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GOOD



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BY

J. H. KELLOGG M.D.

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J. H. KELLOGG, M. D.

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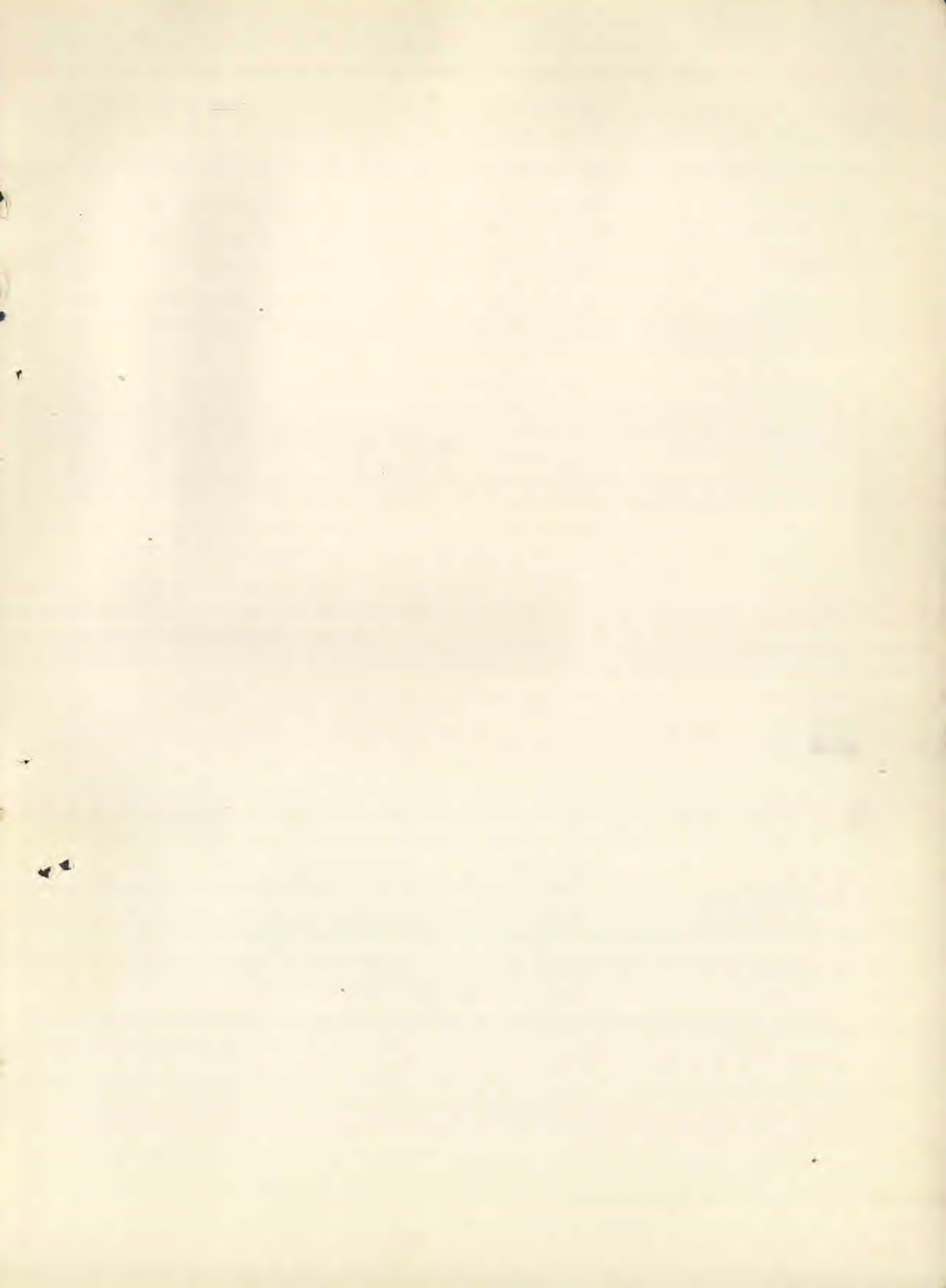
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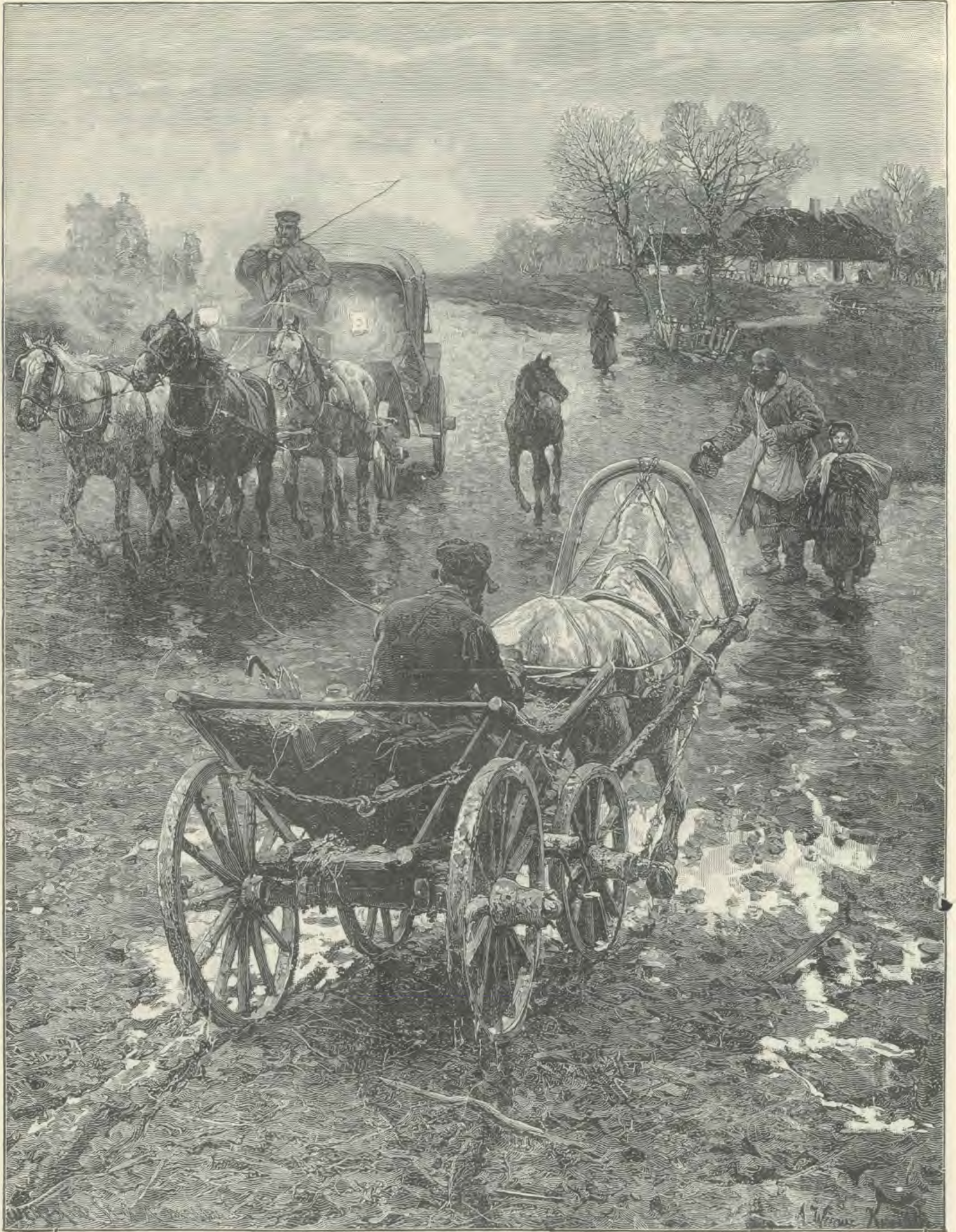
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NUMBER 1.

BATTLE CREEK MICHIGAN

JANUARY, 1891.

INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

21. — Australia.

THE enemies of free competition should be banished to the land of the Australian savages. The ethnological history of the Australian continent proves strikingly that industry, intelligence, and progress flourish along the highway of international commerce, while isolation begets sloth and stupid conservatism. In 1770, when Captain Cook explored the coasts of New South Wales, Sir Joseph Banks, the botanist of the expedition, was struck by the wonderful floral wealth of the plains and the genial climate of the hill country—a climate rivaling Southern Greece in sunniness, and Western Portugal in pleasant temperature. The soil, though inferior to that of the Sunda Islands in fertility, was by no means deficient in valuable edible products. There were wild-growing berries, nuts, and nutritious roots, numerous varieties of marsupial mammals that could be captured without much trouble, crabs on all coast dunes, and shoals of fish in the rivers and bays. The natives, with their broad foreheads and bushy beards, were evidently originally superior to the African negroes, but their intellectual development was but little above that of the larger apes. As human beings, they ranked at the bottom of the ethnological scale, or next to the baboon-like Veddahs of the Ceylon coast jungles.

With an abundance of food-supplies capable of preservation, they suffered from periodic famines, and practiced infanticide to save themselves the trouble of raising a hungry progeny. With an abundance of building-material, they had not yet learned to construct shelter sufficient to protect themselves from

rain and storms. Yet the five senses of those savages were sharp to a surprising degree, and the only circumstance affording explanation of their backward condition can be found in the fact that for generations—for ages, perhaps—they had lived in a state of geographical isolation from other nations, without enemies, without risk of conquest, but also without models of progress and without stimulating rivalry.

The naturalist Du Chaillu, in his account of the Gaboon country, describes an ape known as the nschiego (*Troglodytes Calvus*), which seems to form a connecting link between the chimpanzee and the gorilla, and lives pair-wise in the tree-tops of the equatorial forests. This creature builds nests affording complete shelter from the showers of the rainy season, and for all practical purposes, as well as in point of symmetry, as much superior to the dens of the Australian natives as a log cabin is to the dug-out of a prairie Indian. The nschiego's rain-house is covered with a dome-shaped roof, resting on branches twisted together by means of vines and covered with grass and leaves, very much like the thatch-work of a Scotch moorland cottage. The Australian foul-weather camp consists merely of slabs of bark torn from rotting trees, and propped up in the rudest fashion with forked sticks. Any more than a usually strong gust of wind is apt to topple over the entire structure, which anyhow, protects only the backs of the wretches that squat huddled together like pigs in a crowded pen.

The Austral "niggers," as the colonists call the no-

mads of the wilderness, are too shiftless to wear any kind of clothing. In the neighborhood of the settlements they cover themselves with sheepskin and such cast-off garments as the settlers may furnish them for the sake of decency; but that change of ancient habits has not always resulted in their sanitary benefit. Their unspeakable uncleanness makes every piece of personal apparel a medium of infection, and cutaneous diseases have become so frequent that the whites avoid contact with a native as the Brahmins would with a Pariah leper. Fourteen years ago, and again in 1886, smallpox made sad havoc

said to attack and temporarily disable their intended mates. Another still uglier analogy with the brute creation, is their indifference to the welfare of their own children after they have once outgrown the age of absolute helplessness. An Australian mother will coddle her baby with ape-like fondness, and hardly ever let it stray out of sight for the first four years; but as soon as the toddling little imp seems able to take care of itself, its debt of gratitude to its progenitors has to be paid by the worst kind of slavery. At the first sign of insubordination, a half-grown boy is apt to be kicked out, if not killed, by his own father, while the



ENCAMPMENT OF NATIVE AUSTRALIANS.

among the aborigines of Western Queensland, and seemed often to single out individuals whose raggedness ought long before to have made them objects of attention to the sanitary police. In such cases, the disease proved nearly always fatal, as a proof that smallpox and similar disorders expurgate filth, as fevers avenge intemperance.

The marriage ceremony of the Australian savages consists often in the simple process of stunning a stray female of a neighboring tribe by means of a club, and then dragging her away an unresisting captive, just as the males of the larger species of seal are

older squaws maltreat every pretty girl as a possible rival, so much so, indeed, that the appearance even of a club-armed suitor must often be welcomed as an agreeable surprise-party.

The marriage of near relatives is discouraged with a strictness not often found among barbarians; and polygamy, though sanctioned by public opinion, is restricted by the difficulty of providing for the wants of a large family. At a distance from the crab-swarming sea-coast, famines are rather frequent; but the natives have developed a faculty for starving, or half-starving, for weeks without permanent injury,

and rely on the experience that sooner or later nature will renew the supply of spontaneous food. Within a hundred miles of the East Coast, perhaps, no native in an uncrippled condition has ever died from lack of digestible food—a rather comprehensive term in a country where fern-roots are boiled like potatoes, and snails and grasshoppers are consid-

and occasionally acquires that dignity of deportment which, in the period of white whiskers, redeems even the gorilla nose of Sambo Africanus. Children under twelve are hideously ape-like, and generally afflicted with pot-bellies, owing to their habit of gorging themselves to the verge of explosion whenever opportunity offers. A Melbourne journal mentions the

experience of a stock-farmer who had removed his rancho to the Upper Darling River, where he lost eighty head of sheep in consequence of an epizootic, but at last managed to stop the ravages of the plague by killing and burying every animal that showed the least symptom of disease. A batch of fifteen sheep had thus been killed and hauled to the edge of a gravel-pit, where the owner meant to bury them the next morning; but during the night a troop of natives saved him all further trouble, by dragging the carcasses to their gypsy camp. In the outskirts of the camp, he came across a group of children squatting about a half-roasted sheep. Trying to make their escape when they saw him come, only two out of five managed to get around the corner; the rest staggered about like gorged vultures, and fell down as often as they attempted to run.

Adults of the East Coast tribes are spindle-shanked, but prove their muscular strength by a feat which only our best acrobats would be able to imitate; viz, the achievement of climbing gum-trees as smooth as a ship-mast and more than ten feet in diameter,—much too thick to be clasped by the arms of an average human being. The distance from the ground to the first branches often exceeds forty feet, but in less than five minutes a stout young native manages to accomplish the ascent by digging his fingers and toes into every concavity of the bark,—all for the sake of getting a few bird's-eggs, or capturing

the young of a small species of opossum that builds its nest in the tree-tops.

Of all the modes of burial ever practiced by creatures in the shape of human beings, the method of the Queensland nomads is certainly the most uncouth. After drying the corpse in the sun and knocking out its teeth for keepsakes, they deposit it on a framework of rough poles, and bury it under a few armfuls of rushes and old kangaroo skins, leaving the bush-wolves to sing its requiem. No member of the



AN AUSTRALIAN GRAVE.

ered tidbits. Strange to say, the martyrs of that horrid diet get old, as a proof that freedom from care is, after all, the main condition of longevity. A similar phenomenon may be observed in the villages of Central Russia, where mental stagnation prevails in its ugliest forms, but where charity and parish poor-laws protect every native from the risk of actual starvation.

A black Australian patriarch, with a bushy beard and shaggy eyebrows, is not an unattractive biped,

dead man's tribe will settle within a mile of his grave, for fear of being haunted by the spooks making the burial place their midnight rendezvous. The metaphysical opinions of the Australian aborigines prove, indeed, that savages can be afflicted with an abundance of supernaturalism without betraying a trace of anything deserving the name of religious sentiment. They believe in evil spirits whistling in the blasts of the storm wind, and try to exorcise them by spitting in the direction of the sky; but for the conceptions of the Deity, of future existence, of repentance, atonement, and conscience, their language has not even a definite word. From somewhere in the land of their forefathers,—Eastern Asia, perhaps,—they have imported a notion faintly resembling the Buddhist doctrine of metempsychosis, and believe that animals may be re-born as men, and men, as human beings of a superior rank. A black robber who was executed by process of law in Eastern New South Wales, went to the gallows with a swaggering bravado, parting from his relatives with a farewell shout to the effect that he was "going to be born again as a white fellow."

The experience of the British colonists has proved that all the most valuable vegetable products of the Old World will flourish throughout the enormous range of territories from Southern Victoria to Trinity Bay in Northeastern Queensland. Dates, figs, olives, peaches, excellent grapes, apples, pears, and cherries will thrive with a minimum of culture, and the wheat of New South Wales is equaled only by the best samples from Northern California. Twenty years ago,

the climate was supposed to be too dry for the successful cultivation of Irish potatoes, which have since been found to succeed on hundreds of highland farms in the upper valley of the Murray River. Stock-raising, however, has proved still more profitable, and, as a consequence, the Australian colonists have become the greatest meat-eaters of the Caucasian universe, the average consumption of animal food being twenty per cent higher in Melbourne than in New York, and sixty per cent higher than in Moscow or Stockholm, though the climate of the Victoria coast plain is that of a perpetual spring. As a consequence, digestive disorders are rather prevalent in the Australian colonies especially in the tropical lowlands, where consumption, too, is rather too frequent to be ascribed to the fitfulness of the climate. The multiplication of orchards tends, however, to remedy the evil, and some of the upland ranchers of Eastern Victoria (in the latitude of Southern Spain), are models of health and vigor.

The climate of the interior is dry to a degree for which our speech has hardly an adequate term, but the worst result of that aridity seems, after all, to be the prevalence of certain troublesome insects,—fleas, for instance,—which cannot be kept down by any ordinary precautions, and multiply fearfully on the least neglect of cleanliness. Such plagues, however, are confined to the dust-swept tablelands of the central territories, and, on the whole, there is no doubt that from a sanitary point of view Eastern Australia is, next to Western North America, the most desirable land ever settled by European colonists.

(To be continued.)

THE EAR, THE EYE, AND THE NOSE.

BY A DOCTOR.

1.—The Ear: Its Diseases and Hygiene.

THE human ear consists of three portions, the *external ear*, the drum cavity, or *middle ear*, and the labyrinth, or *internal ear*. The external portion is composed of skin and cartilage, and its use is to concentrate sound. The canal leading from the external to the middle ear, contains many fine hairs, and is lubricated by a sticky substance, earwax. The object of both hairs and wax is to prevent the entrance of insects.

The middle ear contains three bones, usually known by their common names of *mallet*, *anvil*, and *stirrup*, from their fancied resemblance to these articles. Connected with the bones of the middle ear are two very minute muscles serving an important purpose,—

that of adjusting the drumhead to receive either loud or soft, high or low sounds, as it is tightened or relaxed by these muscles. The middle ear also connects with the throat by means of the Eustachian tube, thus allowing a change of air in the drum cavity, so as to keep it filled with air of about the same density as that outside the body.

The internal ear is composed of three parts: the vestibule, the cochlea, and the semi-circular canals. This part of the ear lies within the bony substance of the skull, and is lined with very delicate membranes. Here are a bundle of nerves and a mass of fine ear stones. The cochlea, or spiral, is one of the

most curious portions of the ear. In form it resembles a snail shell, and each row or coil of the spiral is composed of nerve fibers. There have been counted more than twenty thousand little nerve fibers in this portion of the ear. The labyrinth is filled with fluid, into which extend delicate hairs from the nerve cells. Sound waves reaching the labyrinth, vibrate the fluid, and this vibration is communicated by means of these hairs to the nerves of hearing, thence to the brain, and we hear.

The possibilities of the audiphone are based upon this fact,—that vibrations may reach the nerves of hearing otherwise than through the natural channel. The scratching made by a pin upon one end of a board, can be heard very distinctly by a person at the other end, if he will press his teeth to the surface of the board. The vibrations of a tuning-fork are very plainly heard by the person to whose head the handle may be placed, when a person sitting next him might be unable to distinguish a sound. The vibrations are communicated by the skull to the middle ear, in the first instance by means of the teeth. The vibrations cause a shaking in the drum membrane of the ear; that carries the sound to the bones, and they in turn communicate the vibrations to the fluid in the next chamber, where the nerves are reached, and the latter convey the sensations to the cells of the brain. Hearing, then, is simply jars produced by vibrating bodies, which are recognized by the ear.

The most common disease of the ear, and one which nearly every one has experienced, when a child at least, is earache. Many persons regard this as a trifling circumstance, whereas it is a matter of grave concern. An earache means congestion or inflammation of the membranes or nerves which convey sound; it may be of the drum membrane, or it may be seated more deeply in the ear. Thus these early earaches often lay the foundation for deafness in later life.

The most common cause of earache is a cold which affects the nasal cavity, and works through the Eustachian tube to the ear. At first it may cause simply congestion enough to be painful, but if neglected, it may develop into an inflammation which will only find relief in a discharge of matter from the ear. Lightly as such a discharge is commonly regarded, it means that a quantity of matter has produced such distension of the drum membrane as to rupture it, and such a circumstance means that the hearing is permanently impaired,—that it can never be as perfect as before, though there may be no difference noticed for years. However, this discharge from the

ear is often ignorantly welcomed, since it is a common experience that one often hears better after the discharge than just previous. The accumulation of matter has brought about a density in the ear which the rupture relieved. If an inflammation of the ear results in a gathering, it is better that a good surgeon open the drum membrane with a very fine needle rather than incur the irregular, ragged opening of a natural discharge.

But with a little care at the outset, such danger may be avoided. In the very beginning of an earache, cold applications are best, alternating every two or three hours with a short hot fomentation. Fill a rubber bag with cold water, and lay it a little below the ear over the crease back of the jaw-bone, thus covering the Eustachian tube, the seat of the disease. Cold applications will prevent the inflammation's extending; but if they do not soon afford relief, then hot applications should be made continuously. This will encourage the accumulating matter to find an outlet through the Eustachian tube. An ear douche is of great benefit, although the apparatus convenient for giving it may not be obtainable. However, a good substitute is the following: Have the patient lie with the aching ear uppermost, and into it place a roll of cotton wet with warm water. Then drop hot water into the ear, or cover the ear with a dry flannel, over which apply the fomentations. It is necessary, if the heat be applied directly to the seat of the disease, that the wet cotton be inserted in the ear; else the canal will be filled with air, which is a poor heat conductor, while water is a good one.

Nineteen out of every twenty cases of deafness are due to catarrh of the middle ear, and this nearly always originates in nasal catarrh. A cold is a germ disease, and when it reaches a certain stage, is sufficiently virulent to inoculate a healthy membrane. A person who is in this condition, often drives little portions of the infectious mucus through the Eustachian tube, and thus into the ear, where the germs propagate, by blowing his nose very violently to free it from obstruction. In this way the tubes leading from the nasal cavity to the throat, eyes, or ears may become infected, and lead to severe ulcerations and inflammations of these organs. In freeing the nose from obstruction, only one nostril should be closed at a time, and the effort should be gentle.

There is another way in which diseases of the ear originate from nasal catarrh. The ears breathe, and this process is necessary for the maintenance of their health. The effect of stopping up the air passages from the nose to the ears is very much like stopping

up the holes to the side of a drum. The drum would only give forth dead, muffled sounds, and that is the way sounds appear to the ears when the Eustachian tubes are closed. When these canals are obstructed, the secretions that normally pass off through these channels accumulate in the ears, and a diseased process is set up.

Sometimes a catarrh, from some cause, begins first in the ears. Persons who have contracted this form of catarrh can ascertain it by pressing along the line of depression back of the jaw-bone, to discover whether or not there is tenderness along the Eustachian tube. If so, there is disease of the tube which will sooner or later manifest itself in deafness, if it has not already done so.

The ears should be frequently examined by a competent specialist, for signs of approaching deafness. Chronic disease of the ears might often be averted by a little attention at the outset. Children especially are often partially deaf without such a condition being suspected. They are many times considered stupid when they are simply hard of hearing, and frequently are punished for neglects for which their ears, not their morals, are to blame. School-children should have both ears and eyes tested, that any defects dis-

covered may be given an opportunity to be remedied while they are young.

How to Care for the Ears.—Observe the following rules respecting the care of the ears in health:—

Never clean the ears with a pick or twisted end of a towel. If the earwax does not dry up and fall out of itself, as it should, consult an ear specialist.

Never allow cold water to enter the ears, or a cold wind to blow into them. If cotton is placed in the ears, remove it as soon as it is unnecessary.

When a foreign body gets into the ear, syringe the ear with warm water, leaning the head to one side that the object may drop out, and drawing the ear upward and backward to dislodge it. To remove an insect, pour in a little oil to suffocate it, then syringe as directed, etc.

Shouting in the ear may cause deafness. Prepare for an expected loud sound by closing the mouth and covering the ears.

Never box or pull the ears. Permanent deafness may result.

Avoid the use of catarrh nostrums and ear "drops;" also the use of tobacco and snuff. Smoking, especially of cigarettes, is exceedingly injurious to the health of the ears.

JAPANESE MASSAGE.

BY ERNEST W. CLEMENT.

THE stranger landing in Japan, is, of course, bewildered by curious sights and sounds. Everything is so strange and weird, and withal so miniature, that he seems to have dropped suddenly into fairyland. He is, indeed, like Dick Swiveller, when the latter awoke from his feverish dreams, saw the metamorphosis of his room, and the Marchioness playing cribbage by herself, and thought he either was still "dreaming" or had "woke up by mistake in an Arabian night," and pinched himself to see if he was really awake. In like manner, the new-comer to Japan feels like pinching himself to see whether or not he is actually awake!

Of the myriad novelties, great and small, that attract the attention, it would be difficult to determine the most curious. But of all the strange sounds, that which produces the most peculiar sensation, is, perhaps, the shrill whistle, with a somewhat mournful note, which may be heard almost from dusk to dawn. It is the whistle of the blind, and though heard also during the day, is, of course, especially impressive when it pierces the still air of evening. That, moreover, is the time—from four or five o'clock till eleven o'clock or midnight—when the blind go about

plying their vocation. Their bamboo whistle is used both to advertise their business and to warn other people to clear the way for them. And as the hearing of the blind is especially acute, and as all other persons, even the coolies rushing along with their passenger and freight vehicles in a seemingly reckless way, are tenderly careful of them, it is seldom that an accident occurs.

With the exception of some musicians, and a few who may be supported privately by relatives or who are in asylums, the blind of both sexes in this country are engaged in one calling, and have a complete monopoly of that profession. This calling, in the vernacular, is denominated *amma*, and is usually translated "shampooing;" while the operator himself goes by the name *amma san* ("Mr. Shampooer"). This operation, as will be seen later, is in reality a kind of massage treatment, much employed by the natives when they are tired or a little indisposed. It is especially "recommended to tired pedestrians, and to persons suffering from lumbago, rheumatism, and other pains and aches." It is, among the lower classes, a very common remedy for colds and headaches.

In ancient times these blind masseurs took the place, to a great extent, of physicians, who, in those days, were not very skillful. In Chamberlain's "Things Japanese," it is stated that "till recently, that is, until about the year 1870, all the shampooers in Japan formed one immense guild under two provosts, one of whom lived at Yedo, the other at Kyoto. This guild possessed various legal privileges, and admittance to it took place on the passing of certain tests and the payment of fees. It was divided into several grades, the rise from grade to grade being conditioned by new tests and higher fees. For the highest grade to which any blind mortal could aspire,—the grade next under that of provost,—a fee of 1,000 *yen* (dollars) was exacted. This organization is now fast falling into decay."

There are, however, even now many grades of *amma* treatment. In this city (Mito) of 20,000 inhabitants, there are altogether about eighty persons, of whom one-quarter are females, occupied in this calling. Fees also vary, according to the price of rice or the skill of the operator. It is very common to hear in the evening this cry: "*Amma, Kami-shimo, sam-hyaker mo*" ("shampooing, upper and lower, three hundred *mo*"). "Upper and lower" means all the body; and three hundred *mo* equal three *sen* (cents). We may occasionally hear "*Amma, Kami-shimo, tempo sam mai*;" or even "*ni-hyaker mo*." A "*tempo*" is a coin worth eight mills, and "*ni-hyaker mo*" means "two hundred *mo*," or two cents. These, however, are the prices of amateurs, operating on children or the very poorest; the average charge of a good operator in this city is five *sen*, and of the very best, ten *sen*. In Tokyo the ordinary cost is twelve *sen*; in Yokohama, fifteen *sen*.

A short time ago, the writer was suffering from a severe cold and fever, and felt exceedingly languid. He sent, therefore, for first-class *amma* operator, and asking him, because it was the first time, to be a little tender in his applications, proceeded to be "shampooed." But as the writer is not a specialist in physiological and anatomical science, he cannot explain specifically or technically the various movements, or tell the reason of each and all: he can attempt only to give a general idea of the treatment.

The shampooer sat in Japanese fashion at the side of the patient, as the latter lay on a *futon* (thick comforter, or quilt) on the floor, and began operations on

the arms; then took the back and the back of the neck, afterwards the head (top and forehead), and ended with the legs. On the arms, back, back of the neck, and legs, he used sometimes the tips of his fingers, sometimes the palms or the backs of his hands, sometimes his knuckles, sometimes his fists. The movements consisted of pinching, slapping, stroking, rubbing, knuckling, kneading, thumping, drawing in



CRYING HIS VOCATION.

the hand, and snapping the knuckles. The rubbing in the vicinity of the ribs was slightly ticklish, and the knuckling on the back of the neck at the side of the collar-bone, a little painful. On the head he used gentle tapping, a little pounding with his knuckles, stroking with both hands, holding the head tight for a moment, grasping the head with one hand, and stroking with the other. The operator seemed to have a good practical knowledge of physiology and anatomy, and certainly succeeded in driving away the

languor and the headache, in producing a pleasant tingle throughout the body, and in restoring the normal circulation of the blood. He is criticized, however, for one serious fault in his operations,—that of “shampooing down instead of shampooing up. A portion of the good done is thus neutralized, one object of scientific massage being to help back towards the center the blood which is lingering in the superficial veins.” But though the Japanese *amma* may not be perfectly scientific in its method, it succeeds wonderfully in driving away the pains and aches.

In “GOOD HEALTH” for August, 1888, is an editorial article which carefully and scientifically anal-

yses massage. Without going into the details of that thorough analysis, we may take up the general points, and apply them to the *amma* system. We find, then, that “the principal procedures” in Japanese massage are six in number,—“touch, passes, friction, kneading, vibration, and percussion.” We need not, for one moment, suppose that the blind “shampooer” of Japan follows in his movements any such analysis, or even any specially scientific analysis; but his operations can be classed under one or another of those heads. For instance, we may find him using “touch,” or a “simple application of the hand or some part of the hand to any part of the body;” or “passes,” consisting of “light movements made over the surface with some portions of the hand;” or “friction,”

in which “the surface is rubbed harder than in passes;” or “kneading,” in which “either one or both hands may be employed;” or “vibration,” consisting of “a few vibratory movements applied to the body through the hand of the operator;” or “percussion,” which “consists of blows, varying in method and force.” The so-called “joint movements” of Western massage I have been unable to find in the *amma* treatment; but the above-mentioned procedures may be identified. It seems justifiable, therefore, to call *amma* “the Japanese massage system.”

The blind shampooers sometimes employ also acu-



GIVING AMMA TREATMENT.

puncture. In Murray's “Hand-Book to Japan” may be found the following passage concerning the erection of a certain temple in Yedo, now Tokyo: “It was founded in the latter part of the seventeenth century, by Sugiyama Kei-iche, who, to a fervent belief in the powers of the goddess [named Benten], added the distinction of being the first to popularize acupuncture in Japan. He was a favorite of the Shogun Tsunayoshi, and being blind, was made head of the guild of shampooers, for which reason, doubtless, the art of acupuncture likewise has always been chiefly practiced by blind people. . . . In former years, the blind used to hold a festival here twice a year, and give performances on the lute.”

From Hildreth's “Japan as It Was and Is,” we

may learn that acupuncture was "chiefly practiced in a violent colic endemic to the country. According to the Japanese theory, it is caused by wind, and to let out this wind several small holes—nine being a favorite number—are made with needles prepared for the purpose, generally in the muscles of the stomach or abdomen, though other fleshy parts of the body are in some cases chosen for the operation. These needles are nearly as fine as a hair, made of gold and silver generally, but sometimes of steel, by persons who profess a particular skill in tempering them. The bony parts, nerves, and blood-vessels are carefully avoided, and as the needles are passed through the skin and muscle, they are twirled about in a peculiar manner."

Inasmuch as the *amma* profession is limited by tra-

dition to the blind, the latter are enabled, instead of being supported by relatives or friends, to earn a living for themselves. Not only that, but the most skillful of them received such good incomes that they have money to lend. It might, indeed, have been inferred, from what has been written about the guilds and their fees, that the income must have been large in ancient times. Since the introduction of Western medical science, the amateurs and unskillful have been dropped behind; but, according to the law of the survival of the fittest, the most skillful continue to be very prosperous. There is, indeed, no reason why the *amma san* should be displaced entirely, even by physicians educated in the best Western medical science; for the *amma* treatment seems to be essentially the same as massage.

FOOD AND CHARACTER.

OLIVER WENDELL HOLMES, in a series of papers, both readable and valuable, which appeared in the columns of the *Atlantic*, gives his many friends among the lovers of good literature a great deal of sensible advice how they may healthfully and happily attain to a good old age; for what is length of days without health or happiness? Among other good things from the "Autocrat" of eighty years, we quote the following on the effects of diet upon character:—

"Somebody has been writing to me about 'oatmeal and literature,' and somebody else wants to know whether I have found character influenced by diet; also whether, in my opinion, oatmeal is preferable to pie as an American national food.

"In answer to these questions, I should say that I have my beliefs and prejudices; but if I were pressed hard for my proofs of their correctness, I should make but a poor show in the witness-box. Most assuredly I do believe that body and mind are much influenced by the kind of food habitually depended upon. I am persuaded that a too exclusively porcine diet gives a bristly character to the beard and hair,

which is borrowed from the animal whose tissues these stiff-bearded compatriots of ours have too largely assimilated. I can never stray among the village people of our windy capes, without now and then coming upon a human being who looks as if he had been split, salted, and dried, like the salt fish which has built up his arid organism. If the body is modified by the food which nourishes it, the mind and character very certainly will be modified by it also. We know enough of their close connection to be sure of that without any statistical observations to prove it.

"Do you really want to know 'whether oatmeal is preferable to pie as an American national food'? I suppose the best answer I can give to your question is to tell you what is my own practice. Oatmeal in the morning, as an architect lays a bed of concrete to form a base for his super-structure. Pie when I can get it; that is, of the genuine sort, for I am not patriotic enough to think very highly of the article named after the Father of his Country, who was first in war, first in peace,—not first in pies, according to my standard."

AN AMERICAN recently swam the English Channel from Folkestone to Boulogne, a distance of sixty miles, in twenty-two hours and twenty-eight minutes.

Customer to Grocer: "I want to get a pound of your old cheese."

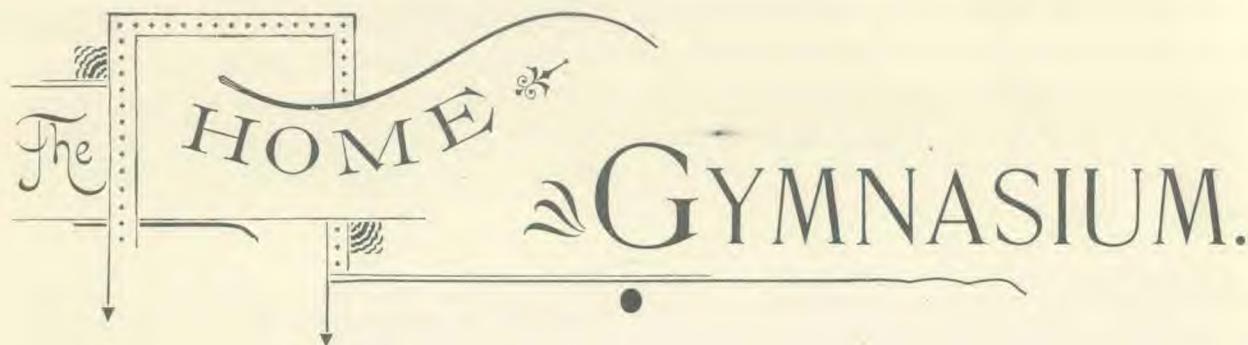
Grocer: "All right, sir; I'll send it around in five minutes."

Customer: "And let it bring a couple of crackers with it."

"TALK about wives," said Farmer Hawbuck; "I've got one in a million. Why, she gets up in the mornin', milks seventeen cows, and gets breakfast for twenty hard-workin' men before 6 o'clock, by George?"

"She must be a very robust woman, Hawbuck," remarked one of his hearers.

"On the contrary," put in the farmer, she is pale and delikit like. Jimminey! ef that woman was strong, I dunno what she could'n't do!"—*Harper's Weekly*.



The HOME GYMNASIUM.

A GYMNASIUM AT HOME.

THE purpose of this Department is to give such instruction as will enable any young man or woman who desires to do so, to develop a good physique. Nothing is more essential to success in life, at the present day, than a strong body, well-developed muscles, and a dignified and graceful carriage. Gladstone, who has been aptly called "the greatest thinker of the greatest nation," has a sturdy, well-developed physical frame. Although eighty years of age, it is his regular habit, when visiting his estate in Wales for relief from the cares and burdens of an extraordinarily active public life, to recuperate his energies by wood-chopping; and it is a very common thing for him to fell to the ground a huge oak, four feet in diameter, in a single afternoon. How many men of eighty can be found equal to such a task as this? Indeed, how many of our young men of twenty or thirty years would be willing to undertake a job of this sort? Mr. Gladstone's erect and vigorous figure gives to him a dignity of presence which must in part, at least, account for the marvelous personal influence which he wields.

Mrs. Langtry, whose beauty of face and form have captivated so many thousands, maintains her freshness and grace by the aid of a ten-mile walk every

day. The Empress of Austria, who is said to have the finest figure of any woman in Europe, although fifty years of age, is still a most accomplished horse-woman. Probably most persons suppose that a good or bad figure is a natural gift, whereas it is quite certain that the majority of men and women are born with the ability, at least, to acquire good figures. The great preponderance of bad, unsightly figures which one meets, are the result of neglect to properly train the body. A good figure, a graceful carriage, a dignified presence, freedom and grace in movement, are unquestionably among the most desirable qualities. They go farther, in fact, in making up the sum of subtle elements which constitute personal influence, than does a handsome face or a melodious voice. Bodily form and movement are, in fact, to some degree, expressions of character, and hence rightly exercise a certain dominance in personal influence.

The plan for the Home Gymnasium Department for 1891, is to give, together with facts and theories of interest in this connection, a series of lessons which, if carefully learned and practiced, will enable any young man or woman to acquire a healthful, graceful, and dignified bearing.

WHAT IS NEEDED FOR A HOME GYMNASIUM.

THERE are many appliances which may be made of service in a gymnasium, or in pursuing physical culture in its various branches, such as dumb-bells, Indian clubs, wands, poles, apparatus for pulling weights, etc.; but for the course of instruction which we have mapped out for the year 1891, no apparatus whatever will be required. The exercises which will be recommended and described will be such as can be taken without apparatus, and in any room in an ordinary dwelling-house which is properly ventilated.

A good supply of fresh air must always be secured, as the benefit derived from exercise is in large part due to the increased amount of air taken into the lungs. The importance of making sure that this extra supply of air is of the highest degree of purity, need not be emphasized. The temperature of the air of the room in which exercise is taken, should range from 60 to 65° F. The room should not be warm enough to occasion violent perspiration, as this will induce a tendency to taking cold.

A good time for taking exercise is on first rising in the morning and just before going to bed at night. For an invalid, more suitable hours might be selected. Persons who are in feeble health will find ten o'clock in the forenoon a good time for exercise; but those possessing ordinary health will usually be occupied at this hour with duties of some sort, and unless a more convenient time is selected, will be likely to neglect the employment of exercise in a systematic manner, which is quite essential to the securing of good results. All of these exercises should be taken with the clothing so loose that no portion of the body shall be restricted. It is especially important that there should be perfect freedom of the muscles of the chest, waist, and other portions of the trunk, as the exercises employed are largely directed to the development of the muscles of this part of the body.

Regularity in exercise is a matter of the utmost importance. The exercises prescribed should be taken

every day. The freedom of movement, lightness, and buoyancy of step which will be appreciated as the result of even a few weeks' regular and systematic exercise, will, we are sure, be sufficient encouragement to the new beginner to induce him to continue the employment of this most efficient means of gaining and maintaining excellent health. We are certain that any one who will undertake to faithfully carry out the instructions which will be given in this department during 1891, will feel fully repaid for the time and effort expended. At the present time, more than one hundred and fifty young ladies, and a considerable number of young men, are daily practising the exercises which we shall describe, and with most excellent results. From time to time during the year, we shall devote space to some of the results of the work which is now being done in classes and by individuals, and of the work which we hope will be undertaken in the interest of their own personal improvement by many of the readers of this journal.

HEALTH, GRACE, AND BEAUTY.—FIRST PAPER.

To be well, that is to be in a condition to exercise to the highest degree all the faculties of one's being, is not only a privilege, but a duty which no intelligent human being can innocently ignore. The desire to be graceful and beautiful is a laudable ambition, the gratification of which can lead to no harm; and as health and beauty are intimately associated, it is scarcely to be expected that one can be acquired without the other. Healthful exercise may not to any great extent modify the features of the face, but it will secure grace and beauty of form and movement; and there is far greater attractiveness in a graceful and well-developed figure than in a simply pretty face.

In the instruction to be given in this series of articles, we shall not confine ourselves to any one system of gymnastics. Each of the various systems possesses merits peculiar to itself. For example, the system of heavy gymnastics gives strength, while light gymnastics give alertness and activity. The Delsarte system is especially designed to give grace and freedom of movement, and ability for bodily expression. The system of exercise developed by Ling, commonly known as Swedish gymnastics, are specially calculated to develop the muscles of the lower extremities and of the trunk, and to favorably influence the vital organs. A long experience in the use of exercises as a means of securing symmetrical development of the body, has convinced us that the best results are not to be secured by any single system of

exercises or movements, but by a combination adapted to the attainment of the object sought. In preparing the series of lessons for this department for 1891, we have placed under contribution various so-called systems of gymnastics, especially the Swedish gymnastics and the Delsarte system. Neither of the excellent systems last mentioned are capable of accomplishing so much in a given time alone as may be accomplished by a judicious combination of the two. We have also occasionally introduced modifications of our own which have been dictated by experience and a knowledge of the anatomy and physiology of exercise.

Without the most scrupulous attention to a formal order of statement, let us now consider some of the principles which are to guide us in our study and practice. We shall here only briefly give the general principles which underlie the science of physical culture, as we shall in a future article, devoted entirely to the subject, consider in greater detail and completeness the subject of the anatomy and physiology of the muscular system. It is important, however, that the reader should understand at the outset a few of the great underlying principles which must guide us in our work.

1. Healthful vigor and activity of the muscles are necessary for the maintenance of those functions upon which depend a good appetite, good digestion, good assimilation, and the prompt removal of waste matters from the body.



FIG. 1.—CORRECT STANDING POSITION.
(WEIGHT ON BALLS OF FEET.)

one person in a hundred, perhaps not more than one in a thousand, can be found who knows how to stand correctly, or who can take at once a correct standing poise when told how to do so. The most perfect male figure the writer ever saw, was among the wilds of Arizona, in the person of a Yuma Indian, who in form and poise stood as perfect as an Apollo. The scanty clothing which he wore had imposed not the slightest restriction upon his bodily movements, and the active out-of-door life which he led had resulted in a perfectly symmetrical muscular development. Without the slightest knowledge of gymnastics or the art of bodily expression, he stood gracefully and easily in a poise which any professor of physical culture would pronounce as nearly perfect as possible. Why should not civilized men and women have equally perfect and graceful figures?—Simply because that symmetrical development of the muscular system, upon which grace and beauty of form de-

2. The beating of the heart and the action of the lungs are both immediately dependent upon the action of muscles. The heart itself is a single muscle. In the act of breathing, many muscles are brought into play. All of these important muscles are strengthened by exercise and weakened by neglect of general muscular work.

3. The walls of the abdominal cavity are chiefly composed of muscles. The important organs—stomach, liver, spleen, bowels, etc.—which occupy this portion of the body, depend upon the contractile power of the abdominal muscles to hold them in position. Some of these organs, especially those occupying the lower part of the abdominal cavity, are held in place by special muscles. The weakness of the abdominal muscles resulting from inactivity and neglect of physical exercise, allows the body to drop into an incorrect poise, such as is shown in some of the accompanying cuts, and as a result, the important organs of the abdomen fall out of place, thus engendering a great variety of diseases which affect most profoundly the entire body.

4. Muscles can be made to grow only by work.

5. Work alone, however, gives strength without either grace or freedom of movement, qualities which are nearly as desirable as strength.

6. The grace and freedom of movement which characterize an animal possessed of the ability for healthful muscular activity in the highest degree, are to be obtained only by alternations of work and rest,—energizing activity and relaxation. Work gives vigor and energy to the muscles; relaxation gives muscular control,—makes the will dominant. In all the exercises which will be directed in this series of lessons, this thought will be kept in mind, and the pupil who undertakes to make a practical application of the instruction given, must also keep the thought well in mind in all his work.

Correct standing is the foundation for the entire system of exercises which we shall give in this series of lessons, and the acquirement of a correct poise in standing is perhaps the most difficult task which the pupil will be asked to perform. Among civilized people, scarcely



FIG. 2.—INCORRECT STANDING POSITION. (WEIGHT ON HEELS.)



FIG. 3.—INCORRECT STANDING POSITION. (WEIGHT ON HEELS.)

4. The head should be held well back upon the shoulders, the chin must be slightly drawn in, and the shoulders well braced back, but not in a strained position. The arms should be allowed to hang easily at the side, and the shoulders should not be elevated.

When a person has assumed the correct poise, a vertical line passing from the top of the head just in front of the ear, lengthwise of the body, will fall at the ball of the foot. This line, it will be noticed, passes not over the shoulder, but just in front of it.

The beginner will probably make many efforts before he succeeds in getting himself in perfect position according to the above rules. Indeed, very few

pend, is almost wholly neglected among civilized people. Our bodies are allowed to grow out of shape, to fall into ungraceful and unhealthful attitudes. The flat chests, round shoulders, crooked spines, caved-in stomachs, protruding abdomens, straight backs, awkward gait, and general lack of grace in movement, are not, as most persons probably suppose, the result of inheritance or a lack of natural endowment, but the effect of wrong education, or rather a lack of proper education, of the body.

HOW TO STAND CORRECTLY.—Let us now describe the exact position which a person should occupy in correct standing:—

1. The weight of the body should rest upon the balls of the feet, rather than upon the heels. Heel-standing is a very prevalent habit, and is one which is productive of much mischief. Fig. 1 represents correct standing, while Figs. 2, 3, and 4, show the attitudes taken by persons in heel-standing. Of course Figs. 2, 3, and 4, are somewhat exaggerated examples, but all were taken from life. The writer has met hundreds of cases in which the poise of the body and the resulting bodily deformity were fully as great as are here represented.*

2. The muscles of the legs must be made firm or rigid, and the hips well set back. Observe that in Fig. 1 the shoulders are forward of the hips, while in Figs. 2, 3, and 4 the shoulders project backward beyond the hips. It is impossible to hold the body in a proper poise when the shoulders are even with or behind the hips, for the reason that the head must be thrown forward and the chest flattened, in order to distribute the weight of the body in such a way as to preserve the equilibrium. There must of course be an equal mass of the body on either side of the line which marks the center of gravity.

3. With the hips well held back, the chest can be thrown up strongly in front, and held as shown in Fig. 1. The abdomen should be at the same time well drawn in, so as to overcome the tendency to abnormal protrusion which is observable in the majority of persons who have never cultivated a correct poise.



FIG. 4.—INCORRECT STANDING POSITION. (WEIGHT ON HEELS.)

*The vivacious lines and graceful poise of Fig. 1, are not the product of an artist's imagination, neither were they the result of a course of scientific physical training. They represent exactly the outlines of a young German peasant girl, who had all her life been accustomed to active muscular effort, and frequently carried for a distance of several miles, a load of ninety pounds balanced upon her head,—the most effective kind of gymnastics.

persons are able to assume a perfect poise at the first attempt. A long and persevering effort is required in the majority of cases, owing to the tyranny of habit and the weakness of those muscles necessary to hold the body in correct position. The following exercise should be practiced as a means of assisting a person to assume the correct poise:—

Exercise 1.—First put yourself as nearly in correct position as possible, being careful to have the weight thrown forward upon the balls of the feet, the hips held well back, the chest up, and the abdomen retracted. Now stretch out both arms in a horizontal line in front of the body, reaching out as far as possible without bending the body forward, at the same time rising upon the toes and taking a full breath. Next, move the arms sidewise and upward at the same time, so that when the hands come opposite the body the arms will be at an angle of about 45 degrees. Continue the circle backward, keeping the arms stretched as far as possible meanwhile, and finally bringing the arms down to the sides and the heels to the floor at the same moment. Be careful all the time to keep the back well curved, the hips well set back, and the chest up. This exercise will be very certain to bring the body into a fairly good position. This exercise should be repeated a number of times, at least eight or ten, keeping the muscles of the entire body firm during the exercise, until the body is brought into a correct position, which can easily be determined by means of a string with a small weight attached to its lower end, or by a straight edge set up against the body. In taking exercises of this sort, breathing should always be carried on at the same time, one deep breath being taken and held during the movement.

After the pupil has attained what he believes to be a correct poise, it should be held for two or three minutes, deep breathing being practiced at the same time. In taking a deep breath, the chest should be held firmly up in position, but should not move to any considerable extent in the act of breathing. The chief movements should be at the sides of the chest. The sides of the chest may be aptly compared to the handles of a pair of bellows. The strong muscles by which the act of breathing is normally performed, are chiefly attached to the ribs which form the framework of the lower part of the chest, and these are the muscles which should be developed. Women who have not been accustomed to breathe in this manner, will find this exercise somewhat difficult at first, and the muscles will fail to act when called upon; but by persevering effort they can be brought into active use again, and the sensation of lightness and buoyancy

which will come as the result of free and deep breathing practiced in this manner, will well repay one for the effort made to acquire the normal method of breathing, which the majority of women, unfortunately, have lost. This breathing exercise should be always practiced in connection with the standing poise. At first it may not be possible to hold this position correctly for five minutes. The exercise should be discontinued as soon as a severe tired feeling is experienced. When the exercise cannot be taken more than one or two minutes at once, it should be repeated at least half a dozen times a day. Some time must be devoted to these exercises. At least one half hour every day should be set apart for practice, if any considerable degree of benefit is expected. A very earnest and persevering effort must be made by one who has so bad a poise as is shown in Fig. 2 or Fig. 3.

FORCIBLE CARRIAGE.—We fancy we hear the reader who has undertaken to execute the exercises above described exclaim, about this time, that the poise which we present as the correct one seems to him to be very unnatural; that his position is strained, and that it is only by a very strong effort that he can hold himself in such a position after he has attained it. This is all very true. It is only by a strong effort that one can correct deformities which have existed for years, and force his body into a correct poise. A long time must elapse before he will be able to hold a correct poise naturally and unconsciously. Indeed, it is probable that what has been aptly termed "forcible carriage" of the body is the natural and proper method. The spirited horse which holds his head high, his neck gracefully arched, his back curved, and every limb firmly placed, maintains his beautiful poise, which is at once recognized as an evidence of strength and vigor as well as of beauty, by forcible though spontaneous effort. The same horse, when sick or exhausted, hangs his head. The graceful curve of the neck and back are gone. The limbs are relaxed. Both grace and beauty are lost. The change is not due to the fact that the horse holds himself in a different position, but simply to his failure to hold himself up. It is precisely so with the human form. A graceful and beautiful poise, the characteristic of health, must be maintained by a forcible effort; but by the proper training of the muscles and the development of healthful vigor in the body in general, this effort will become a pleasure rather than a task, and will finally come to be so spontaneous and natural that a correct poise will always be assumed without thought or conscious effort. This is the point to which every person who undertakes to follow the work marked out in these lessons

should seek to attain. We do not hesitate to guarantee that any person who is not yet past middle age, who will faithfully execute the exercises prescribed, will find himself, at the end of one year from the present time, marvelously improved in health, strength, and vigor, and especially in grace, freedom of movement, and dignity of bearing. He will also acquire such lightness and buoyancy in making muscular effort, and such ability for endurance, as will quite astonish him.

The following exercises should be practiced in the correct standing position:—

Exercise 2 (swaying).—Hold the body firm, and sway slightly forward and backward, taking care that there is no bending of any part of the body except the ankle joint, which should be treated as a hinge. The toes and heels must be kept upon the floor, and every muscle of the body firm and tense, a correct poise being maintained all the time. The swaying movement should first be very slight, but may be gradually increased until the head moves several inches back and forth.

Exercise 3 (half-standing—foot-raising).—Raise the right foot in a straight line, with the toe pointing down, until opposite the left knee. Hold the raised foot in position while counting ten, then return it to position, meantime keeping the body rigid and in perfect poise. Repeat the same exercise with the left foot. Alternate thus until each foot has been raised five times for the first exercise, increasing the number of times each morning, until the foot can be raised and held in this manner while counting fifty, and repeated for each foot ten or fifteen times.

Exercise 4 (toe-standing).—While holding the body in perfect poise, sway a few times, then raise the heels an inch or two from the floor, keeping the legs and the body firm, being specially careful not to bend the knees or throw the head forward. Hold position while counting ten, then lower the heels to the floor. Repeat ten or fifteen times for the first lesson, gradually increasing the length of time the body is held in a raised position, and also rising higher upon the toes as the muscles of the legs acquire strength.

DIRECTIONS FOR PRACTICE.—Practice the preceding exercises during the month of January as follows:—

First week, practice Exercise 1. Assume the correct position, and hold it from two to five minutes from three to six times daily, and take the correct poise as many times during the day as possible.

Second week, practice Exercises 1 and 2, for ten minutes three times a day.

Third week, practice Exercise 3, in connection with Exercises 1 and 2, for ten minutes three times a day or fifteen minutes twice a day.

Fourth week, practice Exercise 4, in connection with Exercises 1, 2, and 3, for fifteen or twenty minutes twice daily.

We must not forget to warn the reader that if he undertakes to carry out the exercises described in this article, he will at first experience backaches, sideaches, neckaches, legaches, shoulderaches, and probably aches, pains and soreness in every part of the body. He must not, however, be discouraged on this account, but must persevere, perhaps lessening the vigor of the exercise for a day or two, and in a few days all of these aches and pains will disappear, never to appear again if the exercise which produced them is taken regularly each day. As new exercises are tried, new pains will appear, and will disappear as quickly if the exercise is persevered in. The occurrence of pains is not an indication that the exercise has done harm, but that the muscle exercised was weak, and needed the very work which it has been made to do. The pain is produced by the quickened circulation in the muscle used, by which nature is bringing to it an increased quantity of nutriment, as a result of which the muscle will in a short time become larger and stronger, and able to do the work required of it without difficulty, and without the occurrence of pain or soreness. Exercises taken with so great care that no pain or soreness can possibly result, will not be likely to do any good, as pain and soreness are indications of the activity of the tissue-building process by which nature undertakes to make the muscle stronger.

ANCIENT BREATHING EXERCISES.—Prof. Max Muller has recently published some extracts from the Sanscrit, which describe breathing exercises, consisting of deep breathing, expelling and drawing in the breath at a regular rate, and holding the breath, for the purpose, as was said, of steadying the mind. The person taking this exercise was directed to assume a firm and easy position, and then to carefully regulate the breath,—drawing it in through one nostril, clos-

ing the other nostril with the finger, then after retaining it for some time, sending it out through the other nostril. The time occupied in the three parts of the exercise,—inhalation, retention, and exhalation,—was regulated by the repetition of the syllable *om*. It was claimed that this method of breathing gave remarkable clearness to the mind, and prepared the individual for a mental state in which most exceptional powers might be manifested.

DRESS

SUBSTITUTES FOR THE SKIRT.

ONE of the radical defects in woman's clothing from a health standpoint, is the lack of proper protection for the limbs. While the trunk of the body is clothed with from five to six, and sometimes even ten thicknesses, the limbs and feet, which, because they are so far from the vital centers, need to be supplied with the greater artificial warmth, are not infrequently covered with but one thickness, and that of cotton. To be sure, they are draped about with numerous skirts, but these garments generally contribute far more, with their tight bands and heavy materials, to pressure about the waist and weight upon the hips than to any additional warmth about the extremities.

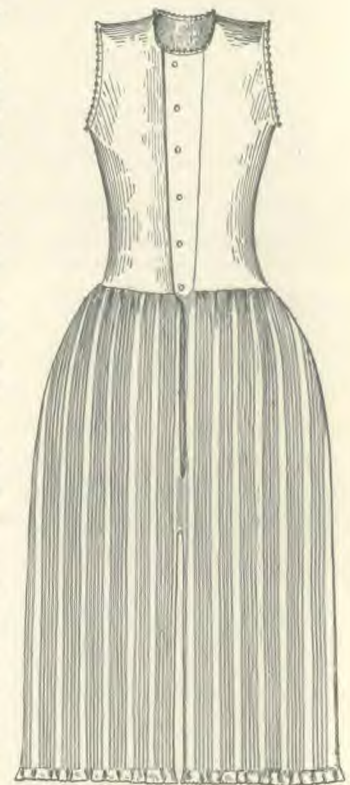
Loose skirts, even though they be multiplied in number, are entirely inadequate to secure the needed warmth, since the simple motion of the limbs in walking creates a current of air about them underneath the warmest skirt. A person thus clad, going from a high temperature indoors into a low one without, soon becomes chilled by the constant circulation of cold air about the extremities, created by the wind-blown skirts. Many cases of serious illness may thus be attributed to insufficient clothing of the limbs.



EQUESTRIENNE TIGHTS.

These objections to a garment so commonly considered indispensable to woman's wardrobe, have led to the invention of various substitutes

which clothe the limbs in some separate fashion. Among these, the knitted divided-skirt with waist, and the equestrienne tights represented in the accompanying cuts, are pre-eminently serviceable as cold weather garments. With a union undersuit of wool, worn under a similar one of linen or cambric, a knitted divided skirt of suitable thickness, and an ordinary dress, one may be lightly, warmly, and equably clothed throughout, without corsets, bands, straps, or any other superfluous accessories. When going for a walk or ride, if a pair of the knitted tights are drawn on over the divided skirt, and a short closed wrap added for the trunk and arms, one is far better protected than it is possible to be with the heaviest and warmest Newmarket, or long cloak of any sort, while the freedom of motion and the feeling of lightness gained are unsurpassed by any other adjustment of the clothing.



KNIT DIVIDED SKIRTS.

Many ladies prefer the tights to the divided skirt for indoor wear, and have altogether discarded loose skirts in their favor. A trial of either style of garment is quite sufficient to convince one that for warmth, comfort, and ease they are far superior to the from three to a half dozen loose skirts often worn in the attempt to keep warm during the cold season.

E. E. K.

WISE AND FOOLISH.

As a sound body is the necessary foundation of a sound mind, food, clothes, exercise, all the conditions of daily life, are important considerations in training girls either for high scholarship or practical work; and yet how little attention is paid to hygiene! A physician need but look at the forms of our girls to appreciate the violence done to nature in the small waists, constrained gait and manners, of all we meet. In looking at the beautiful paintings and statuary in the Old World, I have often wondered whence came our idea of the female form. It is certainly like nothing in heaven above or the earth beneath, or in the waters under the earth; for even the traditional mermaid is vouchsafed more breathing power than the woman of the nineteenth century. None of the old artists have immortalized anything of the kind in marble or on canvass. Those of our own times turn away in disgust from the daughters of Hancock and Adams, to copy the Venuses and Madonnas of the past for the perfection of womanly grace and beauty.

All sensible men laugh at their wasp-like waists, and women themselves affect to dislike them, and always declare, when attacked, that their clothing is loose, that they are small naturally, which is to say that God, by way of making a variety of the human species, thought fit to tap the ribs of the American woman. I do not like to interfere with the designs of Providence, but I should like to see the experiment fairly tried, for one generation, of hanging all woman's clothing loosely on her shoulders, that we might learn what hand God had in her present weakness and deformity.

Ordinarily, a girl of fourteen is a healthy, happy, romping being, with short hair, short dress, and clothes hung loosely on her shoulders; but as soon as her skirts trail, and dressmakers begin to "form the waist," as they say, a change takes place at once in her whole manner and appearance. She is moody, listless, weary, struts when she runs, cries when she should

laugh, and all this at the very age when she should manifest new vigor and enthusiasm. Much of this is to be attributed to the many unnatural restraints placed on girls, the indoor life and sedentary habits; but more to her dress than to any other cause. The tight waist compressing the ribs, prevents a free circulation of the blood and action of the heart and lungs, and paralyzes a belt of nerves and muscles at least six inches in width around that part of the body.

When we remember that deep breathing has much to do with deep thinking, we see the relationship between scholarship and dress. Girls, by the style and material of their clothing, are practically debarred from all out-door amusements; and yet they need them as much as boys do, and if well trained and properly dressed, would take as much pleasure in them. It is as one of the conditions of health that the question of dress becomes one of great importance.

"There was a time in the history of mankind," says Carlyle, "when man was primary and his rags secondary; but times have changed; clothes now make the man." I hope we are fast coming to that period in the history of woman when health and freedom in woman are to be the first consideration. If girls are to hold equal place, with equal force, in the world of work, an entire revolution in their dress is inevitable. When I was young, with a short dress hung loosely on my shoulders, a round hat, and a pair of light shoes made precisely like my father's, I used to walk five miles before breakfast, or ride ten miles on horseback; and to that early and continued obedience to physical laws I am indebted for a life of uninterrupted health and happiness.

Health is the moral condition of all women. Weakness, disease, pain, and sorrow are the results, in all cases, of violated law and divine ordination.—*Elizabeth Cady Stanton.*

PROTECT THE CHILDREN.—Many mothers are still ignorant respecting the necessity for the proper clothing of children, especially in regard to the protection of the limbs. Not infrequently children may be seen upon the street whose legs are almost bare, and who wear low-necked clothing. This exposure of the two extremities of the trunk is harmful in the highest degree. It induces in the lungs pneumonia and temporary bronchitis, and in the bowels, inflammation,

congestion, and various other morbid conditions, which may lay the foundation for chronic ill health in after years. Mothers should see that their children are warmly clad, and especially that their feet and legs, arms and shoulders, are thoroughly well protected. A child, owing to its greater surface in proportion to its size, is much less able to protect itself against the cold than a grown person, and hence needs more and warmer clothing.

SOCIAL PURITY.

THE NEED OF PURITY REFORM.

BY J. H. KELLOGG, M. D.

THE evidence of the decadence of morals, especially in the rising generation, is such as to alarm those who are at all awake to the tendencies of the time. Modesty and a virtuous shamefacedness are quite too rare in these degenerate days. The whole tenor of fashionable society seems to be such as to encourage the cultivation of manners not the most favorable to purity. Thousands of intelligent and serious-minded men and women in all parts of the civilized world, have recognized the spirit of the age in this regard, and appreciate the necessity of agitating the subject and improving every proper opportunity for the cultivation of a better sentiment, and the inculcation of the heaven-born principles of purity of heart, which alone can lead to purity of life.

Very few are aware of the prevalence of impurity at the present day. Even those who are themselves impure, scarcely appreciate the number of those of like character. Thousands of those who pass as good moral members of society, communicants of churches in good standing, carry beneath their pious garb hearts full of iniquity. In saying this, the writer speaks what he knows, not what he has learned by hearsay, or what he has guessed at. These statements are based upon actual knowledge gained from those who have been led astray by the influences and associations which surround men and women, young and old, in almost every community. We are not speaking too emphatically when we say that modern society hides under the garb of decent respectability a veritable Sodom.

Perhaps one of the most active foes to purity is the purient literature of the day,—trashy novels, sentimental Sunday-school books, and sensational newspapers. The popular story papers probably do vastly more mischief than do such grossly indecent publications as the *Police Gazette*, and the books and pictures which Mr. Comstock is so industriously engaged in suppressing. In a medical experience of scarcely twenty years, the writer has met several scores of young persons who confessed that their lapse from a chaste life was due to the reading of

this sort of literature. A prominent pulpit orator, in referring to this class of literature, did not state the matter with undue force when he asserted that "the ten plagues of Egypt have returned, and the frogs and lice have hopped and skipped over our parlor tables." How many parents are awake to the gravity of this cause of impurity.

There are those who dislike such plain talk, and who imagine that silence is the best policy. To such we say, This question cannot be ignored without neglecting a great portion of the instruction of Holy Writ. The Almighty himself has placed it in the bosom of the Ten Commandments. It rises most vividly before us in the pictures which the Bible gives us of the lives of both good and bad men. A hundred times it is mentioned in the epistles of the New Testament. Still more frequently we hear it in the solemn denunciations and admonitions of the Old Testament. Indeed, the Bible, as has been aptly said, "thunders" against it; then why should we hold our peace when the world has never seen an age which needed more to be warned, admonished, and instructed?

Evil association is often the avenue through which the father of lies and iniquity leads his victims down to ruin. A moral contagion is abroad in the world. The troops of boys of all ages, from five to twenty, that we see upon the streets of every city, sitting on the curbstone, loitering about the corners, gathering here and there in little knots from which the ears of passers-by may easily catch words and phrases which bring the blush to virtue's cheek, are evidence that parents are by no means generally awake to the danger which lies in evil companionship. Many boys, especially in the cities, are, after they reach the age of ten or twelve years, allowed to select their own associates; and it is generally the case that the association most easily formed is with some foul-minded youth, who is only too anxious to impart to an innocent lad the evil knowledge which he has in like means gained from some other boy missionary of evil.

The damage which would be done by a terrific hurricane sweeping with destructive force through a thickly settled district, is insignificant compared with the evil work which may be accomplished by one vicious lad. No community is free from these vipers. Every school, no matter how select it may be, contains a greater or less number of these young moral lepers. Often they pursue their work unsuspected by the good and pure, who do not dream of the vileness pent up in the young brains which have not yet learned the multiplication table, and scarcely learned to read.

Vice spreads like wild-fire. It is more "catching" than the most contagious disease, and more tenacious, when once implanted, than the leprosy. Scores of times has the writer seen a fond parent's heart wrung with anguish at the revelation of the fact that an idolized son or daughter had for years been traveling in the pathway of iniquity, right under the parental eye, without the first suspicion of such a course having been entertained by the too indulgent and too trusting parent. Eternal vigilance is the price of purity, as well as of moral safety in every other particular. In one brief moment, the mind of a pure child may be inoculated with the virus of corruption which may work its moral, mental, and physical ruin.

Impurity of thought is the foundation of all impurity of action. Occupation of mind and body is one of the best moral safeguards. Mental stagnation is an invitation to evil thoughts, and from evil thoughts are born evil actions. Thousands of people fall into evil ways simply for want of mental occupation. This is especially true of the young. An unoccupied mind is like a stagnant pool, the water of which grows foul and impure simply from want of activity. Turn a lively brook into a pond covered with green slime and teeming with filth, and send the putrid water dancing over the pebbles, whirling and boiling in a thousand eddies, and dashing in little waterfalls, and soon it becomes pure. If you wish to keep a child's mind free from unwholesome thoughts, and to develop a character which will prompt to good and useful acts, fill it so full of wholesome and useful truths and facts that there will be no room for evil.

Undoubtedly, unwholesome food, especially the use of such stimulating articles as spices and other condiments, flesh-meats, pastry, and highly seasoned viands, is one of the most active causes of impurity in modern times. The early Romans who fed upon the simple fruits of the earth, were as chaste in morals as abstemious in diet. Under the degrading influence of a luxurious and stimulating dietary, the Roman emperors developed a degree of moral turpitude that astonished even the heathen world. The great mon-

archies which once ruled the world became dissipated and corrupt only when their citizens became wealthy and adopted luxurious modes of life. Simplicity in diet, dress, manners, and in all the habits of life, are most conducive to virtue.

Many of the usages and customs of our modern society seem to open the door to vice, and lead the young and inexperienced unconsciously away from the path of purity and virtue. To fashionable dress must be charged no small share of the mischief wrought by impurity. False ambitions and false standards of dress are among the greatest obstacles to purity reform. Fashionable dress is as demoralizing to women in its way, as is luxury to men. Women of all classes, rich as well as poor, must be brought to consider "the body more than raiment," and instead of endeavoring to ape a dressmaker's model, shaped or dictated by the demimonde of Paris, learn to clothe "this temple of the Holy Ghost" so simply and so healthfully that it may be a fit dwelling-place for the Spirit of Him who created it.

Ignorance is one of the mightiest allies of vice. To be forewarned is to be forearmed against sin and iniquity, as well as against misfortune of any sort. Yet how many foolish mothers try to persuade themselves that ignorance and innocence are synonyms! The divine laws of purity which govern the body, must be taught our children, must be learned for ourselves; then shall we and they be prepared to serve God with "a pure heart fervently." Ignorance leaves wide open the door through which may enter the demons which can make of the temple where Divinity should be enthroned, a veritable hiding-place for every unclean thing. We must lay aside our prudishness and false modesty, and plainly but delicately warn, instruct, and admonish those who are walking in the ways of sin, whether openly or secretly, and vigilantly guard those little ones whose pure hearts are yet untainted by its contagion.

One of the most blessed results of this work is that it ennobles, purifies, and elevates those who engage in it. The one who reaches out his hand in an earnest, sincere effort to lift another up to a higher plane of life, in so doing lifts himself up to higher and holier ground. This work is noble, Christ-like, elevating. Are there not hundreds among those who read this paragraph who are willing to engage in such beneficent labor? A word of warning here and there, a word of encouragement, of instruction, and above all an example of holy living and exemplary walk and conversation,—by such means a sincere soul, inspired by an earnest, pure purpose, may save thousands from physical and moral destruction.



NEXT month we shall expose a number of popular "Cancer Cures" in this department.

POISONING BY PISO'S CONSUMPTION CURE.—According to the *Kansas Medical Journal*, two cases of poisoning by the use of this nostrum have occurred in a single month in Nebraska. At this rate, we shall soon have a formidable rival for "Mrs. Winslow's Soothing-Syrup," which has doubtless killed hundreds, perhaps we might safely say thousands, of babies, and older children, too. A perusal of the following, which is published as the formula for "Piso's Consumption Cure," will reveal the secret of its poisonous properties:—

Tinct. tolu,	½ oz.
Fl. ext. lobelia,	2 dr.
Fl. ext. cannabis indica,	2 dr.
Chloroform,	1 dr.
Sulph. morphia,	4 gr.
Tartar emetic,	4 gr.
Ess. mentha viridis,	10 drops.
Water,	8 oz.
Sugar,	14 oz.

"FLEURY'S TASTELESS CASCARINE."—This nostrum is manufactured by the Fleury Medicine Co., of Springfield, Ill. It is claimed to be a harmless remedy for biliousness, costiveness, dizziness, headache, and torpid liver. It is sold in small wooden cylinders, each of which contains about three quarters of a dram of yellowish-white powder. A careful examination of this powder, according to *New Idea*, shows it to be composed of sub-nitrate of bismuth and calomel, mixed with powdered sugar. The manufacturers of this nostrum have evidently taken advantage of the well-known laxative properties of cascara, a California herb, and have wished the people to believe that their so-called "Cascarine" contains the active principles of this efficient drug. This method of deception is not uncommon with charlatans of this class. It will be noticed that the mixture does not contain a particle of cascara, or anything derived from this drug.

MOTHER SIEGEL'S SYRUP.—This nostrum is very widely sold, and consequently largely used, in England as well as in America. The following formula we give on good authority, as being a correct representation of the constituents of this medicine. As will be readily seen, it contains nothing remarkable or characteristic. It is simply a compound of very common drugs, none of which possess any real curative virtues:—

Conc. decoction of aloes (1 to 4),	60 m.
Borax,	1.3 gm.
Capsicum, powdered,	0.13 gm.
Gentian, powdered,	2.3 gm.
Sassafras oil,	0.3 gm.
Wintergreen oil,	0.12 gm.
Rectified spirit,	7.5 gm.
Fluid extract dandelion,	7.5 gm.
Syrup,	125 gm.

FATAL POISONING BY "CHLORODYNE."—An Australian medical journal calls attention to the fact that a woman who had taken a dose of "Chlorodyne" at night, and nursed her twin babies afterward, found her little ones showing symptoms of narcotic poisoning the next morning. The infants died during the day. The death of the little ones will not appear at all remarkable when the composition of "Chlorodyne" is known. The following is reputed to be the formula of this very popular pain-relieving and sleep-producing preparation, against the use of which we most unhesitatingly warn our readers:—

Morphine hydrochlor. (mur.),	32 gr.
Alcohol,	3 fl. oz.
Tinct. cannabis indica,	1 fl. oz.
Tinct. capsicum,	30 minims.
Oil peppermint,	12 minims.
Chloroform,	1 fl. oz.
Acid hydrocyanic dil.,	2 fl. dr.
Glycerin sufficient to make	8 fl. oz.

Mixtures of this sort should be prohibited. No powerful drug should ever be taken, except by the prescription of a wise and intelligent physician.

COMPOUND OXYGEN QUACKS.

A GREAT number of merciless charlatans impose upon the public in the sale of worthless compounds labeled with the alluring title, "Compound Oxygen." There are at least a dozen different articles on the market which are sold under this name. We have examined a number of these compounds, and have not yet found a single one possessed of any medicinal virtues whatever. A number of years ago we obtained a sample of "Starkey & Palen's Compound Oxygen," which we believe is the original of the whole class of secret nostrums sold under this name. The young lady who was taking the "Compound Oxygen" had been presented with a bottle by a friend, and thought it was doing her spine a vast amount of good. She had suffered for a number of years from spinal irritation, hysteria, and a variety of nervous symptoms which had rendered her life miserable. We sent a sample of the "Compound Oxygen," and also of the "Oxygen Aqua" which accompanied it, to Prof. Prescott of the University of Michigan, at Ann Arbor. Prof. Prescott enjoys a world-wide reputation as a chemist, and his analysis can be relied upon. The following is an exact copy of his report:—

"'Compound Oxygen. Keep dark.' A colorless aqueous solution of nitrate of ammonia and nitrate of lead, the two salts being in nearly equal proportions, and together forming about three per cent of the solution.

"'Oxygen Aquæ, for digestion. Keep cool.' One of the grades of compound oxygen, a colorless, odorless, and tasteless liquid, found to be water of a commendable degree of purity, quite free from sophistications; probably this is the original compound oxygen."

Prof. Prescott also made an analysis of a compound

oxygen sent out by Dr. O'Leary, of Boston, a notorious charlatan and traveling quack. Dr. O'Leary's compound oxygen contains, according to Prof. Prescott's analysis, alcohol, chloroform, bitter almonds, balsam of tolu, and red coloring matter,—not quite so good an article as the compound oxygen made by Starkey & Palen, which contained a smaller proportion of poisonous drugs (only three per cent of nitrate of ammonium and lead), consequently not likely to do any harm. We quote as follows from the *Druggists' Circular* respecting these nostrums:—

"The first two samples (from Drs. Starkey and Palen, of Philadelphia) were sent to Prof. Prescott for analysis, by the editor of *Good Health*, who remarked as follows: 'It should be remembered that this solution is to be used by inhalation, a teaspoonful being added to a small quantity of warm water, through which air is drawn by means of a glass tube. Neither of the substances contained in the solution is volatile at the temperature at which the solution is used, so that it is impossible for any medicinal property whatever to be imparted by this boasted remedy, except what comes from the warm water, which is itself very healing when used in this way, as we have demonstrated in hundreds of cases. Prof. Prescott also tested the vapor given off from the pure solution when it was boiled, but found nothing more than the vapor of water.

"The 'Compound Oxygen' is usually accompanied by what the manufacturers are pleased to call 'Oxygen Aquæ,' which they recommend their patients to take as an aid to digestion. The analysis of this showed it to be nothing but water. The most careful tests revealed nothing else."

NOSTRUMS.—A cynical Frenchman remarked that the treatment of consumption is "opium and lies." The same may be said of dyspepsia, torpid liver, and a great variety of other maladies, omitting the opium. The great multitude of patent nostrums which are advertised and guaranteed to cure all the common maladies to which human beings are subject, are remarkable only for the mendacity with which their respective merits are set forth by advertisers.

"GARFIELD TEA."—According to the manufacturers, the Stillman Remedy Co., of New York, "Garfield Tea" "is composed wholly of herbs; a natural remedy, potent and harmless. Directions: Place a

heaping teaspoonful of the herbs in a tin cup or vessel; add a teacupful of boiling water, let the cup remain on the fire until the water boils up, then cover, and remove from the fire; strain, and drink every night on retiring." *New Idea* has made an examination of "Garfield Tea," and finds it is composed of senna leaves and couch grass. Any one who wishes a drink made of these drugs, can obtain it at less expense by purchasing the ingredients directly of any druggist, and mixing them to suit. It is claimed that "Garfield Tea" is a harmless remedy for liver and kidney disorders. It is just as useful as senna leaves and couch grass, neither more nor less. We have never yet known of a case of liver or kidney trouble cured by the use of these very common drugs.

GOOD HEALTH

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

THE RAGE FOR PEPTOGENS.

NOTWITHSTANDING the assertion made by Dr. Roberts, the eminent English physiologist, that the digestion of the modern civilized man has become so vigorous that it is necessary for him to use alcohol as a means of slowing down the too rapid process, and thus preventing "an undue and dangerous acceleration of nutrition," it is a fact which must have come to the attention of the least-observing person, that there has been within recent times a great increase in the number, and in the consumption, of articles recommended as aids to digestion. The number of preparations of pepsin, pancreatin, diastase, malt, peptones, peptonoids, and other so-called digestive agents, is legion, and their consumption is so great that numerous immense establishments are wholly devoted to their production, and several medical journals are published for the express purpose of advertising them. As a result of the glowing advertisements of these articles which are scattered about the country, and their frequent prescription by physicians, thousands of persons have come to depend so entirely upon the use of artificial digestive agents and artificially digested food, that they really have very little use for their own stomachs and other digestive organs. In consequence, these organs become less and less efficient in their action, until in some cases the digestive functions become almost completely inert. We have met many cases of this sort, in which the principal need was for the education of the digestive organs to the performance of their natural functions. The first step in these cases was, of course, the withdrawal of the artificial aids so long employed. Experiments made long ago by a French physiologist demonstrated that the prolonged use of such agents lessened the natural vigor of the digestive organs.

Doubtless much of the mischief arising from the

use of these various preparations is due to the misrepresentations made concerning them. For example, in the advertisements of pepsin, pancreatin, and other digestive agents, no mention is ever made of the fact that these substances are really by no means harmless, that they not infrequently generate poisonous substances if they are not themselves actually poisonous, and that their prolonged use is certain to be detrimental rather than beneficial, even if some temporary benefit might be derived from them. After having employed agents of this class for several years, we have, as the result of careful observation, come to discontinue their use almost wholly. Indeed, although we constantly have under treatment scores of cases of digestive disorders of all sorts, it is very rarely that we ever make a prescription of any digestive agent or pre-digested food.

In one of the periodicals devoted to the advertisement of food preparations, the *Dietetic Gazette*, we find, in the editorial department, an article recommending these artificial digesters and artificially digested foods for fever cases, and especially for consumptives. The writer says, "No food should be given without its appropriate digester,—pepsin, pancreatin, or diastase." A little further along in the same journal, we find an article quoted from the *Sanitary Era*, extolling the virtues of "bovine," a preparation which consists chiefly of beef's blood, glycerine, and whisky. It is said of this repulsive preparation that it consists of "unchanged albuminoids requiring no digestion, but ready for blood,"—as if unchanged albuminoids could be absorbed directly into the system from the stomach, or through any other channel! Human blood cannot be manufactured out of beef's blood any more readily than it can be made out of beefsteak, or any other form of flesh food. Digestion is necessary, the same as in the

case of any food substance. Nevertheless, this preparation is recommended in all cases of consumption, nervous prostration, loss of digestion, etc.

In the same paragraph, the following statement is made as a warning against the use of the artificial digestive agents so commonly employed: "It should be remembered that all artificial ferments or aids to digestion are poisons, and if used for any length of

time will destroy the functional energies of the stomach." Doubtless if each one of the manufacturers of these various preparations was to tell what he knows about the weak points of some other firm's preparation, the public would be sufficiently warned against a dependence upon these artificial aids, which at best can do nothing more than furnish a poor substitute for the natural vigor of the stomach.

KOCH'S DISCOVERY OF A CURE FOR CONSUMPTION.

THE whole civilized world has been agitated during the last few weeks by the announcement by Prof. Koch, of Berlin, that he had probably discovered a cure for consumption. Prof. Koch, as is well known, is the discoverer of the germ cause of this dread malady. That the little microbe thus discovered eight or nine years ago, is the real cause of consumption of the lungs, and of the same disease in other parts of the body, is now generally admitted, although for some years it was disputed by numerous investigators. Prof. Koch has made a great number of experiments for the purpose of finding some substance which would prevent the growth of these microbes, and thus stay the progress of the disease and effect a cure. His experiments have been chiefly conducted upon guinea pigs, and he claims to have at last discovered a substance which, when injected into the tissues of the animal, will not only destroy the tissues diseased by the microbes, and thus effect a cure, but will render the animal proof against future inoculations with the germ. As is well known, guinea pigs are the most susceptible to this malady of any animal, and much more so than are human beings. Consequently it is reasonable to suppose that a remedy which will cure and protect a guinea pig from consumption, will also have the same effect upon a person.

Prof. Koch has been continuing his experiments upon persons afflicted with consumption, and with such results as promise unqualified success. Thousands of physicians from various countries have

visited Berlin, but as yet very little positive information respecting the nature of the remedy has been communicated to the public. Those who have been rushing to Berlin for the purpose of getting information, have had little or no return for their trouble and expense, as nothing more is to be learned in that city at the present time than in almost any place which is reached by postal and telegraph lines. To assure ourselves upon this point, we sent several weeks ago a telegram to Berlin, seeking information, and received in reply a courteous answer from Prof. Koch, transmitted through the American legation of that city, stating that no information could be obtained at present further than what has been published, but that a supply of the prospective lymph would be forthcoming after a few weeks.

We have taken measures to secure a supply of the lymph at the earliest possible moment, and shall immediately subject it to a careful investigation for the purpose of testing its qualities. This discovery of Prof. Koch is so perfectly along the line of the most recent discoveries in medical science that we have much confidence in its genuineness, and shall be surprised if it does not prove to be, if not so great a success as the public have been led to believe by newspaper accounts, at least a very important means of combatting a disease which carries off one seventh of the human family in civilized countries. We will keep our readers informed respecting further developments in this direction.

TEA.—Experiments which have been recently made with tea show that it distinctly hinders the digestion of albuminoids; in other words, it interferes with stomach digestion. It is doubtless on this account that tea is so frequently a cause of sick headache, nervous headache, and other nervous symptoms which depend directly upon some disorder of the stomach. The writer has cured many cases of chronic nervous headache and sick headache, by simply insisting that the patient discontinue the use of tea or coffee.

THE ORIGIN OF CONSUMPTION.—An eminent veterinary authority, Dr. Huidekope, asserts that half the consumption in this country is due to tuberculous cattle. Of course it may not be possible to establish this statement by positive evidence, but when one considers the exceedingly contagious character of the disease, and its great prevalence among cattle, it is easy to see that infection might occur in many ways, not only through the use of the infected flesh and infected milk, but through the inhalation of dust from the powdered sputa or excreta of the animal.

A RIDICULOUS ARGUMENT.

OUR esteemed contemporary, the *Canadian Health Journal*, which we are glad to see has come to be a very staunch advocate of vegetarianism, recently quoted, in order to give its readers both sides of the question, extracts from an article by Dr. Drysdale, of England, in opposition to vegetarian ideas. Among the arguments presented by Dr. Drysdale is the fact that in herbivorous animals, such as sheep, the alimentary canal is twenty-eight times the length of the body, while in carnivorous animals, like the lion, it is comparatively short, being only about three times the length of the body. In man, as stated by Dr. Drysdale, the length of the alimentary canal is "only about six times the length of the body."

Our able contemporary very properly remarks in reply: "This, however, must indicate that man is not intended to subsist on grass and such coarse fodder, but requires more concentrated food, such as cereal grains and their chemically prepared albuminous products, and probably the product of animals, as milk and eggs."

SEPARATE BEDS.—The London *Lancet* recently called attention to the common practice in English-speaking countries, of two or more persons occupying the same bed. The medical writer in the *Lancet* deprecates this practice as being exceedingly detrimental to health, and opposed also to cleanliness and morality. The author maintains, and we think with good reason, that every person, large or small, old or young, should have his own bed.

DR. MILLS, professor of physiology in McGill's University, Montreal, Canada, announces the discovery that blood-vessels are glands, and that the lymph of the tissues is a secretion formed by the glandular construction of the blood-vessels. The Doctor also suggests that the walls of the alimentary canal are of the nature of glands, and that the products of digestion are changed into blood through the action of this peculiar glandular structure.

HOW MUCH WE EAT.—A clever Frenchman has been making an estimate of the amount of food eaten by an individual during a lifetime. He finds that a person who lives seventy years consumes a quantity of food which would fill twenty ordinary freight cars. A person who is a "good eater" may require, however, as many as thirty cars to carry the supplies for his inner man; but those who are always hungry,

With this we wholly agree, but the force of Dr. Drysdale's argument is not entirely broken until attention is called to the fact that in estimating the comparative length of the animal and its alimentary canal, the animal is measured from the end of its nose to the tip end of its backbone, not including the tail, while in the case of man, the measurement is made from the top of his head to the soles of his feet, including his legs, thus making his height include his legs, which is just as sensible as it would be in measuring an animal to add to the measurement from the end of the nose to the end of the spine, the length of its hind legs. Measuring man as other animals are measured in making this comparison, the proportionate number six must be exactly doubled, making twelve. This clearly places man among such frugivorous animals as the ape and the sloth, rather than approximating him to the carnivora. It is to such absurd arguments as this that the champions of flesh-eating are obliged to resort to sustain their unnatural and unscientific practice.

whose stomachs seem never to be filled so full that they cannot receive additional supplies, would probably require a special train, and a special engine to haul it, to represent the total amount consumed in a period of seventy years.

INSANITY FROM TOBACCO-USING.—Kjelberg, according to the *Medical Record*, has recently described a form of mental disease which is observed most frequently in tobacco-chewers and snuff-takers, but is also sometimes seen in smokers. In this condition, the patient suffers from symptoms similar to those produced by malaria,—insomnia, nervousness, and depression of spirits, and after a time hallucinations, fixed ideas, and a tendency to suicide. A short time ago the papers recorded the case of a boy sixteen years old who was an inveterate cigar-smoker, and who hung himself because his father refused to give him money to buy more tobacco. Very likely this was a case of nicotine insanity, such as has been described by Kjelberg.

Not long since, two cases of death by nicotine were reported in the papers, in one of which heart disease had been induced by smoking, and in the other a boy already suffering from heart disease was killed by cigarette smoking. It is high time that the wholesale poisoning induced by the filthy weed was stopped, by law, if necessary.

HYPNOTISM AND CRIME.—Much has been said in newspapers and medical journals respecting the possible relation of hypnotism to crime, it having been contended by the opponents of hypnotism that a person while in the hypnotic state might be influenced by an evil-minded person to commit a crime, and thus not be responsible for his act. In a recent murder trial in Paris, the claim made by the defense was that the one who committed the crime was under hypnotic influence in so doing. Prof. Charcot convinced the jury that it is impossible for any hypnotizer to influence a person to commit a crime against his will. The subject always retains a sufficient amount of will power to be able to resist any act of such a character. This testimony of Prof. Charcot, who is probably not excelled by any other person in a knowledge of hypnotism, both practical and theoretical, is of no small importance, since it completely destroys any apparent scientific foundation for the popular error respecting the influence of one mind upon another, witchcraft, etc.

A NEW POISON IN CHEESE.—Prof. V. C. Vaughan, director of the hygienic laboratory of the University of Michigan, who acquired world-wide celebrity a few years ago by the discovery of tyrotoxin, the active principle of poison in cheese, has recently discovered another poison in that doubtful article of diet. Having received a number of samples which it was claimed had caused sickness and vomiting in those eating them, he proceeded to test their character by feeding portions of the cheese to cats and dogs. Vomiting and purging were produced as a result. However, no tyrotoxin could be detected by the most careful examination. Some portions of the samples were subjected to a process by which the poisonous substance was extracted in solution. Forty drops of this solution injected beneath the skin of a white rat, produced death. A young dog to which a small quantity of the cheese had been fed, and which died as the result, was examined after death, and a simultaneous examination of the cheese and of the liver and spleen of the dead dog, revealed the presence of a peculiar germ common to both. This germ was cultivated in milk, and also in a germ incubator. Milk in which the pure germ was cultivated, was fatal to cats. Further examination seems to show that this new deleterious property is a poisonous albumen, and that it is quite probable that all samples of green cheese contain more or less of it.

RESULT OF ALCOHOLIC PRESCRIPTION.—There is unquestionably much mischief done by physicians' prescribing alcohol as a remedy for disease. Many physicians are in the habit of prescribing alcohol for nearly all maladies and nearly all patients indiscriminately. The writer has met a number of cases in which persons have been made confirmed drunkards by this practice. During the prevalence of the epidemic of *la grippe* some months ago, several instances came under our notice in which persons kept themselves in a state of semi-intoxication for days, either to prevent an attack, or as a means of curing a slight attack, of the disease. An eminent French physician publicly recommended alcohol as a preventive remedy for *la grippe*, in consequence of which fifteen hundred persons were arrested on the following day for drunkenness. Twelve hundred of these people declared that they had done nothing more than follow the prescription of the physician referred to.

CANDIES AND SWEETS.—The civilized "sugar tooth" is a monstrosity, although it is a taste which is cultivated from babyhood with most American children. As to candies, they are something more than sweets; they are sweets adulterated with things which are harmful; for it is almost impossible to get candies made from pure sugar. The "sugar" from which most of them are made grew in a cornfield—an article known to commerce as glucose. At one time we wanted some glucose very much, and had been trying vainly to get it, when some one suggested that we try a candy manufactory. We did not suppose the proprietor would own to using the stuff, but he did, and sold us all we wanted at four cents a pound. We asked him if he thought it was fit to eat, and he replied, "No; I wouldn't eat it for anything. I make the candy for other people to eat." There is no doubt but many children are kept sick and fretful, especially with stomach and bowel troubles, from having too much sweets. Sugar causes an excessive flow of mucus, and brings on catarrh of the stomach, often while children are very young; and it is a most obstinate disease to cure. Give the little ones oatmeal and preparations of wheat, which are half starch. In the process of digestion, this starch will be changed into sugar, and in this way they will be furnished with all the sweets their systems require, if with the grains they take plenty of fruits, with their natural, healthful sweets. If they are not taught to like candies and other artificial "goodies," they will have no appetite or craving for them.



A DOCTOR'S CHATS WITH HIS PATIENTS

COMMUNICATION OF TYPHOID FEVER THROUGH THE AIR.

IT is generally believed that typhoid fever is scarcely ever communicable except through the medium of water or through food. Recent investigations which have been made by Dr. Chour, a French army surgeon, show most conclusively that an epidemic of typhoid fever which broke out in a certain regiment, was due to the presence of typhoid germs in the dust of the barracks occupied by the soldiers. He found in this dust an average of fifty-six million microbes for each gram, and typhoid germs were abundant. The mortality was twenty-two per thousand from typhoid fever in the year 1887, and thirty-three per thousand in 1888. When the cause was discovered, the barracks were cleaned, and as a result the epidemic came at once to an end.

Some years ago it became the duty of the writer, as one of a committee from the State Board of Health, to investigate the cause of an outbreak of typhoid fever in a large State institution. A careful examination was made of the water supply, and of the milk and other food supplies, without result. It was not difficult, however, to trace the outbreak to contamination

of the air. A single case of typhoid fever had been admitted to the institution some weeks previous. The sewer had thereby become contaminated, and in consequence of the direct communication of each one of the buildings occupied as dormitories with the sewer (the protection by means of traps being imperfect, and the ordinary ventilation by means of the rain-water leaders being cut off through stoppage of the leaders with ice), the air in the basement of the building had become contaminated; and as the whole air supply for each building was taken directly from the basement, into which a little fresh air was admitted from outdoors now and then, the typhoid-fever poison was diffused with the greatest facility. The fact that typhoid fever may be communicated through the medium of the air should be kept in mind by those who nurse fever patients, and the greatest care should be taken that no portion of the discharges of the patient are so disposed of as to be converted into dust which may be diffused through the air, and thus communicate the disease to others.

WHAT ABOUT SULPHUR DISINFECTION?

SAID a patient the other day, "I have noticed recently in the newspapers frequent statements which would make it appear that disinfection by sulphur fumes is ineffective. Is it true that this method of destroying germs which has been so much recommended by sanitary authorities everywhere, has at last been proven to be unavailing? If so, what equally convenient method can be employed in its place?"

Very little dependence can be placed upon medical or sanitary suggestions found in newspapers. While the opinions expressed often emanate from physicians, they are usually transmitted through reporters, whose knowledge of medical matters is so imperfect that by

the time the facts communicated to them have reached the public, they are expressed in a widely different manner from that in which they were first stated, and are pretty certain to be sadly mixed with error. As regards sulphur fumigation, experience has shown in a most conclusive manner that it is effective in destroying the germ causes of scarlet fever, diphtheria, typhoid fever, smallpox, measles, and other infectious maladies. But something more than experience can be offered in support of the efficiency of this convenient method of disinfection. Very carefully conducted scientific experiments have recently been made in Paris, which show unmistakably that the fumes of

burning sulphur are destructive to the germs which produce diphtheria, typhoid fever, consumption, and a number of other maladies. It was observed, however, that to make certain that the destruction is complete, it is necessary to burn the sulphur in the proportion of four pounds for each one thousand cubic feet of air, which is a much larger proportion than has heretofore been recommended by sanitary authorities. It is also necessary that the room, while being disinfected, should be tightly closed, and remain closed for not less than twenty-four hours.

It is doubtless possible to thoroughly disinfect a

room without fumigation. Experiments made by various bacteriologists have shown that the germs present in the air of a room will settle to the floor and upon the walls within a few hours, if the room is closed and the air not disturbed. Then the apartment may be quietly entered, and the floor, walls, furniture, and all other articles, wiped with cloths dampened with a strong solution of corrosive sublimate. This method will not, of course, secure the thorough disinfection of crevices in walls or cracks in floors, and will be useful only in rooms in which no such hiding-places for germs exist.

MESSAGE TO THE HEART.—This is the latest attempt in the application of massage. It consists in making the patient take slow and deep respirations, while the operator places his hands upon the lower ribs and assists expiration by pressing the hands forward toward the end of the breastbone. By this process the heart is assisted to fill and empty itself.

A CURE FOR HYDROPHOBIA.—Our readers ought to know that the remarkable work which has been done by Prof. Pasteur in rescuing persons who have been bitten by rabid animals from the almost certain death which follows inoculation with the disease known as *rabies*, or hydrophobia, is being carried on in New York by Dr. Paul Gibier. A person who has been bitten by a rabid animal, and who feels confident that he has been inoculated, may secure almost certain immunity from the disease by visiting the institute under charge of Dr. Gibier, and having inoculation with the "attenuated virus" made by the physician in charge.

FOR ERYSIPELAS.—We are frequently asked the question, What is a good remedy for erysipelas? At the outset of an attack of erysipelas, apply cold cloths wrung out of ice-water, to the affected part. Every two or three hours, apply hot fomentations or a hot poultice for fifteen or twenty minutes. Prof. Koch's remedy for erysipelas is an ointment composed of one part of creolin, four parts of iodoform, and ten parts of lanolin. Probably vaseline would answer as well as lanolin. The ointment is to be applied, by means of a brush, over the affected parts and for a distance of two or three inches around upon the healthy skin. Applications should be made every four or five hours.

WHY CAN'T I SLEEP?—This question is one which a physician is very frequently asked. In quite a proportion of cases, the query might be answered by saying, "Because you sleep under too many or too heavy bed-covers." An excessive amount of heat during sleep occasions nervousness and wakefulness, through exciting the heart's action, and thus causing congestion of the brain. One should sleep under as few covers as possible without discomfort. Of course it is important that the feet and the limbs should be warm, but the amount of covering should never be so great as to induce perspiration. Old-fashioned, heavy cotton quilts are not to be recommended. Woolen blankets are the only really wholesome material for use as bed-covers, and nothing further is needed except a tain counterpane to protect the bedding from dust.

SENSATION OF COLDNESS.—Nervous invalids often suffer from a sensation of cold in various parts of the body. The spine, the buttocks, the feet and legs, and particularly the knees, are parts especially likely to be affected. Very often persons who complain in this way are not really cold, the parts complained of feeling warm when touched by the hand. The coldness is in these cases purely subjective. It is a nervous disorder which is due to some derangement of the central nervous system. In many instances, the difficulty is due to a reflex disturbance arising from a disordered state of digestion, which affects the general nervous system through the sympathetic centers, the solar plexus, or the lumbar ganglia. The cure for this difficulty consists not in the application of heat to the affected parts, but in the removal of the central difficulty by which it is occasioned, and correction of the digestive disorder, or whatever other difficulty may exist as the foundation of the disease.

ICE APPLICATIONS IN PNEUMONIA.—A Swedish doctor reports the treatment of one hundred and six cases of pneumonia with only three deaths. A rubber bag containing pounded ice was tied over the affected lung in all cases, for twelve hours after the first onset of the disease.

BANDAGING THE BODY FOR INDIGESTION.—A German physician has undertaken to cure dyspepsia by tying a rubber bandage, ten inches in width, about the waist. The bandage is worn for about an hour after each meal. The doctor does not seem to understand well the principles upon which the bandage operates. It is not simply by pressure, as he supposes, but by supporting the prolapsed stomach and bowels, a condition which is present in the great majority of dyspeptics.

TO RELIEVE PALPITATION.—An old patient who has been much troubled with palpitation for many years, wishes to know what remedy we would recommend for temporary relief. One of the best remedies for cases of this kind is the application of cold over the region of the heart, or just where the uncomfortable sensation of heat is felt. The cold application may be made by means of a sponge or a cloth wrung out of cold water, or better still, by a rubber bag partly filled with pounded ice. An ether spray is useful in severe cases.

TO REMOVE SUPERFLUOUS HAIR.—A young lady patient who is troubled very much about a slight superfluous growth of hair on her upper lip, insists on knowing how this abnormal growth of capillary substance can be removed. The only radical remedy for this difficulty is destruction of the roots of the hairs by means of an electrical current, applied with a fine needle to the root of each hair separately. This is a very tedious and expensive process, and must be done with very great care, or unsightly scars will result. For temporary relief, the following paste is recommended by an English medical journal:—

“Mix together in fine powder, 50 parts of barium sulphhydrate, 25 parts of starch, 25 parts of oxide of zinc, making into a paste with sufficient water. This is spread on the surface which is to be freed from hair, about an eighth of an inch thick, and allowed to dry. When this is effected (it generally takes about ten minutes) the mass is removed, leaving a perfectly hairless surface. Irritation does not occur, but the mixture should not be applied to the same place on two consecutive days.”

FEVER MEDICINE.—Prof. Semmola, the eminent Italian physician, declares that the administration of medicine for reducing temperature in fevers produces a poisonous rather than a beneficial effect, the quiet and lowered temperature secured being at the expense of the vital force. This view we have held and enunciated for many years, and in our practice have rarely ever employed any drugs for the purpose of reducing temperature, believing that any remedy which will, so to speak, “knock down the patient's temperature from a high to a low point,” must be of a toxic character. We have also noticed more than once in visiting the wards of fever hospitals in large cities, the feeble pulse, the corpse-like pallor, and the exhausted condition sometimes approaching nearly to collapse, in patients whose temperature had been lowered by means of anti-pyrine and similar drugs.

THE TREATMENT OF ACNE.—A young lady whose face is covered with unsightly blotches, earnestly asks for a remedy by means of which they can be removed. The successful treatment of acne is not always a matter easy of accomplishment. Nevertheless, there are few cases which cannot be cured by persevering treatment. First of all it is necessary to give attention to the diet. Flesh meats, greasy foods, condiments, and all indigestible articles of diet should be avoided. Ice-water at meals, ice-cream, cakes, pastry, in fact everything capable of producing indigestion, must be scrupulously discarded from the dietary. The diet should consist of fruits, grains, and milk. As a rule, it is best to avoid the use of butter, as this article is difficult of digestion, and is likely to induce fermentation in the stomach. Excess in eating should also be avoided. Two or three times a day bathe the face with a hot soda lotion, a teaspoonful of soda to a pint of water. The application should be made as hot as can be borne, and should be continued for five or ten minutes. Afterward rub the face five minutes with powdered soap. The rubbing should be sufficiently vigorous to redden the skin. In acne about the shoulders and neck, the rubbing should be continued for ten minutes, and should be repeated twice a day until the surface becomes somewhat irritated. In case this remedy is not sufficient, the following ointment may be employed: vaseline, ten parts; precipitated sulphur, one part; essence of rose, two or three parts. This ointment should be allowed to remain on over night. If considerable irritation results from the rubbing and the application of the sulphur ointment, this may be readily relieved by the employment of a little zinc ointment.

ANSWERS TO CORRESPONDENTS.

SAGE FOR SEASONING.—R. J. H. wishes to know if sage as used in "dressing" is unhealthful.

Ans.—The amount of sage ordinarily used in seasoning is not likely to do any harm.

COLD HANDS AND FEET.—A. F. is troubled with cold hands and feet, accompanied by rush of blood to the head. Asks advice.

Ans.—The symptoms described are very often occasioned by nervous dyspepsia. Very likely the questioner is suffering from this disease.

ZWEIBACK.—A correspondent wishes to know which it is better to use in making zweiback—fresh or stale bread.

Ans.—Excellent zweiback can be made from either fresh or stale bread. Stale bread is generally most convenient for the purpose, however.

TOBACCO AS A REMEDY FOR ASTHMA.—H. E. D. asks: "Would you advise smoking to relieve severe asthma? If not, what substitute would you recommend?"

Ans.—No; tobacco was long ago discarded from the *materia medica* by all scientific physicians. There are several forms of asthma, each requiring different treatment. In many cases the asthmatic attack is induced by a fit of indigestion. Very often an inactive state of the bowels is the exciting cause. Whatever the immediate exciting cause may be, it must be removed to afford relief.

AFTER-EFFECTS OF PLEURISY.—C. B. W. writes: "Six weeks after an attack of pleurisy, I still have much pain in my left lung and side, and a severe morning cough. Does this indicate consumption or a tendency to that disease? Would you recommend the application of Spanish fly blisters, mustard plasters, etc.? If not, what treatment?"

Ans.—Your case should receive the attention of a skillful physician, as it is quite possible that there may be chronic pulmonary trouble beginning which may be cured if taken in hand promptly. The application of hot fomentations two or three times daily, or the wearing of a moist cotton pad covered with oiled muslin and retained night and day, is likely to be more efficacious than any other means with which we are acquainted. Mustard fomentations, and even the temporary application of a mustard plaster, might be of service in such a case.

EXERCISE FOR A THIN PERSON.—E. G. C. asks: "Would not exercise in a gymnasium be conducive to making a thin person thinner? and so would not outdoor exercise be better for such a person?"

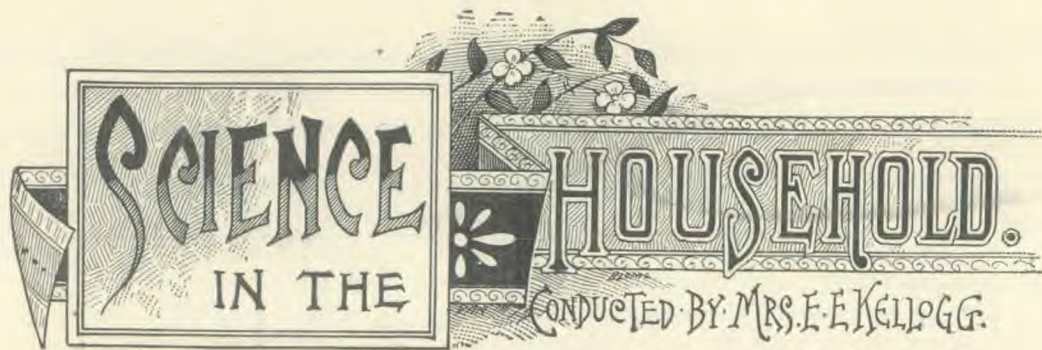
Ans.—Exercise in a gymnasium, if carried to such an excess as to produce exhaustion, would, of course, result in making a thin person thinner; but exercise in a gymnasium properly taken will improve the appetite and general health, and thus tend to induce a gain in flesh, the same as exercise out-of-doors.

DIET FOR A SEDENTARY PERSON.—N. M. G. inquires: "1. What diet would you recommend for a person of sedentary habits, and inclined to inflammatory rheumatism? 2. Is rheumatism conducive to fleshiness?"

Ans.—1. The best diet for such a person is that composed of fruits, grains, and milk. 2. Rheumatism is not conducive to fleshiness, but fleshiness is conducive to rheumatism; or at least a condition which is conducive to undue fleshiness is one which predisposes to rheumatism.

QUININE — BATHING. — Mrs. I. N. M. asks: "1. Is there a less injurious substance than quinine that answers the same purpose? 2. Is there any state of health in which bathing does more harm than good?"

Ans.—1. No. Probably the injury resulting from the use of quinine is much less than is generally supposed. It does not remain in the bone as many people imagine. It is very quickly eliminated from the system. Very little harm is likely to result from the temporary use of quinine in moderate doses. When used in unnecessarily large doses, injury may be done to the hearing. Cases of deafness have been produced in this way. When its use is long continued, it impairs the digestive vigor of the stomach. If used in small doses, such as are ordinarily required to interrupt a malarial fever of a periodic character, it is quickly eliminated from the body through the kidneys, and probably does no harm whatever. There is no remedy at present known that will accomplish the same results with greater safety to the system. 2. There are very few conditions of the body in which a bath of some sort may not be administered advantageously, provided it is given in a proper manner. The popular fear of baths is unfounded, and the idea that a fever patient may take cold if he takes a bath, has been productive of infinite mischief.



ECONOMICAL AND HEALTHFUL LIVING.

"HEALTH is wealth" is a trite saying, and surely under all circumstances that kind of food is the most economical which will maintain the body in the best condition, whether its first cost be least or greatest. True economy consists in supplying our tables with such material as contain an abundance of all the food elements in as nearly a correct proportion as possible, and in the most wholesome condition, rather than in providing something that will simply appease hunger and cater to the taste, at a minimum cost. But, fortunately, from the standpoint of dollars and cents the most healthful food need cost no more than the less wholesome, while in every other respect it is far more economical.

We have often heard it asserted that a diet in which grains and legumes supplied the place of meat, and in which fruits and milk were used in abundance and cream took the place of butter, suet, and lard, was far more expensive than the ordinary mode of living. But experience goes to prove the contrary, as will be apparent from the analysis of the following bills of fare, taken at random from the daily menus of a family of seventeen members, grown persons and hearty, growing children, none younger than six years, in which the average cost per individual was not over twenty cents per diem.

A writer in a recent contemporary magazine estimates the average cost of living for the ordinary working-man in these figures: "For a family of seven we may safely allow, weekly, to the grocer the sum of \$5; to the butcher, \$3; for milk and butter, \$1.50, and \$1.50 more for incidentals,"—thus making the cost about \$1.57 per week for each individual. The amount to the grocer would need to be no greater, although the selection of articles might differ, for the dietary we have suggested, while the amount expended for meat and butter (\$4.50), would be an ample allowance for an abundance of cream and fruit, although it is quite probable that the grocer's share included more or less of the latter.

In the estimates made of the cost of material, we have used the existing market prices of the articles given, and wherever fractions have occurred have taken the next higher whole number. The milk used for cooking we have not counted, since in this case the most of the cream had been removed and its cost counted at the entire cost of the milk itself, or twenty cents a quart, allowing four quarts of milk at five cents a quart to produce a quart of good cream.

BREAKFAST.

- Fresh Apples, with Toasted Whole-Wheat Wafers.
- Rolled Wheat with Cream.
- Grape Toast.
- Whole-Wheat Puffs.
- Toasted Wafers.
- Baked Sweet Apples.
- Hot Milk.
- Stewed Prunes.
- Cream.

Cost.—Apples (fresh and baked) one half peck, 10c.; one lb. rolled wheat, 5c.; one and one half lbs. zweiback for toast, 15c.; one pint canned grape pulp for toast, 12c.; puffs (for which, beside milk, three eggs at 25c. per doz., and one and one half lbs. of whole-wheat flour at 8c. per lb. were used), 14c.; two and one half lbs. of California prunes, 37c.; two qts. of cream, an amount quite sufficient for moistening the toast and supplying a small cream-cup for each individual, 40c.; two lbs. of toasted whole-wheat wafers, 20c.,—making the entire cost of breakfast \$1.53, or exactly nine cents for each person.

DINNER.

- Lima-Bean Soup.
- Baked Potato with Cream Sauce.
- Escalloped Vegetable Oysters.
- Graham Grits.
- Whole-Wheat Bread.
- Whole-Wheat Wafers, Toasted.
- Canned Cherries.
- Hot Milk.
- Citron Apples with Whipped Cream.
- Cream.

Cost.—One and one fourth lbs. Lima beans, 9c.; one half peck of potatoes, 12c.; one lb. graham grits, 5c.,

1 loaf whole-wheat bread, 10c.; two and one fourth lbs. whole-wheat wafers, 23c.; canned cherries, 25c.; apples and citron, 10c.; three bunches of vegetable oysters, 15c.; cream (one cup for the soup, one for cream sauce, and one for whipped cream, beside three and one fourth pints for individual use), 50c.; flour and sugar for cooking, 10c. Total, \$1.69,—a little less than ten cents each.

BREAKFAST NO. 2.

	Bananas.	
Oatmeal.	Graham Gems.	Gravy Toast.
	Apple Sauce.	
Cream.	Toasted Wafers.	Milk.

Cost.—One and a half dozen bananas, 45c.; one and a half lbs. of oatmeal, 8c.; zweiback for toast, 5c.; cream for gravy, 5c.; material for gems (graham flour, milk, and a small proportion of cream), 14c.; apple sauce, 10c.; wafers, 20c.; cream for individual use, 30c.; sugar, 5c. Total, \$1.52.

DINNER NO. 2.

	Tomato and Macaroni Soup.	
Boiled Potato with Gravy.		Mashed Peas.
	Pearl Barley with Raisins.	
	Whole-Wheat Bread.	
		Toasted Wafers.
Cream.		Hot Milk.
	Canned Berries.	
	Apple Tapioca with Cream.	

Cost.—For the soup was required two cans of tomatoes at 10c. each, two ounces of macaroni at 15c. per lb., and one cup of cream,—27c.; one half peck of potatoes, 12c.; one and a half lbs. of peas, 6c.; one lb. pearl barley, 5c.; one third lb. raisins, 5c.; one half lb. tapioca, 3c.; apples, 3c.; whole-wheat bread, 10c.; wafers, 20c.; cream, 50c.; canned fruit, 25c.; flour and sugar, 4c. Total, \$1.70,—ten cents apiece for each member of the household.

Other grains, vegetables, and fruits may be substituted for those used in the above bills of fare, at no greater cost.

SOME SEASONABLE RECIPES.

LIMA BEAN SOUP.—Simmer one pint of dry Lima beans gently in sufficient water to cook and not scorch, until they have fallen to pieces. When done, there should remain but very little water. Rub the beans through a colander. Add rich milk to make of the proper consistency, season with salt if desired, reheat, and serve with cubes of toasted whole-wheat bread or zweiback.

TOMATO SOUP WITH VERMICELLI.—Blanch a cupful of vermicelli in a small quantity of boiling water for ten minutes. Drain in a colander. Have boiling three pints of strained stewed tomatoes, to which add the vermicelli. Salt to taste, and just before serving add one cup of thin cream. Let all boil up for a moment, then serve at once. Macaroni may be used in the place of the vermicelli, but requires longer cooking, varying from twenty minutes to one hour, according to its age. When macaroni is used, it should be broken or cut into very short lengths.

CITRON APPLES.—Select some nice tart apples of about the same degree of hardness, so that they will cook alike, and dig out the cores. Unless the skins are very tender, it is better to remove them also. Stuff the cavities with sugar, first placing in each

apple a few bits of chopped citron. If the skins have been removed, place the stuffed apples around on a flat earthen dish, with a tablespoonful of water on the bottom; cover closely, and bake till perfectly tender, but not till they have fallen to pieces. If the skins are left on, they may be baked without covering. When cold, serve in separate dishes, with a spoonful or two of whipped cream on each apple.

ESCALLOPED VEGETABLE OYSTERS.—Boil two quarts of sliced oysters, well washed and scraped, in two quarts of water until very tender. Skim out the oysters, and put a layer of them in the bottom of a pudding dish, and cover with a layer of bread crumbs; then add another layer of oysters. Fill the dish with alternate layers of oysters and bread crumbs, having a layer of crumbs for the top. To the water in which the oysters were boiled, add a pint and a half of rich milk, salt to taste, boil up, and thicken with a heaping tablespoonful or two of flour rubbed smooth in a little cream. Turn this over the oysters and crumbs, and bake a half-hour. If there is not enough juice thus prepared to cover all well, add more cream or milk. Stewed tomatoes form a very nice accompaniment for escalloped vegetable oysters.

It is said that silver table-ware may be made bright by leaving it immersed for some hours in strong borax water. The water should be boiling hot when the silver is put in.

The good coal saved from the ashes and cinders after sifting, may be made to burn almost as well as fresh coal, if first well sprinkled with water, and then added, while partially wet, to a tolerably good fire.

LITERARY NOTICES.

PUBLIC OPINION is a weekly journal of interest to all intelligent persons, but seems, by its condensed and ready-to-hand arrangement, to be peculiarly adapted to the wants of busy people who have little time to read, and thus desire to cover all the ground possible in spare moments. As a correct reflection of the popular thought on current topics, this paper is deservedly popular. \$3.00 per year. *Public Opinion*, Washington, D. C.

"THE NEED FOR WORK TO PROMOTE SOCIAL PURITY," by Mrs. Elizabeth Powell Bond, an eight-page leaflet, has just been issued as No. 23 of the *Philanthropist* series. It is an earnest, effective plea, especially in the interest of the young of both sexes, in behalf of social purity and White Cross work. It ought to be read by all fathers and mothers, and by all philanthropic men and women everywhere. Price by mail, 20 cents a dozen; \$1.00 a hundred. Address, *The Philanthropist*, P. O. Box 2554, New York.

GOOD HOUSEKEEPING appears in its handsome monthly form for January, filled with much more than its usual collection of valuable and interesting reading matter. In its new form its number of pages is fully doubled, and thus opportunity is given for a greater range and variety of subjects. That this is taken ample advantage of in this fine initial number, is shown by its wonderfully full and varied table of contents, enriched as it is with everything most prized by the housekeepers and home-makers of the land. \$2.40 per year. Clark W. Bryan & Co., Publishers, Springfield, Mass.

THE undoubted feature of the *Century* for January is the bringing to light, by that enterprising magazine, before they appear in any other country, of the long-hidden memoirs of that greatest of French diplomats — Talleyrand. The first installment will contain a sketch of the author's strange and lonely childhood, an account of his entry into Parisian society, his estimate of La Fayette, and some account of the beginnings of the French Revolution. There is also a description of Talleyrand's residence in England and America, and of a conversation — of special interest in our present political situation — between Talleyrand and Hamilton on the subject of free trade and protection. The *Century* Publishing Co., New York.

"Jack the Conqueror, or Overcoming Difficulties," 159 pp., illustrated, Pacific Press Publishing Co., Oakland, Cal. This little volume belongs to the Young People's Library series issued by this house, and consists of short, selected stories for children.

THE *Kindergarten* for January is an excellent number of this little magazine. Parents cannot afford to have their little ones grow up without the kindergarten development, and where no kindergarten training is at hand, this helpful little monthly supplies a teacher's place, giving both theory and practice in detail from the best kindergarten authorities in the country. Mothers interested in the higher methods of education for children, will find the *Kindergarten* invaluable. Alice B. Stockham, Publisher, Chicago.

CIVIL GOVERNMENT AND RELIGION: OR CHRISTIANITY AND THE AMERICAN CONSTITUTION, by Alonzo T. Jones. 182 pp. Pacific Press Publishing Co., Oakland, Cal., and 43 Bond St., New York. This little work, as the preface states, is the outgrowth of several lectures upon the relationship between religion and the civil power, delivered by the writer in 1888. The present demand for religious legislation throughout the country has rendered this presentation of facts and arguments relating to it an exceedingly timely one. Whether agreeing with the views set forth or not, the reader cannot fail to be interested in such able and earnest treatment of a subject so closely concerning his own personal rights and liberties.

THE *Chautauquan* for January is heaped high with valuable matter. The following is but a small portion of its contents: The Intellectual Development of the English People, by Edward A. Freeman; The Religious History of England, IV., by Professor George P. Fisher; England after the Norman Conquest, Part I., by Sarah Orne Jewett; What Shall We Do with Our children? Part IV., by Harriet Prescott Spofford; How the People are Counted, by H. C. Adams, Ph. D.; How to Succeed in Business, by S. S. Packard; Woman's Council Table: Color in House Decoration, by Candace Wheeler; A Few Words for the Caged, by Olive Thorne Miller; Training Boys and Girls in Housework, by Harriet Carter; Tenement-House Visiting, by Helen Iselin; Housekeeping for Two, by Rose Lattimore Alling. *The Chautauquan*, Meadville, Pa.

PUBLISHERS' DEPARTMENT.

THE extraordinary lateness of the present number of *GOOD HEALTH* is greatly regretted by the publishers, this being the initial number of the volume. We trust, however, that our readers will be so well pleased with its contents that they will readily overlook its tardy arrival. The delay has been caused by an unusual press of work at the office of publication. The printers have worked night and day, but have not been able to meet all the demands that have been made upon them. We trust that another delay of this kind will not occur during the year.

The special attention of our readers is called to the new departments which are introduced in this number. The publishers feel that these new features will be heartily appreciated, and that they will add to the popularity of the journal.

* *
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GOOD HEALTH FREE FOR 1891.

ANY one who wishes to do so may obtain one or more copies of *GOOD HEALTH* free during 1891, by accepting any of the following offers:—

OFFER NO. 1.—To any subscriber who will send us the names of three new subscribers, with the subscription price, we will send *GOOD HEALTH* free during 1891. The names may be sent together, or singly, as they are obtained. Be careful to mention whether or not the premium is desired. If the premium book, the "Household Monitor of Health," is desired, the amount required for the premium and postage on the same should be added to the regular subscription price.

OFFER NO. 2.—Any subscriber who will send an order for ten dollars' worth of the publications of the Good Health Pub. Co., will receive, in addition to the books ordered, a copy of *GOOD HEALTH*, monthly, during 1891.

OFFER NUMBER 3.—To any person who will organize a "Health, Grace, and Beauty Club," to practice the exercises described in our Home Gymnasium Department, and will maintain the same during the year 1891, we will send free a copy of *GOOD HEALTH* for the present year. It will be required that the person organizing a club shall not only send his own name, but also the names of the members of the club, and their promise to practice the exercises described in the series of papers entitled "Health, Grace, and Beauty," the first installment of which appears in the present number.

OFFER NUMBER 4.—To any person who will organize a "Health, Grace, and Beauty Club" of twenty members, sending us the names of the members of the club, and also twenty subscriptions to *GOOD HEALTH*, accompanied with \$20, we will send a copy of *GOOD HEALTH*, free, for 1891, and also a copy of the "Home Hand-Book of Domestic Hygiene and Rational Medicine," the most practical work on popular medicine ever published. (See advertisement of this excellent volume on another page.)

* *
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A SPECIAL OFFER TO OLD SUBSCRIBERS.—Our new premium book, the "Household Monitor of Health," is a mine of information on all subjects pertaining to individual and domestic hygiene. It contains no long, prosy articles, but short, spicy bits of information. Almost every paragraph is worth the price of the journal for a year, or of the book. (For full particulars, see advertising page.) The retail price is \$1. It is furnished with the journal, to new subscribers, postpaid, for \$1.37. As many of our old subscribers may wish they were new subscribers, that

they might be able avail themselves of our generous offer to the latter, we propose to offer the work to the former on the following terms: Every old subscriber whose subscription has expired, or will expire with the January or February numbers, may obtain a copy of this work, the "Household Monitor of Health," bound in cloth, 400 pages, retail price \$1, by sending with the subscription price to the journal, 50 cts extra for the book, and 12 cts. for postage, making in all for the *GOOD HEALTH* one year and the premium book, \$1.62. We are sure that hundreds of our readers will be glad to avail themselves of this generous offer. The "Household Monitor of Health" is a veritable encyclopedia of useful knowledge upon this subject. There is not a dull page in the book. Every page bristles with choice facts which no person can afford to be ignorant of. Send in your orders at once, as the volume is about to go to press, and we would like to print a sufficient number in the first edition to supply the immediate demand, so that no one will be obliged to wait for the printing of the second edition. This offer is good only till April 1, 1891.

* *
*

GOOD HEALTH is read wherever the English language is spoken. It is generally recognized as being the leading popular health journal of the world. Consider, kind reader, whether you cannot afford to do something to aid in extending its circulation in your immediate neighborhood. Will not your neighbors be benefited by the instruction given in the monthly columns of this journal? *GOOD HEALTH* differs from other popular health periodicals in many notable particulars. One of the most important of these is the fact that every item which appears in its columns is carefully scrutinized by persons competent to judge as to reliability and scientific accuracy. Its columns are not filled up with trash, but every line is made to give some important practical instruction.

* *
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Do not fail to notice on another page the advertisement of our new book, "The Household Monitor of Health." This is a practical work which ought to be in every household. We expect to be able to announce this new volume ready for delivery, in our next number.

* *
*

We expect our new Detective Bureau Department, will call down upon our heads the wrath of nostrum-mongers and patent-medicine manufacturers; but we are prepared for the worst these harpies can do. The public health is one of the most sacred of human interests, and its protection should be considered the duty of every intelligent citizen. We hope our friends will co-operate with us in our efforts to expose the chicanery and frauds of the men who make capital of human ignorance and suffering. We should be glad to have our attention called to any patent-medicine or quackish system which our readers may consider worthy of attention in the pages of this Department.

* *
*

THE American Health and Temperance Association begins with January the publication of a new journal, to be entitled *THE MEDICAL MISSIONARY*. The new enterprise has already the assurance of a wide circulation. It will be devoted to the interests of medical missionary work at home and abroad. It will be a journal of 16 pages. Subscription price, 25 cts. per year.

PUBLISHERS' DEPARTMENT.

THE publishers recently sent to press the one hundred and fiftieth thousand of "Plain Facts for Old and Young," one of Dr. Kellogg's earlier popular medical works.

* *

WANTED.—Agents in all parts of the United States, to sell Dr. Kellogg's popular works, "Home Hand-Book of Rational Medicine," "Ladies Guide in Health and Disease," "Man, the Masterpiece," and other fast-selling books. One agent sold and delivered, in one year, nineteen hundred copies of a \$4.50 book. The same agent obtained fifty-two orders for the book in one day, and delivered every one of them a few days later. An agent cleared, last summer, \$750 in selling one of these books, in two months' time. No more useful works are offered for sale, and there are few books which sell so readily when presented by agents who have been properly trained.

* *

A CANVASSER'S SCHOOL.—The Good Health Publishing Company has made arrangements to organize a Canvasser's School for the education of persons who wish to engage in the sale of the health publications of this company. This school will be so conducted as to be a source of personal benefit to every one who takes the course, in addition to the preparation for canvassing work which it will give him. The daily program will consist essentially of the following exercises:—

1. A memory drill, in which the best methods of memorizing will be taught, and memory disciplining exercises given.
2. A study of the subject matter of the books to be handled.
3. Practice in various chemical experiments, etc., useful in illustrating the subject matter of the books, and necessary for a thorough understanding of it.
4. A physical culture drill, the purpose of which will be to improve the health of the agent, and to give him a dignified and impressive bearing.
5. Entertaining and instructive lectures illustrated by charts, experiments, and stereopticon views.
6. Instruction in how to make a success of the book business.

The old method of house-to-house canvassing is largely discarded, and new methods, which are not only much more successful and remunerative, but much more agreeable to the agent as well as to his patrons, are explained, and the agent rendered competent to employ them, by a thorough drill. The book business has really come to be a profession; and to insure success, it is as necessary to be studied as is medicine, law, teaching, or any other profession, and any person of ordinary ability who will take a thorough course of instruction in this work, cannot fail to succeed. The failure of most agents is due not to lack of natural ability, but to want of knowledge or instruction.

Young men and women of ability are wanted to attend this school. Splendid fields are open for at least five hundred agents who are qualified to handle these works.

The publishers have engaged to assist in conducting the school, Mr. Harry W. Smith, a gentleman who has marked ability for this kind of work, and who has had a large and very successful experience. Mr. Smith undertakes to say that every person of ordinary ability and intelligence who will take this course of training, *can be*, and *will be*, made to succeed.

The school for canvassers will open about March 1. Those who are ready to engage in the work before that time should write for information, as some special courses of instruction will be held in different parts of the country before that date.

For further particulars, address the Good Health Pub. Co., Battle Creek, Mich.

MRS. KELLOGG'S "Cook Book," which has been waited for so long, is now in the printer's hands, and we hope to be able to announce its completion before many weeks.

* *

THE little work by Dr. Kellogg, on "Intestinal Dyspepsia," is being rapidly pushed to completion. In preparing the work for the press, the author added several chapters to the original MS., hence the delay. We hope to be able to announce its completion, in the next number of this journal.

* *

THE Sanitarium is full of patients who are enjoying the winter at this excellent institution. So far, the weather has been very mild. There has been no extreme cold experienced as yet. As we write, the weather is really that of early April instead of what one naturally expects to find the first two weeks in January. The average temperature of Michigan weather, thus far, has been higher than that of Colorado. Michigan is gaining a reputation for its mild winters, as well as for its cool and pleasant summers.

* *

THE sick people at the Sanitarium do not have time to get the blues. They are kept so busy with their Swedish movements, Swedish gymnastics, bath-room treatment, and various exercises in health-getting that they have no time to think of anything other than their regular duties. The doctors tell them, when they arrive, that they must work their passage, and they soon find that this means active employment from morning till night, in one way or another. There is something for them to do, or something to be done to them, every hour of the day.

* *

THE changes in the heating apparatus of the Sanitarium have been finally completed. Some months ago, a large building was erected at a distance of 500 feet from the main building, for the purpose of accommodating the six huge boilers which supply the steam and heat for this mammoth institution. The great steam-pipes are conducted to the main building through a large underground tunnel. Soft coal has been replaced by fuel oil, which burns without smoke or odor. It is believed that the heating and ventilating apparatus of the Sanitarium is the most elaborate and complete of any connected with so large a building, in this country.

* *

THE Sanitarium Hospital wards are well filled with surgical patients from all parts of the United States. The secret of the popularity of this department of the institution will be readily recognized when the fact is known that the surgeons in charge of that department recently completed a series of fifty-two consecutive successful cases of abdominal surgery, without a single death. These were all cases of complete ovariectomy, and the greater share were cases of the most difficult and serious character. As is well known, ovariectomy is one of the most critical operations known to surgery, and the record of fifty-two successful cases without a single death, has never been surpassed or equaled in this country. The amount of surgical work done can be judged from the fact that this entire series of cases covers a period of less than nine months. No extraordinary skill is claimed by the surgeons, but the unusual success is attributed to the superior sanitary advantages afforded by the Sanitarium Hospital, the abundance of pure air, and careful dietary and skillful nursing.

ADVERTISEMENTS.

MONTANA, OREGON & WASHINGTON—Colonists for Montana, Oregon, Washington, or British Columbia points, should take no other line than the Northern Pacific Railroad. This railroad, with its main and branch lines, has brought into communication with the East all prominent sections of the great Northwest. It is the only line traversing Montana and Washington. It is the only line running through trains from the East to and through the State of Washington. It is the short line from St. Paul to Butte City and Helena, Mont., Spokane Falls, Wash., and Portland, Ore., and the only all rail line to Tacoma and Seattle, Wash. Under present car arrangements, Pullman sleeping-cars and furnished tourist sleepers are run via the Wisconsin Central, and Pullman palace sleepers via the Chicago, Milwaukee & St. Paul, and the Northern Pacific, from Chicago through to the Pacific Coast—without change. In addition to this service, the Northern Pacific runs on its through express trains regular day coaches, dining cars, and free colonist sleepers from St. Paul to Tacoma and Portland. The Northern Pacific line allows the holders of second-class tickets to stop at Spokane Falls, Wash., and at all points west thereof, ten days at each place desired. This will enable settlers to thoroughly examine all lands for sale in the new State before selecting a permanent location. No other line offers holders of second-class tickets an opportunity of examining all sections of this great State without the payment of additional fares of from \$5.00 to \$20.00. For maps, time-tables, and illustrated pamphlets, or any special information desired, address your nearest ticket agent, or Chas. S. Fee, Gen'l Pass. and Ticket Agent, St. Paul, Minn.

ANNOUNCEMENT.

The UNION PACIFIC, "THE OVERLAND ROUTE" has completed the widening of the gauge between Ogden and Pocatello from narrow gauge to standard gauge.

COMMENCING OCTOBER 10,

through trains composed of Pullman Palace Sleepers, free reclining chair cars, and day coaches, will be run between Salt Lake City and Butte.

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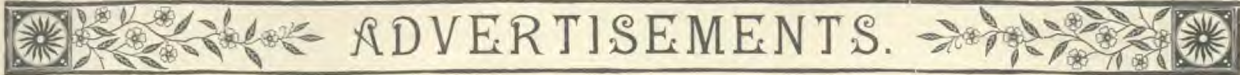
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As *The Sanitarian* has been hitherto, it will continue to be in the future: Devoted entirely to the promotion of the art and science of sanitation, mentally and physically in all their relations. It has just added to its attractions, beginning in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

A. N. BELL, M. D.,

113 A Second Place, Brooklyn, N. Y.

PLAIN FACTS FOR OLD AND YOUNG,

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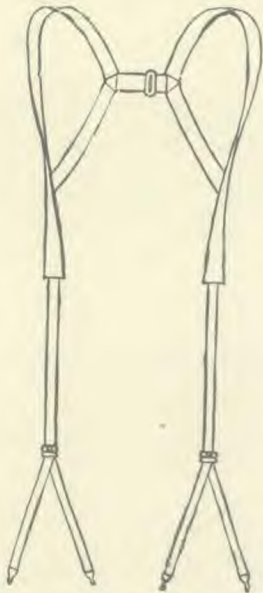
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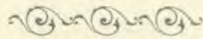
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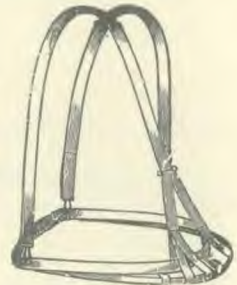


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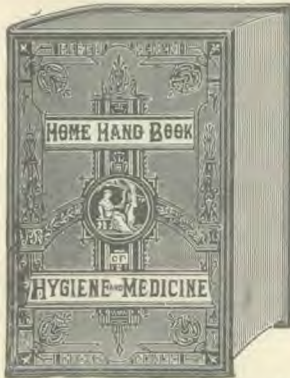
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Rochester.....			6.00	9.20	8.00		11.20
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STATIONS.							
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New York.....		11.30	4.50	6.00	10.00		
Syracuse.....		pm 8.30	11.55	am 2.10	am 8.00		
Rochester.....		10.40	am 1.42	4.20	10.45		
Buffalo.....	pm 11.30	11.30		5.30	11.50	am 8.45	
Sp. en. Bridge	am 12.28	am 12.28	3.05	6.25	pm 12.50		
Detroit.....	8.30	7.50	9.25	pm 1.20	9.45	4.4	pm 7.45
Ann Arbor.....	2.43	8.55	10.19	2.17	10.30	5.58	8.58
Jackson.....	pm 11.25	10.05	11.18	3.20	11.50	7.15	pm 10.20
Battle Creek ..	.55	11.35	pm 12.22	4.30	am 1.23	8.47	11.57
Kalamazoo ..	2.17	pm 12.12	12.59	5.02	2.17	pm 9.30	am 12.50
Niles.....	4.10	1.23	2.0	6.17	4.05	7.40	8.10
Michigan City	5.25	2.31	3.18	7.20	5.45	8.55	4.30
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pm	pm			am	pm
3.00	7.00	Boston.....		8.30	7.30
5.00	8.00	New York.....		11.10	7.40
6.20	8.45	Buffalo.....		9.50	5.40
7.45	8.10	Niagara Falls.....		8.15	8.15
8.30	1.00	Boston.....		9.50	12.10
8.30	11.55	Montreal.....		8.00	7.45
8.30	1.00	Toronto.....		8.40	7.25
		Detroit.....		9.45	7.45
CHL. Pass.	H. C. Exp.	Lmtd. Exp.	Pacific Exp.	Pacific Exp.	Mail Exp.
am	pm	pm	pm	am	pm
5.50	4.14	1.04	8.59	2.24	7.16
7.25	5.40	2.14	10.10	3.55	8.31
8.05	6.27	2.40	10.43	4.45	9.05
8.48	7.20	3.00	11.28	5.30	9.35
10.00	8.25	4.00	12.39	6.30	10.30
10.37	8.58	4.33	1.06	12.05	11.00
1.00	10.00	5.30	2.00	1.00	12.05
1.48	pm	2.50	1.48	12.50	
2.52	6.47	3.43	2.45	1.50	
3.40	7.26	4.25	3.35	2.35	
5.00			4.52		
5.20	8.45	5.55	5.10	4.00	
pm	10.45	8.10	7.50	6.25	
	pm	am	pm	am	
		Dep.		Arr.	
		Port Huron.....		10.31	1.05
		Lapeer.....		8.55	11.48
		Flint.....		8.00	11.17
		Durand.....		7.20	10.48
		Lansing.....		5.37	9.57
		Charlotte.....		5.00	9.27
		BATTLE CREEK.....		4.05	8.45
		Viicksburg.....		2.55	8.01
		Schoolcraft.....		2.42	
		South Bend.....		1.50	7.17
		Haskell's.....		1.41	
		Valparaiso.....		11.25	5.20
		Chicago.....		8.40	3.15
		Dep.		am	pm

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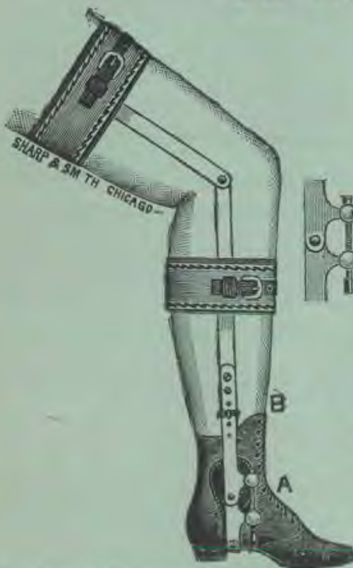
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