by corsets and tight waists. We present herewith a few exercises which are excellent for developing the muscles of the trunk:—

Exercise 13.—Fig. 3 represents an exercise to be taken in a doorway, or between two posts of proper height. The position is sufficiently well shown in the cut. The exercise consists in raising one foot and placing it forward as in walking, at the same time throwing the body forward with energy. The forward motion being arrested suddenly by the arms, a strong strain is brought upon the muscles of the front of the body, particularly upon those of the chest. After the forward movement, the foot is returned to its place



FIGURE 3.

points of support of the hands and feet the center of motion. The movement may be varied by allowing the body to fall slowly toward the hands by bending the arms at the elbows, and then straightening the arms to restore the body to the first position. The effect is to expand the chest and strengthen the muscles of the abdomen and back.

Exercise 16.—Fig. 6. The body is placed in the kneeling posture, with a cushion under the knees, and the heels prevented from rising when the body bends forward, as shown by the dotted line, by being placed under the edge of a sofa or some other convenient object. This movement affects not only the trunk, but also the muscles of the calf and thigh.

Exercise 17.—Fig. 7. Lie upon a bed or sofa, or upon a mat on the floor. Raise the legs in alternation, extending the feet, that is, pointing the toe in the direction of the leg as forcibly as possible. The leg should be raised as nearly to a right angle with the body as possible.

Each of these movements should be repeated sev-



FIGURE 4.



FIGURE 5.



FIGURE 6.

beside the other. This movement is repeated eight or ten times with each foot. As in all other movements, the action should be deliberate, and energy and considerable muscular strength should be employed. This is a most excellent means for strengthening the chest.

Exercise 14.—Fig. 4. Another admirable movement for developing the chest and the muscles of the trunk. The feet are thrown apart to brace the body, the hands being clasped over the head, and the trunk is oscillated from side to side several times in succession. Then the same movement is executed from before backward.

Exercise 15.—Fig. 5. The weight of the body is partly sustained by the hands holding the top of a bed-post, or a ring fastened in a wall or post. The movement consists in swinging the body, making the

eral times, until the muscles employed feel somewhat fatigued.

PROGRAM FOR MARCH.

In addition to the exercises given in this article, continue the program laid down for February, increasing the amount of work from week to week as the increase in the strength of the muscles will admit.



FIG. 7.



INJURIOUS EFFECTS OF WAIST CONSTRICTION.

(Concluded.)

BY J. H. KELLOGG, M. D.

One of the greatest obstacles in the way of reform is that so few women can be made to understand that their clothing is harmfully tight, even when they are suffering from this cause to an extreme degree. A short time ago, I took occasion to measure the waist of a lady who had made the worn-out statement that she never in her life had worn her clothing tight. In applying the tape-line about the waist outside the clothing, I found the measurement to be exactly twenty-five inches. My lady office assistant directly afterward measured the waist, at the same point, with all the clothing removed, and found the measure to be exactly twenty-seven inches, showing that this lady who was so very positive that her clothing was "not the least bit tight," had diminished by two inches, the space which should be occupied exclusively by the stomach, liver, spleen, kidneys, bowels, and nerve centers, and in addition, had crowded in the thickness of a corset, several undergarments, and a dress!

When exhorted upon the subject, many women exclaim in triumph, "I do not wear a corset. I have never worn a corset in my life;" or "I wear a health corset;" or "I suspend all my garments from the shoulders." Nevertheless, an examination will show that almost without exception, even those who consider that they have made a praiseworthy reform in dress, and are exceptionally correct in their observance of the requirements of hygiene in this particular, are found to be suffering serious injury from the constriction of waistbands. It is useless for a woman to deceive herself by lifting the skirts and calling attention to the looseness of the bands, as she very well knows that these same bands, when dragged downward by the weight of skirts either heavy or light, are drawn tightly about the body. If this was not the case, nothing would prevent them from slipping over the hips. They must be tight to be of the slightest service in supporting the skirts. Supporting the skirts by bands passed

over the shoulders seldom helps matters very much, since the narrow straps usually employed as skirt supporters, when dragged down by the weight of the several garments commonly attached to them, cut into the flesh and produce so much discomfort and restriction of movement of the shoulders that, to relieve the strain, the garments are attached at a point so low as to allow the weight to partially rest on the hips. The evil thus sought to be avoided, is scarcely mitigated.

A woman's clothing should be as loose as a man's. There should be ample room for the full play of the breathing muscles of the waist and abdomen. There should be ample opportunity for the diaphragm to play up and down in its ceaseless, rythmical activity. The liver, stomach, spleen, pancreas, and kidneys should be allowed to remain where they belong, so that they can perform their work naturally and efficiently. To insure this, the only safe plan is to have the upper and lower garments made in one piece, and to employ as few undergarments as is consistent with warmth, so that no unnecessary weight may be loaded upon the shoulders or carried about the waist or hips. Shoulder straps and braces, skirt supporters, stocking supporters, and the various sorts of harnesses recommended to women who wish to make a reformatory improvement in dress, must be unhesitatingly pronounced failures. They do not accomplish what is expected of them, but are themselves in many cases productive of positive mischief. The numerous health corsets, elastic corsets, dress-reform corsets, hygienic corsets, and the whole category of similar garments are merest sophistries. The only service which they efficiently perform is that of deceiving the wearer into the supposition that she is conforming to the laws of health as regards dress, while the worst mischiefs are steadily being wrought by some garment, the only sanitary feature of which is its alluring name.

A CONVENIENT EXERCISE DRESS.

ONE of the most common obstacles in the way of proper physical culture for women, lies in their dress. As ordinarily worn, it fits so snugly as to interfere with the proper expansion of the chest and waist, hampers the freedom of the arms with tight sleeves, and impedes the active motion of the limbs with long and heavy skirts, making it necessary to don a special costume for exercise and gymnasium practice. Busy women and school-girls find this plan so inconvenient that they too frequently forego the benefits to be derived from systematic exercise rather than take the time and trouble to make a change of apparel.

A combination street and exercise dress has recently come to our notice, which obviates all these difficulties. It is an exceedingly simple and comfortable suit, composed of three pieces, a divided skirt, (over which, for the street, may be worn a plain or kilt skirt), and a blouse. Our illustration shows the divided skirt and blouse, which forms the exercise dress. In this instance it



GYMNASIUM DRESS.

was made of four widths of navy blue flannel of light weight, cut the length of the ordinary dress skirt. These four widths were then sewn together. Halfway down the middle seams a piece of the goods six or eight inches square, doubled three-corner-wise was inserted so as to form a division in the skirt. An elastic tape run loosely in the hem at the bottom of each division, permits of their being adjusted to any desired length. The top of the skirt was finely gathered, and sewn to a waist, made of sillesia, which was faced up for two or three inches, with the goods. With one or two union suits underneath, the divided skirt affords ample warmth, and no other skirt but a dress skirt is needed. As shown in the cut the garments is a little shorter than it is usually worn.

The dress skirt should be furnished with button-holes in the band to fit buttons attached to the waist of the divided garment, thus providing for its proper suspension from the shoulders, and permitting of its being taken off and put on at a moment's notice when the hour for exercise has arrived.

As an exercise dress, we know of no other that affords more ease and freedom of motion, while the addition of the skirt and a wrap when leaving the gymnasium, serves as a preventive measure against colds, too often overlooked after vigorous exercise. This costume is also a serviceable dress for rainy and damp weather, since with the addition of suitable leggings to protect the limbs and ankles, the dress may be pinned up with safety-pins. Then, covered with a gossamer, one can walk with no danger of damp or muddy skirts, and no trouble with the care of them. E. E. K.

WAISTS AND BRAINS.

AN English medical gentleman announces the absurd theory that the reason why the women of the present day have such small waists in comparison with those of the women of some generations back, is because they are undergoing a process of evolution by which their brains are getting larger and their waists smaller. The professor evidently overlooks the fact that women have larger livers than have men, and since the liver is located just beneath the waist line, it is evident that it requires just as much room as ever, and that the smallness of waist so characteristic of the modern civilized woman is the result of tight-lacing, instead of the working of any natural law. Doubtless if some female child should

be born with a callosity on the balls of its feet, or an abnormally large great-toe joint, or a distorted toe, the professor would find a ready explanation in the law which secures "the survival of the fittest" rather than in the hereditary influence of wearing tight and high-heeled shoes. Such a physiologist belongs to the class of men who are bound to maintain that whatever is right. Nevertheless, the influence of this class of thinkers is quite too small to stay the onward march of progress, and we think we can see not far in the future, the day when all intelligent women will demand as much room at the waist as do the men, and the same opportunity for the development of all their muscles.

Social Purity.

HAVING A "GOOD TIME."

BY HELEN L. MANNING.

"O WINNIFRED, Cousin Winnifred! just look at these exquisite Jacqueminot roses which Walter Murray brought me this evening!"

"Winnifred Morrice looked up from her writing desk as her beautiful cousin, Eloise Vane, whirled into the room, her dark eyes flashing with pleasure, and in her hands a large cluster of rarely beautiful roses.

"They are indeed lovely, Cousin Eloise. Mr. Murray must have sent into the city for them. Our greenhouses furnish nothing so fine. They must have been quite expensive, dear. Are you sure you are doing right to accept so much from him? It is not the roses only, I mean, but so many other gifts, besides going to expensive entertainments. Last week it was a box of orchids and camelias, a handsome book, besides—"

"Yes, besides that delightful violin concert; and to-night I took pains to discourse longingly and enthusiastically upon the musical pageant to take place in C—Thursday evening, and Mr. Murray gallantly invited me to go. Of course I accepted, and you need n't scold," pouted Eloise, as she marched to the mirror and arranged three or four of the roses with charming effect in the girdle of her gown.

"But, Eloise, that will mean carriage hire, for C—is four miles from here, and more roses, probably; besides you know the tickets are very high. Mother has always taught me that it is not wise to accept such expensive favors from a gentleman, for several reasons. Remember that it is n't six weeks since Mrs. Norton's reception where you first met Mr. Murray, and you know very little of him or his circumstances."

"I know he is polite, and understands how to make himself agreeable."

Winnifred turned to resume her writing, her face a little troubled, but hardly knowing what more it would be best to say.

"Winnifred is right, Eloise," said Mrs. Morrice, who had entered the room in time to hear the last few remarks of her daughter and niece; "a young girl for her own sake cannot afford to accept costly gifts or social pleasures from a young man who is a mere ac-

quaintance, and it is even much the better plan to exchange only inexpensive gifts when a couple are engaged to be married. A young man who is carefully reared is delicate and considerate in the attentions he offers a lady, and will avoid putting her under undue obligations, and would be repelled by a girl who intimates her desires to go and to receive gifts."

Eloise flushed scarlet; for her errors were due more to thoughtlessness and lack of proper training than to deliberate intent.

"Then there is another side to this matter," continued Mrs. Morrice, seating herself between her daughter and her niece, "and that is the effect upon the young men themselves. A little incident to which I was personally knowing, may help you to see this more clearly. My young days were spent in a college town, and just across the street from my father's house there lived a pretty, dashing girl who was determined to have what she called a good time, regardless of what it cost any one else. One winter a student from the country became so entirely infatuated with her that he devoted all his leisure, and every dollar of money which he could command, to the gratification of her whims. He took her to theaters, concerts, and lectures; he bought her books and bric-a-brac, flowers and bonbons, and she accepted his gifts and attentions as her due, and was not at all backward in expressing her preferences and desires. Prof. Farris was a friend of the young man's father, and noticing that the youth was not looking well and was neglecting his studies, he wrote a line intimating to the old gentleman that it would be well for him to come and look after his son. The father had made what was considered liberal provision for his son's comfort, but at this period the latter was found occupying a cold, cheerless attic, and was taking his meals in a cheap restaurant. Every penny of the remainder of his allowance he spent upon the heartless, silly girl to whom he was so blindly devoted. It is not infrequent that clerks, and other young men on slender salaries, are led to rob not only themselves, as this young man did, but their employers also, when under the spell of a designing

woman. Further than this, there is a certain class of young men who delight in putting a girl under pecuniary obligations, that they may by and by use the advantage that it gives for base ends."

"O Auntie," cried Eloise, "I never dreamed how my conduct might be construed. I am sure I never meant to appear to such disadvantage, and indeed I will never be so thoughtless again."

"I am sure, dear girl, that this experience will serve to emphasize the lesson which all young people need to learn—that their 'good times' must not be at the expense of self-respect, nor must they be a selfish draft upon the purses or the good nature of other people. To drain a cup filled with pleasure sought by such means, is to find the bitter dregs of humiliation and shame at the bottom."

UNWHOLESOME FICTION.

It is a hopeful sign that intelligent men and women everywhere, even newspaper writers, are coming to recognize the damaging influence exerted upon the minds of the young, particularly young women, by the reading of bad fiction. Under the head of bad fiction must be included a large share of all fictitious books. These books, which often claim to be based upon facts, or to present pictures drawn from real life, are never truthful. Vice is always pictured somewhat less hideous than it is. It would never do to present in any book intended for popular reading, the horrors of vice and sin in their naked reality. The repulsive characteristics of vice are necessarily glossed over, so that it appears far less loathsome than it really is. A writer in the *Atlanta Constitution* remarks upon this subject:—

"I would rather take an innocent young creature through the worst part of New York City, at midnight, than put bad books into her white hands. There is little romance or allurements in naked human vice, but vice clothed with a poet's fancy, beautified by the imagination, is another sort of thing.

"There is so much in a girl's commencing right in the things she reads. It is often the making or marring of her whole future life. There are women to-day, forty years old, still living in the pernicious books they have read. They started with bad books in their teens. They followed bad heroines, and may, according to their own diseased minds find themselves an improvement on those they imitate. They are, if not actively vicious, silly, unnatural creatures whom everyone ridicules and no one respects."

REGULATION OF VICE A FAILURE.—A report has recently been made by Dr. Nicolsky respecting the regulation of prostitution in Kiew. According to this report, it appears that forty-three per cent of the five hundred women who were under surveillance, were found diseased, and the disease was yearly increasing. A committee of the medical society condemns all attempts to regulate prostitution as ineffective. It seems now to be generally admitted that State regulation of vice is a failure from a medical standpoint, as well as utterly wrong in principle from a moral point of view.

that not even the smell of smoke may be found on their garments after passing through the thickest of flames.—*Sci.*

In the great work of educating and rescuing children from lives of vice and crime, we need men and women in our schools and places of influence whose lives are so pure, so unselfish, so noble, that they will carry love and light into the dens and wretched abodes where dwell the children of crime; men and women who will take these unfortunate and misguided children by the hand, and lead them up and out into the sunlight of truth, beauty, and goodness; men and women whose characters are so pure

DIET AND IMPURITY.—"Keep thyself pure" is God's command. Purity is freedom from all that contaminates and defiles. Whether it shall be secured for the children depends largely upon the care taken of them by the parents. There seems to be a close connection between cleanliness and purity. God's way of teaching purity to his ancient people (rather, his way of making it an ingrained part of their nature), was by the washings in clean water; the robes of the priests of "fine linen clean and white;" the perfect cleanliness of all vessels used in his sanctuary; the "without spot or blemish" required of every sacrifice offered to him. Similar means will teach the same lesson in our homes. See that the child's skin is always kept clean by bathing in pure water; that its clothes, no matter how coarse and patched, are clean and whole; that the dishes from which it eats, and the bed in which it sleeps, are clean. Dirt and indecency seem to be twin brothers.—*Mary Allen West,*



THE matter concerning cancer cures, which was promised for this department this month, has been crowded over to the next number.

ALUM BAKING-POWDERS.—We are glad to note that the Minnesota Legislature has recently passed a law requiring that all baking-powders containing alum shall be labeled, "This baking-powder contains alum." Everybody ought to know that alum is a poisonous substance, and is productive of serious diseases when used in the form of baking-powder. A very large proportion of all the baking-powders now selling in the market contain alum or ammonia. According to a report of the Massachusetts State Board of Health, the *Scientific American* recently published a list of ninety-five baking-powders, including the Royal, which is claimed by its manufacturers to be absolutely pure, every one of which contained either alum or ammonia. Ammonia, as well as alum, is harmful, and should never be used, in any form, in connection with foods. To detect alum in bread, macerate in three or four tablespoonfuls of water a half slice of bread. Strain off the water, and add to it twenty drops of a strong solution of logwood. Then add a large teaspoonful of a strong solution of carbonate of ammonium. If alum is present, the mixture will be changed from pink to a lavender-blue. This test will discover a grain of alum in a pound of bread.

STRYCHNINE LOZENGES.—According to an English medical journal, a medical genius has recently undertaken the manufacture of confectionery flavored with strychnia. The drug is prepared in the form of lozenges, each of which contains one thirtieth of a grain. The lozenges are to be used as a tonic after fatigue, and are specially recommended for use in attendance at the theater, and to brace one up during a prosy sermon at church. It is to be hoped that the use of these poisonous lozenges has not yet become very prevalent, although we would not undertake to show

that the use of strychnia in the form of a lozenge is more detrimental than in the form of a pill. The effects obtained from the use of strychnia are delusive. It is a "nerve fooler" of the most pernicious kind. It is the most powerful of so-called tonics, making the patient feel better when he is really not better, giving him a sensation of vigor and energy when in fact he is still exhausted. The results from the use of strychnia are cumulative and exceedingly harmful, and it is very probable that those who use strychnine lozenges to keep themselves awake in church, will in so doing pave the way for a funeral in church at no very distant day.

MOXIE.—We have had so many inquiries respecting the nature of Moxie, that we are glad to give our readers the following from the *Western Druggist* :—

"A correspondent desires to know the composition of Moxie Nerve Food, extensively advertised 'as a very lively enemy to rum,' etc. 'Though neither a stimulant, poison, tonic, nor medicine, and contains not a drop of alcohol, yet it satisfies the drunkard's thirst better than anything else.' . . . 'It has created more excitement in the East than the railroad or the telegraph, and in Washington they all drink it, from the President down.' Such is the driveling language of a quack nostrum, boomed by a retired homeopath for the benefit of the dissipated élite. As usual, a romantic story goes with the nerve food, how it is prepared from a plant discovered by one Lieut. Moxie, and, 'being entirely unknown to the botanists,' was named in his honor. A large reward is offered for any chemist who can produce its equal, or give a correct analysis of the wonderful nerve food. This 'Moxie,' despite the wonderful tale of its discovery, and although so 'wholly unknown to botanists,' is, we presume to say, a plant otherwise termed *avena sativa*. The great 'nerve food' is a decoction of oats, made into a sirup and flavored with sassafras and wintergreen."

HALL'S FRAUD IMITATED.

SOME weeks ago we received a copy of a small book entitled, "The New Method," published by M. L. Holbrook & Co., of New York. The work referred to consists of one hundred and twenty-eight pages, including advertising pages, bound in the cheapest style of pamphlet binding. The author says in his preface, "We make no claim to originality in the ideas here given;" so we did not look for anything specially new, although the author states that the title, "The New Method," is claimed "simply on the ground that well-known measures have been applied in a somewhat novel manner." The only novelty we have been able to discover is in the miscellaneous and desultory way in which the meager amount of information given is communicated. As a matter of fact, there is not a single thing in the entire pamphlet to entitle it to the claim of being a new method. It is largely made up of quotations from various medical journals, and of advertisements of the appliances offered for sale by the Health Supplies Company.

The following ungrammatical paragraph is the author's own statement of what his new method comprises:—

"The principles of the 'new method,' or the home treatment without medicines, for all of these are, in brief, diet, exercise, and the washing or *flushing of the alimentary canal.*"

In the italicized words, and the pages which follow the words above quoted, it is apparent that the new method is simply "Hall's hygienic treatment" under a new name. Successful frauds are subject to imitation as well as the genuine original.

When "The New Method" was first issued, a few weeks ago, it was sold without restrictions of any sort; but the publishers seem to have later conceived the idea that by imitating the quackish methods of the so-called Dr. Hall, they might like him reap a golden harvest from the ignorance of the public. They are accordingly now sending out deceptive advertisements representing their system to be a "*new appli-*

cation of nature's healing powers, the vis medicatrix naturæ, to the cause of all chronic and sub-acute diseases," claiming that "the 'new method' is based on two hitherto almost unknown hygienic principles that are more potent in the cure of chronic disease than any drug or medicine yet discovered." It is evident from a comparison of the statement made by the author in the preface of the work, in which he disavows any originality in the ideas, and admits that the remedies recommended are *well-known* measures, with the recent statement that the 'new method' is based on two hitherto *unknown* principles, that the publishers, not finding the ready sale for the work which they expected, have made a change of base, and now propose to follow in the unworthy footsteps of their predecessor, the notorious Dr. Hall, in the practice of this sort of charlatany. Each purchaser of the work is now required to pay two dollars for a pamphlet of only one hundred and twenty-eight pages, and in addition is required to sign the following pledge: "I, the undersigned, do hereby pledge myself not to let the book, 'The New Method,' pass out of my hands or the hands of my family, or to reveal its contents except by permission of the Health Supplies Company, of New York."

The success of the Hall method of gulling the public has been so great from a financial standpoint, it will likely find many other imitators. We warn our readers to be on the lookout for these sharks. As we remarked in our criticism of Hall and his methods, we consider the meanest of all frauds to be those which impose upon the sick and suffering, and take advantage of the miseries and misfortunes of one's fellow-beings to enrich one's self without rendering any just equivalent. From what we have seen of the operations of this new enterprise, we are inclined to believe that it is in no particular more worthy of respect and confidence than its predecessor, from whose brazen attempt at wholesale deception it has evidently taken its cue.

FAITH AND COMMON SENSE.—The neglect to mingle a grain of common sense with their faith has often led well meaning Christian people to adopt a wrong course of action, the result of which has been not infrequently, disastrous to themselves as well as discreditable to the Cause which they doubtless desire to advance. According to the *American Lancet*, the Governor of Sierra Leone says that "the climate of that place is not suited to those who trust in 'faith'

healing, and ignore the means placed by Providence at their disposal for the relief of suffering humanity. The communication was called forth by the conduct of nine American missionaries, who had such faith in the 'faith cure' that they would take no medicine until two of their number died and two others became very sick of tropical fever. Even then they seemed to be influenced mainly by the fact that their conduct was endangering the lives of others."

GOOD HEALTH

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

COFFEE DRUNKENNESS.

CASES of drunkenness resulting from the use of tea and coffee have been frequently reported, and several have been mentioned in medical journals in which the victims of tea and coffee inebriety had suffered from delirium tremens as the result of their pernicious practice. Dr. Mendel, of Berlin, has been making a clinical study of coffee inebriety. His studies were carried on chiefly among the women of the laboring classes in Essen and vicinity. He recently published a brief account of his researches. The victim of coffee inebriety is one of the most miserable of human beings. He is low spirited, sleepless, suffers frequent attacks of headache, which are relieved by coffee, but speedily return. His muscles are weak, his hands tremble, he has inability and aversion for work, his heart action is feeble, he suffers from palpitation and great pain in the region of the heart. The complexion is sallow, hands and feet are cold, the face wears an anxious and pained ex-

pression. The patient suffers from a great variety of dyspeptic symptoms, from inflammations of various sorts, and often acquires the red nose which is generally considered characteristic of alcoholic inebriety, and hence called the rum-blossom.

Many of these distressing symptoms are temporarily relieved by stronger doses of coffee, only to return when the effect of the stimulant wears off. Dr. Crothers, in referring to these researches, calls attention to the fact that coffee drunkenness is increasing in this country, and that "the coffee drinker, after a time, turns to alcohol, and becomes a constant drinker. In other cases, opium is taken as a substitute. Coffee inebriates are more common among the neurasthenics, and are more concealed because the effects of excessive doses of coffee are obscure and largely unknown. Many opium and alcoholic cases have an early history of excessive use of coffee, and are always more degenerate and difficult to treat."

GUM-CHEWING AND WEAK BRAINS.—A New York doctor asserts that to his positive knowledge the persistent habit of gum-chewing has produced mental weakness in fourteen cases of young girls who are now under medical treatment. It might be a question whether the mental weakness is the result of gum-chewing, or the gum-chewing the result of intellectual feebleness. Certainly the habit is not one indicative of a high grade of mental development.

DIED OF DINNERS.—Kate Field asserts that the late Justice Matthews "died of dinners," and not from overwork. Indeed, she cruelly tears away the curtain which shields the private life of these great men from the public gaze, and heartlessly exposes the sad fact that Chief-Justice Waite and Justice Miller

also died of dinners, and that the other members of the Supreme Court are in imminent danger of going to a sphere where "dinners are unknown," from the same cause. Miss Field cogently remarks, apropos of the subject of death-dealing dinners, that "most of us commit suicide without knowing it, and our mourning friends call it a blow from the hand of Providence. In one sense they are right, however, for he who defies the laws of health, pays the penalty of sickness and death. It's a great pity there is no chair in school or college dedicated to the science of living. Who will endow such a one? I know a man who can fill it, and who says everybody ought to live to be at least one hundred. The problem of long life is merely a question of what, when, and how much to eat and drink."

VEGETARIANISM IN JAPAN.

It perhaps may not be known to all our readers that the writings of Buddha, which are held as sacred books by many millions of the natives of Asia, very strictly enjoin abstinence from the use of flesh foods. There are in Japan many thousands of Buddhists. How flesh-eating is regarded by the Buddhists and Brahmans, and the sort of impression made upon these people by the flesh-eating habits of Christians, will be seen by the perusal of the following communication we have just received from Mr. Masatoshi Ohara, of Otsu Omi, Japan:—

“In one of our Buddhist Sutras we read as follows:—

“‘There’s none in heaven and earth, among Samanas or Brahmans, among gods or men, by whom such food (the flesh of animals) can be eaten without hurt to himself.’

“‘Out of compassion, never kill any living being, but love all with your whole heart, and save their lives, when they are in dangerous state, with all your might. The followers of the Buddha should never go down so low as to kill them and eat their flesh. They should rather have been killed with horrible sword than to eat animal flesh, because flesh-eating

kills the seeds of compassion, love, and kindness toward others.’

“From the point of view of morality, it was, in our country, forbidden to kill any animal and eat its flesh, but that was done away soon after the enthronement of the present emperor. From that time, several foreign savages came here, and taught the flesh of animals to be a most important food to sustain healthful body, and many who were converted into Christians began to eat animal flesh publicly. The operations of butchery became more and more flourished, and there arose many countless butchers’ houses in our country.

“We regret heartily that the Japanese Christians never love an animal, and that they kill it and eat its flesh with pleasure. They go on hunting and fishing, taking away many lives of inferior ones; while we Buddhists never hunt and fish, and are telling them to cease from their practices. Formerly the flesh-eating was thought as degrading matter, and so do we now; but they Christians take us for ignorants who do not know how to keep body healthy! What horrible Christians!

“I will give you further account the next time.”

THE INFLUENCE OF COLD.

A low temperature is antagonistic to all forms of life. Plant life flourishes most luxuriantly at a high temperature, provided water is present in sufficient quantities, while cold checks the growth of plants. Animal as well as vegetable life is dwarfed under the influence of a low temperature. In mountain climbing, one can almost determine the altitude by the height of the straggling pines which grow among the rocks.

The influence of cold is especially productive of mischief to human beings at the two extremities of life. Children and old people are of all classes the largest contributors to the mortuary tables during the cold season of the year, and especially during a “cold snap.” Bronchitis, or winter’s cough, in old people, capillary bronchitis in children, and pneumonia in both classes, are very common during the coldest months of the year. These susceptible classes should be carefully guarded from the cold by strict atten-

tion to the clothing, and avoidance of all exposures to a low temperature. It is particularly important to regulate with great care the temperature of sleeping-rooms. Sleeping-rooms should always be at a temperature slightly lower than the room occupied during the day. If the day temperature is 65° or 70°, the night temperature should be about 60°.

Sleeping-rooms should always be heated, either by a grate, or by a register connected with a hot-air furnace, or by a steam heater. Too high temperature during the night, however, should be carefully avoided. Sleep is much more refreshing in an atmosphere a few degrees below the ordinary atmosphere to which the body is exposed during the day, than in a warm, relaxing temperature. Warm bed-gowns should be worn at night during cold weather, and special care should be taken to protect the lungs by extra layers of flannel during the day, particularly when exposed to a low temperature in going out-of-doors.

It has been remarked by medical men that rickets is rarely ever found among the children of Japan,—a

fact which is attributable to the practice of vegetarianism, which prevails almost exclusively in that country.

MORTALITY OF LIQUOR DEALERS AND USERS.

We quote the following very significant statistics from the *Quarterly Journal of Inebriety* :—

“Dr. Baer of Berlin has made a study of some official returns of the mortality and longevity of persons who manufacture and handle wine, beer, and all forms of alcoholic drinks. These studies embrace fourteen thousand two hundred males, of whom over thirteen thousand were over twenty-five years of age. The following tables show the result of this study :—

Persons at	Expectation of life of temperate persons.	Expectation of life of persons who handle spirits.
25 years of age,	32.08 years.	26.23 years.
35 “ “	25.92 “	20.01 “
45 “ “	19.92 “	15.19 “
55 “ “	14.45 “	11.16 “
65 “ “	9.62 “	8.04 “

“CAUSES OF DEATH AMONG THE CONSTANT USERS AND VENDERS OF ALCOHOL.

	Average mortality of general male population.	Mortality of users and venders of alcohol.
Brain disease,	11.77 per cent.	14.43 per cent.
Tuberculosis,	30.36 “	36.57 “
Pneumonia and pleuritis,	9.63 “	11.44 “
Heart disease,	1.46 “	3.29 “
Kidney disease,	1.40 “	2.11 “
Suicide,	2.99 “	4.02 “
Cancer,	2.49 “	3.70 “
Old age,	22.49 “	7.05 “

EFFECTS OF TOBACCO UPON THE STOMACH.—M. Lyon, an eminent French physician, has recently published, in the *Union Medicale*, an account of careful researches which he has carried out respecting the effects of tobacco upon the stomach. He finds that tobacco lessens the contractility of the muscles which partly compose the walls of the stomach, thus producing indigestion and dilatation of the stomach. This is an important addition to the long list of charges which medical men have brought against this drug.

DECAYED TEETH AND CONSUMPTION.—An eminent dental authority recently called attention to the fact that diseased roots and decaying teeth are frequently the starting point for tuberculous enlargement of the lymphatic glands of the neck. It is perhaps not generally known that the enlargement of lymphatic glands in the necks of children is not infrequently due to the invasion of the glands by the microbes which produce consumption. The disease sometimes finds its way from these enlarged glands to the lungs, and thus results in fatal disease. Two or three cases of this sort have come under the writer's observation. The importance of caring properly for

From the above tables it will be noticed that the expectation of life of an inebriate at twenty-five years of age, is nearly twenty per cent less than that of a temperate person. At thirty-five it is slightly increased. At forty-five it is more than twenty per cent. At fifty-five it is still higher. This is the foundation for the refusal of insurance companies to place policies upon the lives of persons who are addicted to the use of alcoholic liquors. In England, such persons may be insured, but must pay a higher rate, as it is well known that their death-rate is higher, and hence the risk is greater.

Significant facts may also be elicited by a careful study of the causes of death among those who use alcoholic liquors. It will be noticed by referring to the table, that the death-rate from the causes mentioned is higher in the case of the users and venders of alcoholic drinks when compared with the average mortality of the male population, including this class, with one exception. Only seven per cent of the users of alcohol die of old age, while of the general population twenty-two and one half per cent are put down in the statistics as dying from this cause. The excessive mortality from heart disease, kidney disease, and cancer is particularly noticeable.

the teeth, even for the first set, does not need to be emphasized after this startling fact has been announced.

ABSTINENCE FROM FOOD.—The fact that the human body always contains in store a considerable amount of food material which may be drawn upon as a source of supply in case of an emergency, seems not to be generally known. Numerous historical facts, however, as well as the more recent experiments of Tanner, Succi, and others, show very clearly that this is the case. The great earthquake of 1783 was the occasion of the entombment of a large number of persons, especially in Calabria. Many of these were rescued after the earthquake, through the heroic efforts which were made for their relief. In one instance, a young woman of sixteen years remained under ground for eleven days without food or drink. Two mules were entombed respectively twenty-two and twenty-three days. A fowl was exhumed alive after twenty-two days, and a couple of hogs held out for thirty-two days. The testimony of the persons who were buried alive, respecting their sensations, was that after a few days they fell asleep, and knew nothing more.

A NOTED VEGETARIAN.—Prof. F. W. Newman, brother of the late Cardinal Newman, has been a strict vegetarian for more than thirty years, and during a considerable portion of that time has been president of the Vegetarian Society of England. He is one of the most eminent literary men of England, and professor in the London University, and is still active, although more than eighty years of age.

THE MEDICINE HABIT.—A leading professor, in his address at the opening of a prominent medical school a few months ago, called attention to the enormous increase in the consumption of drugs in this country. The following are his words: "Think of two hundred tons of the bromides and one hundred and fifty tons of chloral hydrate being used annually! Among the causes for this may be reckoned the overcrowding of the medical profession, the multiplicity of drug stores, the establishment of free dispensaries, patent medicine advertisements, and the desire of people for medicines to work cures upon derangements of digestion, while they maintain the cause of their trouble by over eating and drinking. The public should be instructed how to properly estimate drugs, and to regard every unknown medical agent as dangerous, if not positively endowed with harm." We never miss an opportunity of placing such facts before the public. Celsus, one of the most eminent physicians of ancient times, sagely remarked in one of his works, "The best medicine is no medicine at all."

CURED BY A SHIRT.—The influence of the mind in the treatment of disease is a factor which should never be overlooked. The eminent Dujardin Beaumetz, of Paris, recently reported a case in which a patient was cured of a supposed cancer of the stomach by the prescription of a quack doctor, the principal element of the prescription being the requirement that he should wear *shirts of a certain color*. The quack had the sagacity, however, to give his patient a simple dietetic regimen, and insisted that his prescription should be followed. Both doctors and patients may learn a lesson from this incident. Aggravated cases of dyspepsia sometimes assimilate cancer so closely that often the most learned physician can be deceived.

The reverse of this, however, sometimes happens. In a case which recently came under our observation, an eminent physician had assured the patient that he was suffering only from dyspepsia, and gave him a stomach tube, which he instructed him to use daily, promising him that a cure would thereby be effected.

A few weeks later, however, when the patient came under our care, we found distinct evidence of an enlarged gall-bladder, in operating to relieve which we removed nearly two gallons of bile, some of which, unfortunately, through the delay, had escaped into the peritoneal cavity.

LENTIL FLOUR.—Pease and beans, especially dried pease and beans, often disagree with persons whose digestive vigor is not great, the most common symptom of indigestion being an undue accumulation of gas in the intestines. This is due to the fact that these seeds contain quite a large amount of woody material, and consequently their disintegration is difficult. Experiments made by German chemists show that when eaten in their natural state, or rather when they are cooked in their natural condition, only 53 per cent of the digestible albumen is dissolved by the process of digestion, the balance being wasted, and doubtless to some degree contributing to the fermentative process. On the contrary, careful experiments show that 92 per cent of the albumen of lentil flour is completely digested. Pease flour and bean flour would doubtless be very valuable additions to our stock of food stuffs. If the flour of the three leguminous seeds cannot be obtained, the same result may be reached by thoroughly boiling the seeds in their natural condition, then when they are well softened, rubbing them through a fine colander.

A TOBACCO SLAVE.—A correspondent writes us concerning a case of tobacco addiction which is almost beyond belief. The victim of the weed is a woman suffering from tobacco cancer, which began at one side of the mouth and has eaten a hole through the face, and destroyed the lower lip to such an extent that it has separated from its supporting attachment, and lies a shapeless mass upon the chin. The disease has extended so far into the throat that the larynx is exposed, and the jugular vein can be plainly seen. The disease was, at the time the correspondent wrote us, rapidly extending across the base of the tongue. Nevertheless, the miserable creature will not suspend the use of the poisonous weed which has been the cause of this terrible state. Being no longer able to use a pipe herself, she has ingeniously devised a method by which she can still smoke by proxy. A smoker, whom she engages for the purpose, seats himself before her with the pipe in his mouth, draws a long puff, and blows it into the ghastly opening in her face, thus enabling her to still enjoy, after a fashion, the horrible drug which has reduced her to a state of living death.

A DOCTOR'S CHATS WITH HIS PATIENTS

CAUSE OF HIGH TEMPERATURE IN FEVERS.

THERE has been much discussion respecting the cause of the rise of temperature which constitutes one of the most characteristic symptoms in febrile action. It is probable that in different diseases and under different conditions, different causes are active. Probably these various causes may be included under three heads:—

1. Increase of heat production.
2. Lessened heat elimination, or loss of heat diminution of the body.
3. An increase in temperature due to the activity of microbes within the body.

It is more than probable that the increase of temperature which accompanies fevers from whatever cause, is in many instances curative in its influence,

since, as is well known, many of the germs most destructive to life are exceedingly sensitive to changes in temperature, ceasing to develop, or even dying, when the temperature is slightly raised above a certain point. It is apparent, then, that temperature-reducing agents should not be used indiscriminately in cases of fever, and that it is possible to attach too great importance to this single means of treatment. In the fever which accompanies typhoid infection and such diseases as scarlet fever and acute rheumatism, vigorous measures for reduction of temperature are usually in order, and by their judicious employment the temperature may be lowered, the course of the disease shortened, and the patient's comfort greatly enhanced.

HOW TO REDUCE TEMPERATURE IN FEVERS.

THE best method of reducing temperature in fevers is a question which has been much discussed by medical men, and has given rise to a great number of scientific experiments. The cold pack of Preissnitz, the cold affusion of Curry, the cold enema of Winternitz, and the cold bath of Brand have each had their advocates. Cool sponging and the cool shower bath administered by means of a sprinkling-pot, as recommended by the late Dr. Austin Flint, and employed in surgical fever not only by him and other eminent physicians, but by Sir Spencer Wells, Prof. Thomas, and other surgeons, have also been highly praised as successful means of combatting rise of temperature. All of these methods, however, have been open to serious objections and disadvantages, which have led many eminent physicians to discountenance their use, and to employ instead, various medicinal agents, such as quinine, antipyrine, antifebrine, and other similar poisonous drugs. Prof. Bouchard,

professor of pathology and therapeutics in one of the leading hospitals of Paris, says, in his work, "*Leçons sur les Auto-Intoxications*," with reference to the means by which temperature may be lowered, "We may diminish the sources of normal heat by blood-letting, or by the use of poisonous drugs which produce the same effect. These means long employed have been almost wholly abandoned by everybody."

The objections urged against the use of water as a means of lowering the temperature have been chiefly,—

1. The application of cold water in such a manner as to produce a decided lowering of temperature, produces chilliness and other disagreeable nervous sensations.

2. Not infrequently the application of cold water is followed by a reaction in which the temperature rises higher than before.

In consequence of these serious objections, water

has not been so universally employed as a means of lessening heat in fevers as it otherwise would have been, since the evident dangers of the use of this remedy, when compared with medicinal agencies for lowering temperature, notwithstanding its recognized disadvantages, have been too evident to be ignored.

Prof. Bouchard, however, after several years' trial, in which he has made over eight thousand applications, recently brought forward a new method of applying water for lowering temperature, which our experience, reaching back now nearly twenty years, enables us to heartily commend. This is the new method proposed by Prof. Bouchard:—

The patient is placed in a bath, the water of which is at a temperature of about three degrees lower than that of the body. If, for example, the temperature of the patient is 103°, the temperature of the water

should be 100°. The temperature of the water is then lowered at the rate of one degree every five minutes until 86° is reached. The length of time the patient remains in the bath will, of course, be determined chiefly by the temperature, a longer time being required when the temperature is high than when it is lower. The advantages of this method of employing the bath for lowering temperature are,—

1. No shock is produced, and the patient enjoys the bath instead of dreading it.

2. The effect in lowering temperature is more decided and permanent in its results. The temperature of the fever patient is to be lowered not through contact of the cold water, but by relaxation of the blood-vessels of the skin, thereby bringing to the surface from the interior of the body an increased quantity of blood, to be cooled by contact with the air.

COLD AIR FOR HEMORRHAGE FROM THE LUNGS.—Dr. Tullio of Naples, an Italian physician, has recently called attention to the fact that hemorrhage from the lungs may be most efficiently relieved by the inhalation of air at a zero temperature. The air is cooled to this temperature by passing through tubes placed in a box filled with broken ice and salt.

FRUIT DIET AS A CURE FOR DRUNKENNESS.—A number of years ago, an English physician called attention to the fact that a diet consisting of fruit, grains, peas, beans, milk, etc., is one of the most excellent means of antagonizing the appetite for alcohol. Dr. Tripley, an American physician, recently confirms these views by announcing the fact that he has succeeded in curing many drunkards by simply prescribing apples as the chief constituent of their dietary.

TREATMENT OF BURNS.—First wash the burned surface carefully with a solution of carbolic acid, two or three parts to one thousand of water, or a solution of salicylic acid of the same strength. If the blisters are filled with water, puncture and empty the contents, taking care to break the skin as little as possible. Then dust over the burned surface a quantity of finely powdered sub-nitrate of bismuth. Cover the whole with absorbent cotton, and renew the cotton as often as it becomes saturated with the serum which pours out from the surface of the burn. If the burn covers a very large surface, instead of bismuth in powder, apply an ointment consisting of one part of bismuth to three or four of vaseline.

FOR COLD-SORES.—Sores of the lips, frequently called cold-sores, but properly known as *herpes*, may often be cured by the simple application of alcohol. As soon as these sores begin to make their appearance, bathe with ninety-per-cent alcohol several times daily. The addition of camphor-gum to the alcohol renders it somewhat more efficient. A one-half-per-cent solution of carbolic acid in alcohol, or a three-per-cent solution of resorcin in alcohol, is also an excellent application.

RELATION OF HUNGER TO INFECTION.—There is a popular notion to the effect that a person is more likely to take a contagious disease when the stomach is empty. Although this fact seems to be well established by experience, nevertheless it has never been established as a scientific fact until recently. Experiments which have lately been made upon pigeons, by two Italian physicians, demonstrate beyond any reasonable doubt that hunger is favorable to the activity of the infectious element, whatever it may be. Pigeons that had been starved, were found to be very susceptible to the contagion of anthrax, although when well fed, they are not at all subject to this disease. It thus appears that hunger in some way lessens the ability of the body to defend itself from the attack of disease germs. Possibly this may be in part due to the fact that when a person is hungry, there is no gastric juice in the stomach, so that the protecting influence of this digestive fluid is lost. Then, too, the lowering of the vital powers as the result of hunger, lessens the resistance of the cells of the body in general.

FOR SWEATING FEET.—A frequent question asked is, "What shall I do for constant sweating of the soles of the feet?" A Russian physician recommends painting the soles with tincture of iodine. This remedy is not likely to do any harm, and is well worth a trial. It is stated that two or three applications will effect a cure in the majority of cases.

PINEAPPLE JUICE IN DIPHTHERIA.—The negroes of the West Indies are said to use pineapple juice with success in the treatment of diphtheria. The juice is applied to the false membrane in the throat, and is said to remove it by a sort of digestive action. Recent investigation seems to show that the juice of the pineapple has a digestive action upon animal matter; we have had no occasion to use it, but as the remedy is a harmless one, it is worthy of trial.

COMEDONES, OR BLACK HEADS.—We are frequently asked what will cure black heads. The so-called black heads, sometimes mistaken for the heads of worms under the skin, are due to the obstruction of those glands of the skin which secrete fatty matter. Prof. Unna, the eminent specialist in the treatment of skin diseases, recommends the following as an excellent application for this annoying affection of the skin. The remedy should be used once or twice daily, after carefully cleansing the skin with a little fine soap and soft water:—

Solution of hydrogen peroxide,	2 oz.
Vaseline,	2 "
Lanolin,	1 "
Acetic acid,	1 dr.
Mix, and perfume.	

DANGER IN MINERAL WATER.—Patients not infrequently say to us, "Doctor, what do you think of the use of mineral waters?" Our invariable reply is that while temporary relief from various bowel or stomach disorders may be found in the use of mineral waters, their habitual use is as harmful as the use of drugs in any other form as a habit. Immense quantities of mineral waters of all sorts, natural, artificial, home-made, and imported, are used by persons who, by their use, are continually aggravating the very maladies for which they are employed. Some of the most obstinate cases of stomach and bowel troubles with which we have ever had to deal, were simply the result of the prolonged use of laxative mineral waters. It should be understood that mineral waters do not contain any potency of any sort not found in a solution of the same drugs, which may be made at almost any drug-store.

A NEW CURE.—A new method of treating disease is instituted by a Bavarian priest, and through the patronage of a Rothschild has suddenly become quite fashionable. The method in question is quite in accordance with a very old Catholic doctrine which requires mortification of the flesh. The principal elements of the cure consist in the following:—

A plunge in cold water, then dressing in coarse linen underclothes without drying the skin, then running for half an hour in the bare feet through the wet grass, cold water, or, if possible, snow, to be followed by a complete dressing and brisk walking. The *Times and Register*, contrasting this method with what it terms the "blasphemous stuff miscalled Christian science," commends the one and condemns the other, remarking: "One says: Mortify the flesh; restrain the lusts of the body, and by a pure life rid yourself of the disease brought about by indulgence in ease and pleasure. The other says: Do n't bother yourself to do anything, but just tell God to come and pick you up. It's his business."

TO RECOVER A PERSON WHO HAS STOPPED BREATHING.—A knowledge of just what to do in cases of this sort should be possessed by every one, as occasions are not infrequent when such knowledge may be the means of saving a human life. If a person suddenly stops breathing, from fainting or other cause, no time should be lost. All restrictions should be removed, but time should not be consumed in removing the clothing in a methodical manner. See that the mouth is free from obstruction, and begin at once artificial breathing movements. These may be effected by raising the arms above the head in such a manner as to draw out the sides of the chest, and restoring them again to position, repeating this maneuver regularly about twelve or fifteen times per minute. At the same time, the sides of the chest may be forcibly compressed with the hands, care being taken to make these movements rythmical, and to make them coincide with the movements of the arm, the compression being made when the arms are brought down at the side. While this is being done, hot water should be obtained. A hot bag or a cloth wrung out of hot water, should be placed over the chest. Hot water should be applied to the head, face, and to the back of the head. Alternations of heat and cold to the back of the head and to the spine are most effective. Downward pressure of the chest may also be employed. These are among the most important measures, and if used efficiently will usually succeed in recovering those who otherwise might have died.

ANSWERS TO CORRESPONDENTS.

INCREASE OF GROWTH—TOMATOES.—C. B. S., Iowa, wishes to know, 1. If the size of a person of stunted growth, nearly twenty-one years of age, can be increased, and how. 2. Also, what is the dietetic value of tomatoes?

Ans.—1. Yes; by a systematic course of physical culture, persons who have reached twenty-two or twenty-three years of age have in some instances been known to increase in height from one to two inches. If such a person will spend three months at the Battle Creek Medical and Surgical Sanitarium, he will be likely to get a good start in the direction of development. 2. Tomatoes are a wholesome fruit. Their dietetic value is about the same as that of other juicy fruits. Tomatoes have an excellent effect in many cases, by encouraging activity of the bowels.

SALT RHEUM—SEROUS HUMOR OF THE STOMACH.—A New England subscriber wishes remedies for both salt rheum and serous humor of the stomach and bowels. Also, what dietary would we recommend?

Ans.—There are so many stages of the disease known as salt rheum, that no one remedy can be recommended for it. Where the disease is in the acute form, and much irritation is present, zinc ointment, which can be obtained at any drug-store, is an excellent remedy. In old cases, in which there is a thickening of the skin and a profuse shedding of white scales, relief may often be obtained by the employment of hot water. The parts should be bathed in hot water for five or ten minutes several times daily. An application of a soda compress (a teaspoonful of soda to the pint of water), kept on over night, is also serviceable. The best dietary in cases of this sort is that composed of fruits, grains and milk, simply prepared. We are not acquainted with any disease which might be properly termed a serous humor of the stomach and bowels.

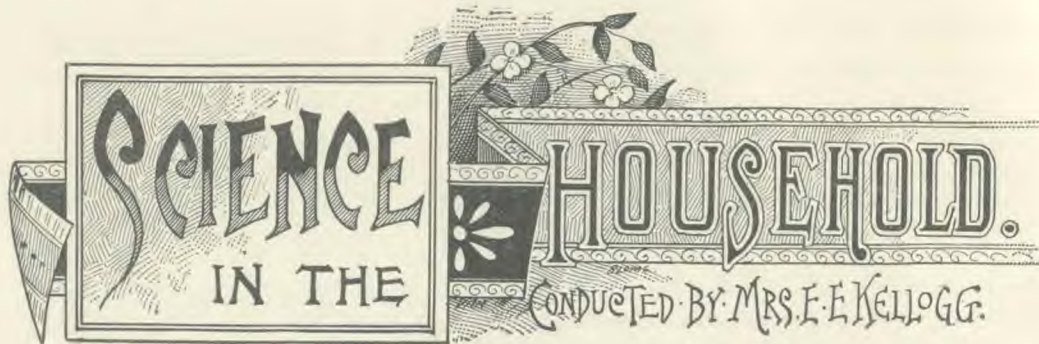
THE USE OF SULPHUR—EATING OF TURNIPS AND SQUASH, ETC.—A correspondent wishes to know, 1. If sulphur is worthy of the place it has as a household remedy. 2. In skin diseases, does it drive to surface, or carry off internally by its purgative qualities? 3. Does the eating of turnips and squash affect the kidneys? 4. What do you think of black licorice? 5. Please give opinion upon the possibility of taking disease through eating vegetables grown by the aid of animal manures.

Ans.—1. Sulphur is an excellent household remedy

for germs. It is also destructive to parasites of various sorts. It has very little value otherwise. 2. It does not carry off disease; it simply empties the bowels when used as a laxative. If disease of the skin is due to the accumulation in the system of impurities which should be removed through the bowels, it ought to be of service in that way; but there are better remedies. 3. In some persons the use of strongly flavored vegetables has a diuretic effect. 4. Licorice has slight expectorant properties. Its value as a medicine, however, is chiefly as a means for disguising the unpleasant taste of other remedies. Its medicinal value is really very small. 5. It is not likely that vegetables absorb germs from the earth as the result of the use of animal manures.

CONCENTRATED ARTICLES OF DIET—FRUIT-EATING, ETC.—W. H. B. asks: "1. What are the articles of diet called concentrated? and do they tend toward causing constipation? 2. In eating fruit in abundance, is it not well to swallow only a portion of the pulp and the entire juice, especially of apples, when the pulp is somewhat tough? 3. Is there any advantage to one who is habitually constipated, in the way and quantity in which fruit is eaten? 4. Also, what are the best kinds? 5. What action has the juice of fruit upon the system? 6. Is cocoa boiled in milk or milk and water, nutritious and easily digested? 7. Will it cause any constipation, and if so, how can that effect be counteracted?"

Ans.—1. Meats, fine-flour breads, and all bolted preparations of the grains are concentrated foods. From the lack of a sufficient amount of indigestible residue, these foods have a tendency to induce inactivity of the bowels. 2. Fruit, the pulp of which is tough, should not be eaten. Persons with feeble digestion find themselves able to eat cooked fruit when raw fruit cannot be digested. 3. Yes. It is better to take the fruit at the beginning of a meal, and when the digestion is good, raw fruit is to be preferred to cooked fruit. 4. Apples, pears, peaches, oranges, prunes, and figs, are especially to be recommended. 5. Fruit juice has no special action upon the system. It is simply a food. 6. Cocoa is in itself not a nutriment, but a stimulant. Foods taken with it, such as milk, are nutritious, but their nutritive value is not at all increased by the presence of the cocoa. 7. The influence of cocoa upon the system is injurious. The only proper method of counteracting it is to abstain from its use.



MORE EXPERIENCES IN HEALTHFUL LIVING.

SINCE the publication of the article on healthful, economical living, in the January number, various of our readers, who have for a longer or shorter period been using a dietary in which cream, legumes, and grains supplied the place of meat, butter, suet, and lard, have favored us with numerous bills of fare in which the cost figures no more, and in some cases much less, than in those given in our January issue. Thinking our readers may be interested in these various experiences, we append a selection from the bills of fare, with their cost. Recipes for most of the articles mentioned have been printed in recent numbers of this journal. The prices given are those current in the localities named.

The following from Parkersburg, W. Va., is for a family of six persons:—

BREAKFAST.

Bananas. Browned Rice. Whole-Wheat Muffins. Graham Crisps. Cream. Hot Milk. Dried Peach Sauce.

Cost.—One half dozen bananas, 10c.; half lb. rice, 5c.; muffins, 5c.; crisps, 2½c.; one lb. dried peaches, 8c.; two quarts of milk, 10c.; sugar, 1½c. Total, 42c., or seven cents for each individual.

DINNER.

Tomato Soup, with Croutons. Baked Potatoes. Mashed Peas. Rolled Oats. Whole-Wheat Bread. Orange Rice. Cream. Hot Milk.

Cost.—One half peck tomatoes, 7½c.; one fourth peck potatoes, 5c.; one lb. peas, 5c.; one half lb. rolled oats, 2½c.; one fourth loaf of bread to make croutons, 2½c.; whole-wheat bread, 5c.; one half doz. oranges, 12½c.; one half lb. rice, 5c.; two quarts milk, 10c. Total, 60c., or exactly ten cents apiece.

The following from an Iowa lady is also for a family of six persons:—

BREAKFAST.

Apples. Rolled Oats, with Toasted Wafers. Tomato Toast. Graham Gems. Patent-Flour Bread. Cream. Hot Milk. Dried Apple Sauce.

Cost.—One sixth peck apples, 3½c.; one third lb. rolled oats, 1½c.; three quarter lb. wafers, 7½c.; half can tomatoes, 5c.; bread for table and for toast, 10c.; half lb. graham flour, 1½c.; one egg, 2c.; dried apples, 6c.; cream, 15c.; sugar, 2c. Average cost per individual, 9½ cents.

DINNER.

Canned Corn Soup, with Croutons. Escalloped Tomatoes. Parsnips, with Egg Sauce. Graham Mush. Buns. Whole-Wheat Bread. Cream. Milk. Cup Custard.

Cost.—One can of corn, 10c.; tomatoes (using the half can left over from breakfast), 5c.; bread for the table, for the tomatoes, and for the croutons for the soup, 10c.; parsnips, 5c.; buns, 5c.; four eggs, 6½c.; milk and cream, 15c.; sugar, 2c.; graham flour, 1c. Average cost, 10 cents apiece.

A lady living in Michigan, who is much interested in this way of living, sends us two days' bills of fare used in her own family of four persons, at an average cost of but five cents each.

BREAKFAST No. 1.

Apples. Graham Mush, with Dates. Toasted Wafers. Dried Apples, stewed with Cherries. Milk. Cream. Bread.

Cost.—Apples, 4c.; graham mush, with dates, 3c.; toasted wafers, 3c.; bread, 2c.; sauce, 3c.; milk and cream, 5c. Total, 20 cents, or 5 cents per person.

BREAKFAST No. 2.

Apples. Grits. Graham Gems. Zweibach. Cream. Milk. Sauce.

Cost.—Apples, 4c.; grits, 1c.; graham gems, 5c.; zweibach, 2c.; cream and milk, 5c.; sauce, 3c. Total, 20 cents, or 5 cents per person.

DINNER No. 1.

Mashed Peas. Potatoes (baked), with gravy. Whole-Wheat Bread. Oatmeal Blancmange. Milk. Cream. Sauce.

Cost.—Mashed peas, 3c.; baked potatoes and gravy, 3c.; whole-wheat bread, 2c.; milk and cream, 5c.; oatmeal and blancmange, 2c.; sauce, 5c. Total, 20c., or 5c. apiece.

DINNER No. 2.

Pea and Tomato Soup. Escalloped Potatoes. Rolls. Milk. Cream. Rice Custard.

Cost.—Soup, 4c.; Escalloped potatoes, 1c.; rolls, 4c.; milk and cream, 5c.; rice custard, 6c. Total, 20 cents, or 5 cents each.

An Illinois lady, who for several years has had charge of the meals of a large family, offers the following bills of fare and schedule of cost for eight persons:—

BREAKFAST No. 1.

Baked Apples. Graham Grits, with Cream. Graham Gems. Graham and Whole-Wheat Wafers. Cream Toast. Stewed Prunes.

BREAKFAST No. 2.

Oatmeal, with Cream. Graham and Whole-Wheat Wafers.
Breakfast Rolls, Blueberry Toast.
Stewed Apples.

DINNER No. 1.

Bean Soup, with Croutons. Mashed Potatoes.
Macaroni, with Tomato Sauce. Pearl Wheat.
Oatmeal Crackers. Patent-Flour Bread.
Fresh Apples.

DINNER No. 2.

Rice Soup. Baked Potatoes, with Cream Gravy.
Baked Beans. Graham Crackers. Whole-Wheat Bread.
Farina, with Cream. Fresh Apples.

Material necessary to furnish these four meals for eight persons,—

Six lbs. of flour, 18c.; two lbs. crackers, different varieties, 20c.; pearl wheat, oatmeal, graham grits, and farina, one half lb. each, 10c.; one peck apples, 30c.; prunes, 10c.; one half lb. rice, 3½c.; two lbs. beans, 8c.; one can tomatoes, 10c.; one half peck potatoes, 13c.; blueberries, 10c.; eight quarts milk, 32c.; macaroni, 5c.; sugar, 1½c. Total, \$1.71, or cost to each individual, 5½ cents a meal.

SOME SEASONABLE RECIPES.

OATMEAL BLANCMANGE.—Soak a cupful of coarse oatmeal over night in a pint and a half of water. In the morning, beat the oatmeal well with a spoon, and afterwards pass all the soluble portion through a fine strainer. Place the liquid in the inner cup of a double boiler, and cook for half an hour. Turn into cups, cool fifteen or twenty minutes, and serve warm with cream and sugar, or a dressing of fruit juice.

WHOLE-WHEAT MUFFINS.—Break the yolk of an egg into a basin, and beat the white in a separate dish to a stiff froth. Add to the yolk of the egg one half cup of cream and one cup of milk. Beat the egg and milk together until thoroughly mingled and foaming; then add, gradually, beating well at the same time, one pint of wheat-berry flour. Continue the beating vigorously for ten minutes; then stir in, lightly, the beaten white of the egg, and turn the mixture at once into hot gem irons, and bake in a moderately hot oven.

ECONOMY of time and strength is more important than economy of money.

A SIMPLE way to take acid stains from linen is to scrape some soap into a cold soft lather, tie up a quantity in the stained part, and boil till the stain disappears.

POWDERED pipe clay will remove oil stains from paper or leather, and with care will not injure the color. Mix the clay with water till of the consistency of cream. Leave it on for some time.

IF velvet becomes soiled with grease, pour on a small quantity of turpentine, and rub briskly with a bit of dry, soft flannel. The odor of turpentine will readily vanish if the garment is hung for some time where the wind can blow through it.

PEA AND TOMATO SOUP.—Soak one pint of peas over night, and cook until tender in a quart of water. Rub the peas, when done, through a colander; add a pint of hot water, one cup of mashed potato, two cups of strained stewed tomato, and one cup of cream. Reheat the whole to the boiling point, turn a second time through a colander, and serve. The proportions given are quite sufficient for two quarts of soup.

CREAM RICE SOUP.—Pick over and thoroughly wash six tablespoonfuls of rice. Put it, with a quart of warm water, into an earthen dish, and place in a moderate oven. When the water is all absorbed, add a quart of rich milk, and one fourth teaspoonful of salt, if desired. Turn into a kettle, and boil for a few moments, or until the rice is done. Add a cup of sweet cream, and serve. When made with care, according to directions, this forms a delicious soup.

WE are too much inclined to think that housework may plan itself out without system or thought on our part. To this is largely due the disrespect in which household duties are held, even by those who assume them. Were a business enterprise to be conducted in this haphazard manner, without thought of the work until it came at hand to do, the result would be the same. The workmen would have respect neither for the work nor its managers. Lack of system works confusion, disorder, and neglect, no matter if displayed in the smallest detail of the simplest task, besides conducing largely to the labor and the consequent fatigue.

IF a porcelain kettle becomes stained, it may be cleaned by filling it half full of water, adding a tablespoonful of powdered borax, and letting it boil for some time. Then scour with soap and borax.

LITERARY NOTICES.

The Sanitary Era is a monthly health journal which we welcome to our table. Filled with valuable information and wise suggestions, healthwise, it is an undoubted authority upon all matters pertaining to sanitary reform. More such journals are needed. Address William C. Conant, Publisher, P. O. Box 3059, New York.

Babyland for March is here, a combination of pretty pictures, stories, and jingles. This number is particularly remarkable for an offer of the Publishers to send a handsome picture-book to each of the five children under eight years who will write and send the five prettiest stories in relation to a given picture, before June, 1891. D. Lothrop Company, Boston.

"LETTERS FROM THE HOLY LAND," 160 pp., illustrated, Pacific Press Publishing Co., Oakland, Cal. This little book also belongs to the Young People's Library series of this house, and consists of letters from a father traveling in the East to his children at home, sketching in familiar language the manners and customs of the people, with particular reference to those which throw light upon Bible scenes as they occur in the Bible narrative. A worthy little volume.

THE *Quarterly Journal of Inebriety* is published under the auspices of the American Association for the Study and Cure of Inebriates. This able quarterly represents the most advanced thought in its peculiar field, and is the organ of an association which throughout a quarter of a century has proved itself a working force in the scientific world, and has during this period largely contributed toward the molding of popular opinion. T. D. Crothers, M. D., Editor, Hartford, Conn.

Scribner for March contains two striking articles of exploration and adventure—"Our March with a Starving Column," by A. J. Mounteney Jephson (one of Stanley's most trusted officers), giving some of the experiences of the column which he commanded in the advance, during the dark days of the Emin Pasha Relief Expedition, and "Mount St. Elias and its Glaciers," by Mark Brickell Kerr (topographer of the Expedition), an account of the third attempt to reach the summit of Mount St. Elias—made in the summer of 1890 by a party under the auspices of the National Geographic Society. Samuel Parsons, Jr., furnishes a valuable paper on "The Ornamentation of Ponds and Lakes," with special reference

to small country places, where fine effects can be made in natural ponds and streams with water-lilies, lotus, papyrus, and certain common shrubs and trees for backgrounds. Charles Scribner's Sons, New York.

Two new leaflets of the *Philanthropist* series have just been published, No. 24, "AN APPEAL TO YOUNG WOMEN," by A Friend, a most timely, effective message of appeal and of warning to young girls; and No. 25, "THE WHITE CROSS IN EDUCATION," by Frances E. Willard, an exceptionally valuable help to teachers, parents, and the young in the promotion of purity. Both these leaflets are valuable additions to social purity literature, and merit a wide circulation. Price by mail, No. 24, four pages, 10 cents a dozen, 50 cents a hundred; No. 25, eight pages, 20 cents a dozen, \$1.00 a hundred. Address *The Philanthropist*, P. O. Box 2554, New York.

THE *Ladies' Home Journal* for February is a rich number. One of its features is an article from Sister Rose Gertrude, the first from her pen, replying to the charges made against her for renouncing her work among the lepers at Molokai. Edward Bellamy has also an interesting article, "Woman in the Year 2000," supplementary to "Looking Backward," which sketches woman in her social conditions as they will appear in the year 2000. The great singers, Clara Louise Kellogg, Emma Thursby, Madam Albani, etc., have also been laid under contribution in this number. Curtis Publishing Co., Philadelphia, Pa.

IN the *Century* for February, elaborate illustration and letter-press happily combine to form a popular number. Though packed from cover to cover with varied and entertaining matter, the space devoted to the early reminiscences of California must still be a center of deep interest to all who love their country, and have watched her triumphal march through the years. The "Memoirs of Talleyrand," which were such a notable feature of the January number, are continued, and give here an account of the first meeting of the great diplomat with Napoleon (then only General Bonaparte), and detail his subsequent relations with him. The frontispiece is a fine portrait of M. de Talleyrand, from a painting by the famous Greuze. There are, also, other finely illustrated papers, as well as good stories and poems in plenty; while the usual departments are correspondingly fine. The *Century* Publishing Co., New York.

PUBLISHERS' DEPARTMENT.

WE are glad to present this number of GOOD HEALTH to our readers in good season, and trust that hereafter the unpleasant delays which have occurred several times recently, will not interfere with the prompt appearance of the journal at the beginning of each month. The publishing work in connection with GOOD HEALTH long ago outgrew its quarters, so that it has been impossible to expedite work as might otherwise have been done. Within the last month the entire work has been removed to a fine new building erected for the purpose, and in the commodious rooms now occupied by the publishing department, work can be done more expeditiously, and much more to the satisfaction of the managers. The occasion for the extraordinary lateness of our last number was the interruption of the work necessitated by moving all the machinery of a complete printing establishment, which is no small task. A failure in the arrival of some parts of the new equipment when expected, was a further cause for delay, quite unanticipated and unavoidable. The work is now fully organized in the new quarters, and there seems no probability of further occasion for serious delay in our work.

* *

THE occasions for delay referred to in the above paragraph also delayed the work on the new book, "The Household Monitor of Health," but the work is now progressing rapidly, and everything possible has been done to get the book into the hands of subscribers at the earliest possible moment. As large a number of type-setters as possible have been secured, and presses are running night and day. The binders have made such preparations for completing the work that within three days after the last sheet is printed the books will be ready for shipment. A large part of the book is already in sheets, and the remaining portion will be speedily finished.

* *

THOSE of our readers who are interested in economical living, will find something of special interest to them this month in the Household Science Department. Mrs. Kellogg's sample meals seem to have excited a very considerable degree of interest. We shall be glad to receive further contributions for this Department.

* *

MICHIGAN STATE BOARD OF HEALTH.

THE proposition of the newly installed Democratic Governor of Michigan to abolish the State Board of Health, in the interest of economy, has brought out a vigorous protest from a large number of intelligent citizens who have kept themselves better posted respecting the results of the labors of the Board than the Governor appears to have done. From the reference, made in the Governor's message, to the work of the Board, it would appear that our chief executive has a very meager idea of the labor performed by the State Board of Health. Having been a member of this Board for something more than twelve years, the writer feels prepared to speak understandingly upon this subject, and can do so disinterestedly, since his second six-year term of office has now expired, and he is not an applicant for reappointment.

In a recent paper read by the Secretary of the State Board of Health before a Sanitary Convention, it was shown that through the efforts of the State Board of Health of Michigan more than

one hundred lives are annually saved from death by smallpox, four hundred from death by scarlet fever, and nearly six hundred from death by diphtheria, aggregating nearly eleven hundred lives each year, or more than three lives per day. This is the result of the work of the Board in the restriction and prevention of three diseases only. Undoubtedly a much larger saving of life results from the missionary labors of the Board in the preparation and dissemination of literature, and the holding of Sanitary Conventions in various parts of the State.

Following the example of Michigan, which was one of the pioneer States in the organization of a State Board of Health, there is now scarcely a State in the Union which has not its State Board, and with very few exceptions the value of the work of the organizers of the State Board of Health has been recognized by the adoption of the same plan upon which this Board was organized, and which experience has proved to be the most effective and the most economical plan of State public health administration.

As regards the expense attending the work of the State Board of Health, it may be safely said that considering the amount of work done by the Board, it is the least expensive of any State Board. The Secretary, who is the only paid member of the Board, is employed at a salary certainly less than half that which his abilities would command in any other line of medical work. The remaining six members of the Board are required by their positions to make a special study of special subjects which are assigned them. They are expected to prepare papers for the Annual Report, to attend Sanitary Conventions; to give lectures, prepare addresses; to visit various localities in the State to investigate the sanitary conditions and solve difficult problems regarding the cause of disease, the origin of outbreaks of epidemics, etc., to examine critically plans for every new public building; to investigate various important questions respecting the dietaries and other hygienic conditions of public institutions which are presented to them by other Boards; and to be continually on the alert to devise ways and means for preventing the invasion of the State by smallpox, cholera, and other fatal contagious maladies, which are always threatening us through immigration from the surrounding States and the Old World. The extent of this work and the need of its efficient performance will be readily recognized when it is remembered that the relation of our State to the great inland sea, which renders it a peninsula, gives to it a larger seaboard than any other State in the Union. All of this work the members of the Board are expected to do, in addition to the attendance at the regular quarterly meetings of the Board. How much does this labor cost the State of Michigan?—Merely the traveling and hotel expenses of the members of the Board. The State Board of Health, although composed of prominent physicians whose time may be fairly estimated worth to them from \$25 to \$100 a day, and who are experts each in some certain line of sanitary work, is, of all the State Boards, the only one the members of which are not paid even the ordinary *per diem*.

As a result of the combined efforts of the State Board of Health of Michigan and similar organizations in other States, there have been created two important sanitary organizations, the American Public Health Association, and an association composed of the representatives of State Boards of Health. Both of these organizations, and particularly the latter, are annually rendering immense service to the country through their

PUBLISHERS' DEPARTMENT.

researches and studies of important sanitary problems. The last-mentioned organization, in particular, being made up of the executive officers of the State Boards of Health of several States, renders most direct and practical service to this and every other State connected with it, through its State Board. At the annual meeting of this Association, the various sanitary problems which arise in the several States, and methods of sanitary work, are carefully discussed, and new methods brought forward for consideration, and the results of the deliberation of this body of experienced and well-trained experts in public sanitary work, are thus made available for every State which maintains a Board of Health. Can Michigan afford to lose the important advantages of this Association? Can Michigan, a State which has been a pioneer in public health work, whose methods of sanitary administration, originated by its Board of Health, have served as a pattern and example to other boards,—we say, Can this great commonwealth, which now occupies a position of prominence and respect, not only in this country, but in the Old World, as one of the most advanced States in matters pertaining to public health, afford to set an example in a retrograde direction by abolishing its State Board of Health, and destroying the noble work which has been built up by so many years of painstaking effort, and which is able to show such brilliant and beneficent results? If the work of the Board could be shown to be inefficient or extraordinarily expensive, there might appear to be some excuse for such an action; but neither proposition has been affirmed.

It may be proper to mention here that the experiment of doing without a State Board of Health has been tried, and proved a signal failure. The State of Massachusetts presents a conspicuous example of an experiment of this kind. Ostensibly in the interest of economy, the State Board of Health was combined with the State Board of Charities and Corrections, with the result of destroying the efficiency of both, so that the State Board of Health was reorganized, as the only plan by which an efficient public health service in the interests of the State could be advantageously carried on.

* *

CANVASSERS' SCHOOL.

THE Good Health Pub. Co. will open, about March 23, a school for instruction in canvassing. The course will consist of a series of daily lectures, drills, and recitations, which will embrace the following subjects:—

1. The general principles of canvassing.
2. Special methods, and the conditions to which they are applicable, as city canvassing, country canvassing, company canvassing, house-to-house canvassing, and class canvassing.
3. How to formulate a canvass, and how to learn it quickly.
4. Interesting and profitable topics for conversation.
5. Lectures and recitations on health and temperance.
6. Memory drill.
7. Physical culture—Delsarte and Swedish gymnastics.
8. Missionary canvassing.

The course will include instruction in the use of the microscope, and a variety of interesting and useful chemical experiments in the testing of food adulterations, etc.

* *

ONE OF DR. HALL'S VICTIMS ENLIGHTENED.

MR. E. D. SCOTT, of Minneapolis, Minn., after having for some time been operating as general agent for the sale of Hall's half-penny "Health Pamphlet" at \$4.00 each, has, through the

exposures published in this journal a few months ago, become thoroughly convinced of the fraud practiced by Hall, and has published a card to the public, washing his hands of the whole business. The following is the card which Mr. Scott has published:—

Notice to Local Agents connected with this office, and all who may receive this Circular Letter.

As I now know, from original records in my possession, that that which I have been selling under pledge of secrecy, as the original discovery of Dr. A. Wilford Hall, at \$4.00 for the pamphlet alone, is not his discovery, but was practiced and published some years before Dr. Hall's Health Pamphlet (pages 35, 45, and 46 asserts the date (1849) of his claim), I therefore decline, hereafter, acting for the sale of said pamphlet under the pledge of secrecy, or in any other way.

Mr. Scott is a believer in Hall's scientific, or unscientific, doctrines, and was evidently a warm personal friend and a full believer of the genuineness of Hall's professed discovery until he saw the August number of GOOD HEALTH, in which the names of the authors who published Hall's so-called discovery years before Hall claims to have made the discovery, and the dates of such publication were given. Mr. Scott took pains to verify the statements made in this journal, and being evidently a man of honor, was induced to take the action which he has taken in the matter,—a course which might be imitated by many others who have been innocently engaged in assisting in the perpetration of one of the most contemptible impositions which has ever been practiced upon an intelligent public. The secret which Hall sends for \$4.00 is the remarkable information that it is possible to inject into the bowels by means of a syringe, one, two, three, or even four quarts of water, the larger quantities named being possible only in cases in which the colon is distended as the result of disease. For this precious information, according to Hall's claims, more than one hundred and fifty thousand persons have been induced to pay \$4.00, although the same information was made public property half a century ago in the writings of Shew, and other water-cure physicians. When our exposure of Hall's charlatanry was published, Mr. Scott, as an honest man, called upon Dr. Hall for a refutation of our statement as to the priority of discovery, but getting no satisfactory reply, and finding on investigation that no reply was possible, he has abandoned the business, and is now taking the honorable course of warning the public, so far as he can, of Hall's dishonest practices.

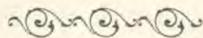
* *

AN AMERICAN GENIUS.—Rider Haggard receives extravagant praise for his originality. But think for a moment who it was that shone supreme in the realm of the weird, the mysterious, the grotesque, before Haggard was born,—Edgar Allan Poe, an American, and a man who is at once the source and inspiration of this whole school of fiction. And it is in America that the great novel will be developed. The inspiring scenery along the majestic Columbia, the serene repose of the beautiful Puget Sound country, and the romantic spots to be seen everywhere in Washington and Oregon, are all beautiful enough to employ the best talent of poet and painter.

The Puget Sound country is a wonderful agricultural country awaiting development. There is nothing open to the home-seeker to compare with it, and it is the future goal of the great army of home-seekers. In healthfulness it is wonderful, and in productiveness unsurpassed. Thousands last year journeyed to this charmed region over the Union Pacific, the original overland route, and thousands more will go this year.

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FOR
WOMEN AND GIRLS.

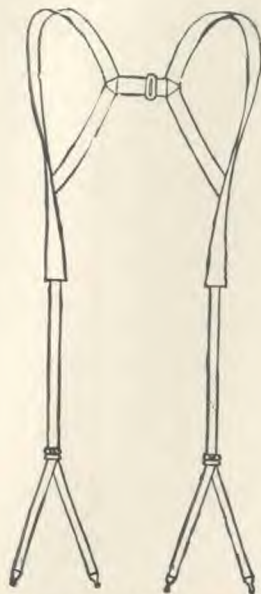


The undersigned are well prepared to supply Healthful Garments, of all descriptions, for Women and Girls, including,

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As *The Sanitarian* has been hitherto, it will continue to be in the future: Devoted entirely to the promotion of the art and science of sanitation, mentally and physically in all their relations. It has just added to its attractions, beginning in November, 1890, THE TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

The Sanitarian will continue in its present form, 96 pages text, monthly; two volumes yearly. The volumes begin January and July; subscription at any time.

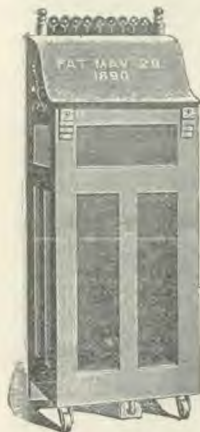
TERMS: \$4.00 a year, in advance; 35 cents a number. Sample copies, 20 cents — ten two-cent postage stamps.

All communications should be addressed to the editor,

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A. M.	P. M.	Ar... Battle Creek... Lv	A. M.	P. M.
1.45	2.46		8.00	12.27
P. M.	A. M.	Lv... Toledo... Ar	P. M.	P. M.
6.30	10.30		4.45	12.10
	A. M.	Ar... Bryan... Lv	A. M.	A. M.
	12.35		6.20	11.53
	P. M.	Lv... Cincinnati... Ar	P. M.	P. M.
	5.00		1.45	7.40

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