

JULY, 1891.

GOOD



FAITH

CONDUCTED

BY

J. H. KELLOGG M. D.

PUBLISHED MONTHLY.

\$1.00 A YEAR.

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Vol. XXVI.

NUMBER 7.

BATTLE CREEK MICHIGAN.

JULY, 1891.

### INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

#### 27.—Peru.

WHEN Robert Guiscard intrusted his son with command of the troops collected for the conquest of Sicily, one of his bravest followers declined to join the expedition, and announced his intention to return to his home in the Normandie pine woods.

"I have visited Sicily before," said he, "and am satisfied that the conquest could be accomplished in a short campaign, but I am equally sure that the possession of the island would prove the ruin of our race. We cannot hope to resist the bane of a climate that has enervated the manly Romans, and the heroic Saracens. The Sicilian summer may enable the native to live without hard work, but without hard work we cannot hope to live in health."

It would be worth knowing if a similar misgiving warned the followers of Pizarro of the fate in store for their descendants. The conquest of Peru has proved the most expensive enterprise of the Spanish adventures. In California they only lost their independence, and in Mexico only their convents and nunneries, but the land of the Incas has cost its colonists their health, their energy, and the physical and moral prestige of their race. In the hands of the Chilian volunteers the Peruvian soldiers were mere children, and their country owes its present independence to the jealousy of the neighboring nations, rather than to the valor of its defenders. Its emancipation from the yoke of Spain was achieved in a similar manner. Long after the other States of South America had expelled their foreign rulers, Peru remained under the sway of its viceroy and inquisitors, till a force of patriots from Buenos Ayres crossed the mountains and after a series of border-skirmishes defeated the champions of monarchism in the decisive

battle of Ayacucho. The listless idlers of the Peruvian Capitol differ from the *Caballeros* of Santiago de Chile, as the vicious aristocrats of Southern Italy differ from the noblemen of Northern Europe.

The neighborhood of the equator is not the only cause of that contrast. Peru, with all its mountains, lacks the broad table-lands of Mexico, and its only plateaus are found at an elevation implying a temperature which by comparison make the heat of the coast plain appear a lesser evil. And by a strange combination of topographical obstacles, the ocean itself is almost equally difficult of access. Along the upper third of the north coast the seashore is skirted by broad dunes of shifting sand, whirling about in every breeze, like the dust-phantom of the Arabian desert, and south of Callao the shore-line is flanked by precipitous cliffs leaving only a narrow trail, frequently submerged by breakers and the waves of the rising tide. The principal settlements are found along the belt of low terrace-lands dividing the coast plain from the mountains proper. That foothill region enjoys a winter climate almost as mild as that of Southern Egypt, but the heat of the long summer is aggravated by frequent droughts, which, in the district of Atacama, culminate in perpetual rainlessness. The skeptic Condorcet used to argue that if the world had really been created for the convenience of mankind, the weather clerk ought to have timed his rain-showers in a way to fetch them down between sunset and morning, and reserve the daylight hours for soul-cheering bright skies. That ideal of climatic beatitude is very nearly realized on the north coast of Peru. On a rancho near the little village of San Tomas, the traveler Pshudi once in-

terviewed a farmer who for more than fifteen years had been obliged to raise every grain of his harvest with the aid of irrigation. "We raise the sluices at sundown," said he, "and close them in the morning, and at nine o'clock the fields are dry enough to go



HUASCAR, THIRTEENTH EMPEROR OF THE INCAS.

wherever you please. On high ground we can stack our corn in the open air, and can rely on fair weather the year round, but of water we don't get a drop more than we pay for."

"Do n't the clouds help you a little?"

"We get heavy dews," said the farmer, "but since I have lived on this place I have never seen such a thing as a fair rain-shower. There was a thunderstorm on the coast five years ago, and that storm wound up with a regular tornado from the west, thick whirls of sand, and dust, and something feeling wet if it struck you full in the face, but to this day I do not know if it was rain or salt water."

In the plain of Atacama, a thousand successive days of clear weather are nothing unusual, and the persistence of those droughts has been explained as follows: Peru is situated directly in the track of the southeast trade-winds that strike the Continent near the mouth of the La Plata, and drench Brazil with the moisture accumulated during their passage over the Atlantic. Before they approach the west coast, that moisture, however, has been pretty nearly exhausted, leaving nothing but light vapor, and an occasional snow shower for the highlands of the Cordilleras, and only dry air currents for the coast plain beyond.

There is a story of a consumptive Laplander who removed to St. Petersburg, in order to enjoy the advantages of a Southern climate, and with a similar modesty of expectation the citizens of Callao pay an

occasional visit to the neighborhood of the metropolis. The climate of Lima is not quite as hot and dry as that of the coast plain, but the rays of the tropical sun are only rarely moderated by a screen of clouds. The nights, too, are generally too warm for refreshing sleep, and when the southeast trade-winds are neutralized by an occasional west breeze, the net result is often a calm that makes the interior of the houses almost unbearable. A hundred years ago, when the power of the Spanish viceroy was still near its zenith, Lima boasted an abundance of public fountains, and every large street had an *arroyo*, or rill of fresh water, running along the center in a paved and cemented channel. The republican heirs of those convenient arrangements have not done as much as keep their ready-made water-works in good repair. Two kinds of the fountains are out of order, and below the city the neglected *arroyos* have formed a series of malarious sloughs, adding mosquitoes to other amenities of the sultry summer nights. The public libraries and museums, too, have been sadly neglected, but the metropolitans have signalized their public zeal by the establishment of a spacious arena for semi-weekly cockfights.

Boodle politicians flourish in Peru with luxuriance sufficient to excite the envy of a Chicago alderman, and the municipal taxes of the larger cities absorb some thirty per cent of the average business profits, but from all such afflictions the stoic *ciudadano* takes refuge in a cloud of tobacco smoke. "The United States," says the author of Brother Jonathan's land,



COYA CAHUANA, EMPRESS OF THE INCAS.

"contains some sixty million republican citizens, most of them colonels." The capital of Peru the humorous Frenchman would probably have described as "a city of eighty thousand inhabitants, mostly tobacco venders." Tobacco is sold in every grocery and every hotel, but also in newspaper and variety stores, in taverns and gambling-hells, besides hun-

dreds of special shops and peddler tents. It enriches a few wholesale merchants, but keeps the man of the population poor,—financially and spiritually poor. They still retain a trace of the old Hispanola sense of personal honor, and have a good deal of poetical instinct, but they have no energy; commerce, industry, and agriculture all suffer from the dry rot of national indolence.

A very striking proof of the general want of enterprise is the fact that the *montana*, the vast forest region traversed by the upper tributaries of the Amazon River, is still, to all purposes, a *terra incognita*. That district comprises nearly one fourth of the entire national territory. Two hundred years ago it was explored by a few plucky pioneers, whose descendants established missions and some fifty or sixty *haciendas*. These plantations produced enormous crops of maize, yam-roots, coffee, sugar-cane, bananas, olives, and indigo. Moreover, the upper affluents of the forest streams are known to contain rich placers of auriferous gravel, and the game resources of the thickets are practically inexhaustible. Countless herds of peccaries frequent the river bottoms, deer of three or four species are found in the uplands, and gallinaceous birds and pigeons in the hill forests, yet that rich possession has now been abandoned to the Chunchos, a tribe of cruel and depraved savages, whose vices may have been exaggerated by their victims, but who certainly seem to delight in outraging every civilized notion of decency. They still use the arrows and flint knives of their forefathers, and with those rude weapons have succeeded in routing the rifle-armed militia of a so-called civilized country.

During the revival period of republican enthusiasm, following the expulsion of the Spanish garrisons, some Peruvian patriots proposed to prevent the degeneration of the colonists by subjecting all young men to a few years' military training. Others suggested the introduction of German gymnasiums, models of which were actually established in Lima, and a few other of the larger cities. The idlers of both sexes patronized those institutions in a languid way, but gradually discontinued their visits, and nobody thought of proposing the remedy instinctively adopted by the predecessors of the Spanish conquerors.

About eight hundred years ago, a warrior tribe of the North appeared on the shore of Lake Titicaca, and in the course of two centuries established its sway over all the territories comprised in the republic of Peru, besides portions of Bolivia and Northern Chili. The Incas (properly *Inguas*) had a tradition that their race had emigrated from a much colder region on the shores of the Northern Ocean (possibly from Oregon, large portions of which country were made

untenable by a lava-deluge covering some 25,000 square miles), and that they had reached this new empire on a fleet of small sailing vessels. At all events, they soon recognized the danger involved in a settlement of the Peruvian lowlands, and confined nearly all their principal strongholds to the plateaus of the upper Andes, where travelers still come across the ruins of vast temples and palaces. From their mountain capital of Cuzco roads traversed the country in all directions, military highways extended to Quito in the North and to Chili in the South, following the backbone of the Sierras, or winding along dizzy precipices by terraces cut into the solid rock. Runners, whose task, like that of the Greek *hemero-dromes* required them to perform a day's journey at



PERUVIAN PEDDLER.

a rapid trot, with short intervals of rest, carried the government messages to every part of the empire. Agriculture was fostered by the supervision of public inspectors, and for the training of the young every town had buildings which were open alike to the children of the rich and the poor.

Of all the excellent institutions and customs of the Incas, their Spanish successors seem to have adopted nothing but the coca habit. The leaves of the plant known as the erythroxyton coca contain a narcotic poison as potent as Bengal opium, and even in very small doses, produce vertigo, headache, and nausea. The origin of the coca vice is as mysterious as that of the alcohol habit, but certainly seems to antedate the period of the Spanish conquest by many centuries. The Incas permitted its use to their idle aristocrats, but made it a misdemeanor to sell coca to minors and laboring men. A few leaves of the vile

narcotic were rolled together with a small lump of quicklime, and chewed by slow mastication, assisted by an occasional pressure of the tongue. The addition of quicklime is said to have the effect of stimulating the jaded palates of old *habitues*, and rendering the flavor of the stimulant more perceptible.

In all these particulars the Spanish colonists have adopted the custom of the Incas, but the by-laws restricting the use of the stimulant were soon abrogated, and the epidemic spread of the vice may be implied from the fact that 35,000,000 pounds of the dried leaf are now consumed every year, though the stimulating virulence of the plant makes an ounce a sufficient supply for two or three days. Like tobacco, coca diminishes the appetite of its victims, and has thus given rise to the delusion which accepts it as a

valuable substitute for food. With a small bag of coca leaves as their only provision, the Indians of the upper Andes are said to perform journeys of thirty and thirty-five miles, over the roughest roads. The proximate effect of the poison is that of a sedative and anodyne, but that effect is soon followed by a debilitating reaction, and the continued use of the narcotic undermines the vigor of the strongest constitution. The belief that the coca habit is specially injurious to the descendants of the Spanish race, can probably be explained by the indolent life of the Peruvian Creoles and the comparative vigor of the Indian highlanders, whose hardy habits serve, for a time, as an antidote to the influence of the poison.

(To be continued.)

### MORAL HYGIENE OF THE FACE.

DOUBTLESS very few people consider themselves responsible for their faces. Most people are content to credit them as well as the color of their hair and eyes to heredity. Nevertheless we are, as a modern writer remarks, to a large degree responsible for our looks.

"According to a newspaper story now in circulation, a well-known United States Senator decided it 'off hand,' in the case of a witness before an investigating committee. The witness in question was so forbidding in countenance that it was said 'his looks ought to hang him.' This elicited the usual defense in such cases,—that a man is not responsible for his looks,—to which the Senator replied: 'But a man of fifty years is responsible for his looks.' In a series of articles appearing in the *Chaperone* magazine, Mr. W. H. Little takes somewhat the same view. The face to him is a 'soul picture,' where the mind expresses itself in permanent lines. The idea is highly poetical, and Hood has expressed it in his beautiful fragment, 'The Sea of Death':—

"And there were neighbor brows, scarred by the brunt  
Of strife and sorrowing, where Care had set  
His crooked autograph and marred the jet  
Of glossy locks; with hollow eyes forlorn  
And lips that curled in bitterness and scorn,  
As though they breathed of this world's pain,  
And so bequeathed it to the world again."

"While the poetical imagination far outstrips exact science, it nearly always leads the way in science.

In illustrating his own theories of the effect of the mind on the face, Mr. Little incidentally illustrates this by choosing the face of Morse, the inventor of the telegraph, as a study. Morse invented the telegraph because he was a poet and a painter; because he had trained his imagination so highly that when he put aside pen and brush as means of expression, he was capable of expressing thought in the greatest invention of any age. For the poetical imagination, all questions of the influence of the mind on the face are settled. To poetical insight, the face is the reflex of the mind on which care and passion leave their 'crooked autograph,' so that in this view 'a man of fifty is responsible for his looks.' But in the poetical mind, as in the common mind, the idea of 'the good and the beautiful' are so closely associated that much of the value of poetical insight is here lost for science. It is true in general, but not always in particular, that essential goodness manifests itself physically in the beautiful and pleasing, yet our common-sense takes that for granted as invariably true. In our pictures, the angels are made as beautiful as possible, while the idea of evil is expressed in deformity and ugliness. In Druer's extraordinary ugly devils, and in Raphael's ideally beautiful cherubs, the poetic imagination has expressed an idea in which the common sense of the civilized world has concurred for generation after generation—in which it still concurs."

ACCORDING to the *Engineering and Mining Journal*, Prof. Hoefler has recently published an interesting article in a German scientific journal, in which he brings strong arguments in support of the theory that

petroleum oil is of animal rather than chemical or vegetable origin, as has heretofore been argued by many scientists. The arguments which Prof. Hoefler advances, are certainly very convincing.



## PERSONAL CLEANLINESS.

THE importance of the functions of the skin is shown by the fact that a person quickly dies when its action is interrupted. A coat of varnish or caoutchouc, applied over the whole skin, will kill a man almost as quickly as a fatal dose of strychnia. In illustrative experiments, horses, dogs, and other animals have been killed by obstructing the action of the skin by some similar means. A little boy was once killed by covering him with gold leaf to make him represent an angel at a great celebration.

The offensive odor of the perspiration, and the characteristic smell of the sweat-soiled underclothing of a tobacco-user, are facts which well attest the value of the cutaneous functions in removing impurities from the body.

The skin is one of the most important depurating organs of the whole body. From each of its millions of pores constantly flows a stream laden with the poisonous products of disintegration. As the water evaporates, it leaves behind these non-volatile poisons, which are of course deposited as a thin film over the whole surface of the skin. As each day passes, the process continues, and the film thickens. If the skin is moderately active, three or four days suffice to form a layer which may be compared to a thin coating of varnish, or sizing. The accumulation continues to increase, unless removed, and soon undergoes further processes of decomposition. It putrefies,—rots, in fact,—and develops an odor characteristic and quite too familiar, though anything but pleasant, being at once foul, fetid, putrid, pungent, uncleanly, and unpardonable.

But the offense to the nose is not the extent of the evil. The unclean accumulation chokes the mouths of the million little sewers which should be engaged in eliminating these poisons, and thus obstructs their work. Being retained in contact with the skin, some portions are re-absorbed, together with the results of advancing decay, thus re-poisoning the system, and necessitating their elimination a second time.

Here water serves a most useful end if properly applied. It is unexcelled as a detergent, and by frequent application to the skin, will keep it wholly free from the foul matters described. The necessity for frequent ablutions is well shown by the fact that nearly two pounds of a poison-laden solution, the perspiration, is daily spread upon the surface of the body. It is not an uncommon occurrence to meet with people who have never taken a general bath in their lives. Imagine, if possible, the condition of a man's skin, at the age of seventy or eighty years, which has never once felt the cleansing effects of a thorough bath!

One of the most serious effects of this accumulation of filth is the clogging of the perspiratory ducts. Their valve-like orifices become obstructed very easily, and depuration is then impossible. It is not wonderful that so many people have torpid skins. The remedy is obvious, and always available.

*How to Make the Skin Healthy.*—A man who has a perfectly healthy skin is nearly certain to be healthy in other respects. In no way can the health of the skin be preserved but by frequent bathing. A daily or tri-weekly bath, accompanied by friction, will keep the skin clean, supple, and vigorous. There is no reason why the whole surface of the body should not be washed, as well as the face and hands. The addition of a little soap is necessary to remove the oily secretion deposited upon the skin.

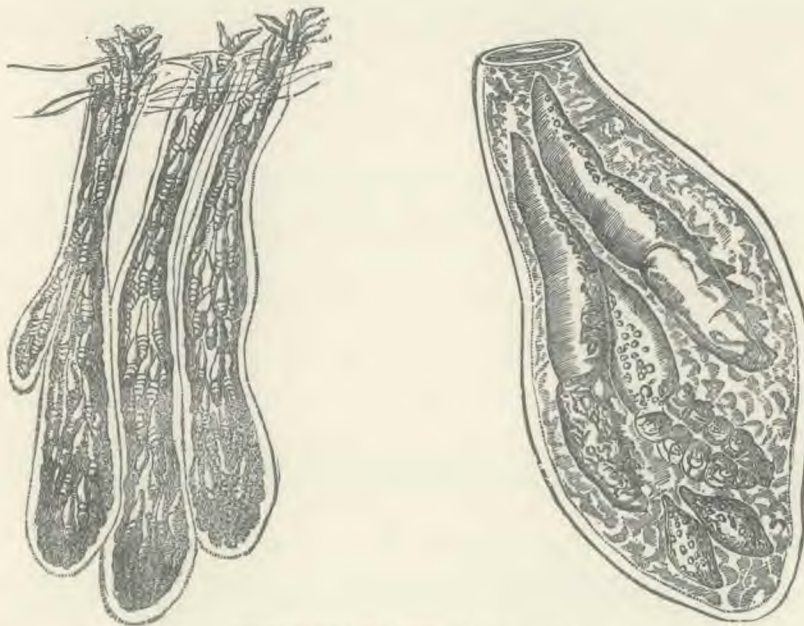
A lady of fashion, in enumerating the means for preserving beauty, says: "Cleanliness, my last recipe (and which is applicable to all ages), is of most powerful efficacy. It maintains the limbs in their pliancy, the skin in its softness, the complexion in its luster, the eyes in their brightness, the teeth in their purity, and the constitution in its fairest vigor. To promote cleanliness, I can recommend nothing preferable to bathing. The frequent use of tepid baths is not more grateful to the sense than it is salutary to the health and to beauty. . . . By such means, the women of the East render their skins softer than that of the tenderest babe in this climate." I strongly recommend to every lady to make a bath as indispensable an article in her house as a looking-glass.

When the foul matters which ought to be eliminated by the skin and quickly removed from the body are allowed to remain undisturbed, the skin becomes clogged and inactive, soon loses its natural luster and color, becoming dead, dark, and unattractive. When bathing is so much neglected, it is no marvel that paints, powders, lotions, and cosmetics of all sorts, are in such great demand. A daily bath, at the proper temperature, is the most agreeable and efficient of all cosmetics.

*Bathing Protects against Colds.*—It is an erroneous notion that bathing renders a person more liable to take cold, by opening the pores. Colds are produced by disturbance of the circulation, not by opening or closure of the pores of the skin. Frequent bathing increases the activity of the circulation in the skin, so that a person is far less subject to chilliness and to taking cold. An individual who takes a daily cool bath has perfect immunity from colds, and is little susceptible to changes of temperature. Colds are sometimes taken after bathing, but this results from

some neglect of the proper precautions necessary to prevent such an occurrence.

*Aristocratic Vermin.*—Doubtless not a few of those very refined and fastidious people who spend many hours in the application of all sorts of lotions and other compounds to the face and hands, for the purpose of beautifying those portions of the skin exposed to view—while neglecting as persistently those parts of the skin protected from observation—would be very much surprised to learn the true condition of the unwashed portions of their cutaneous covering. They instinctively shrink with disgust from the sight of a vermin-covered beggar, in whose cuticle burrows the *acarus scabiei* (itch-mite), while troops of larger



DEMODEX FOLLICULORUM IN FAT GLANDS.

insects are racing through his tangled locks and nibbling at his scaly scalp. It is quite possible that many a fair "unwashed" would faint with fright if apprized of the fact that her own precious covering is the home of herds of horrid-looking parasites which so nearly resemble the itch-mite as to be at least a very near relative, perhaps half-brother or cousin. The name of this inhabitant of skins unwashed is as formidable as the aspect of the creature, though it does not require a microscope to display its proportions, as does the latter; scientists call it, *demodex folliculorum*.

The *demodex* makes himself at home in the sebaceous follicles, where he dwells with his family. Here the female lays her eggs and rears her numerous family, undisturbed by the frictions of any flesh-brush, and only suffering a transient deluge at very long intervals, if such a casualty happens at all. In

studying the structure of these little parasites, we have found several tenants occupying a single follicle, pursuing their domestic operations quite unmolested by any external disturbance.

The *demodex* has been transplanted from the human subject to the dog; and it is found that the new colony thrives very remarkably, and soon produces a disease apparently identical with that known as "mange."

We have not space to describe in detail these savage little brutes, with their eight legs, armed with sharp claws, bristling heads, sharp lancets for puncturing and burrowing into the skin, and their powerful suckers for drawing the blood of their victims. We

care only to impress upon the mind of the reader the fact that neglect of bathing and friction of the skin is sure to encourage the presence of millions of these parasites, and that the only remedy is scrupulous cleanliness of the whole person. Like their relatives, the itch-mite, they do not thrive under hydropathic treatment, and are very averse to soap and water. The best way to get rid of them is to drown them out. They do not produce the irritation which characterizes the presence of the itch insect, so that this evidence of their presence is wanting. But they are sure to be present in a torpid, unhealthy, unwashed skin, no matter how delicate or fastidious its possessor.

#### *Bathing a Natural Instinct.*—

All nature attests the importance of the bath. The rain is a natural shower bath in which all vegetation participates, and gains refreshment. Its invigorating influence is seen in the brighter appearance, more erect bearing, and fresher colors of all plants after a gentle rain. The flowers manifest their gratitude by exhaling in greater abundance their fragrant odors. Dumb animals do not neglect their morning bath. Who has not seen the robin skimming along the surface of the lake or stream, dipping its wings in the cool waters, and laving its plumage with the crystal drops that its flapping pinions send glittering into the air? No school-boy who has ever seen the elephant drink will forget how the huge beast improved the opportunity to treat himself to a shower bath, and perhaps the spectators as well, for he is very generous in his use of water.

If man's instinct were not rendered obtuse by the

perverted habits of civilization, he would value the bath as highly and employ it as freely as his more humble fellow-creatures, whose instinctive impulses have remained more true to nature, because they have not possessed that degree of intelligence which would make it possible for them to become so grossly perverted as have the members of the human race. Man goes astray from nature not because he is deficient in instinct, but because he stifles the promptings of his better nature for the purpose of gratifying his propensities.

*How to Take a Sponge Bath.*—The sponge or hand bath is perhaps the simplest and most useful mode of applying water to the surface of the body; for it requires the use of no appliances which every one does not possess, and it can be employed by any one without elaborate preparation, and under almost any circumstances. A great quantity of water is not required; a few quarts is a plenty, and a pint will answer admirably in an emergency. A soft sponge, or a linen or cotton cloth, and one or two soft towels, or a sheet, are the only requisites. The hand may be used in the absence of a cloth or a sponge for applying the water.

The temperature of the bath should not be above 95°, and 90° is generally better. Most people can habitually employ a temperature of 75° or 80° without injury. The use of a much lower temperature is not commonly advisable, and is often productive of great injury.

Begin the bath, as usual, by wetting the head, saturating the hair well. Wash the face, then the neck, chest, shoulders, arms, trunk, and back. Rub vigorously until the skin is red, to prevent chilling; for even when the temperature of the room is nearly

equal to that of the body, the rapid evaporation of water from the surface will lower the external temperature very rapidly unless a vigorous circulation is maintained.

After thoroughly bathing the upper portion of the body, turn the attention to the lower portion, continuing the rubbing of the upper parts at brief intervals to prevent chilliness. As soon as the bathing is concluded, envelop the body in a sheet and rub dry, or dry the skin with a towel. When the surface is nearly or quite dried, rub the whole vigorously with the bare hand.

The bath should not be prolonged more than ten or fifteen minutes. Five minutes is sufficient to secure all its benefits, and even three minutes will suffice for a very good bath.

Persons who chill easily will find it better to bathe only a portion of the body before drying it. Some will even find it necessary to retain a portion of the clothing upon the lower part of the body while bathing and drying the upper part.

Weakly patients may receive this bath with very little disturbance, even in bed. Only a small portion of the body should be uncovered at a time, being bathed, dried, rubbed, and then covered while another part is treated in a similar manner.

The sponge bath may be administered anywhere without danger of soiling the finest carpet, by using care to make the sponge or cloth nearly dry before applying it to the body. A rug may be spread upon the floor as an extra precaution. When used for cleanliness,—as it should be daily,—a little fine soap should be added two or three times a week, to remove the oleaginous secretion from the skin.—*J. H. Kellogg, M. D., in "Home Hand-Book."*

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### THE INFLUENCE OF FOOD ON CHARACTER.

FEW people of to-day will contend that the different species of animals were originally created as we now find them. It is seen that by a long process of development or evolution by natural laws their present characteristics have been formed.

In making a general survey of the animal kingdom, we find that the carnivorous, or flesh-eating, are always savage, spasmodic in their energies, with little capacity for persistent or continuous labor, as notice the lion, tiger, bear, wolf, etc.

On the other hand the herbivorous animal is comparatively mild, has large capacity for continuous regulated labor,—instance the ox, camel, elephant, horse, reindeer.

We have, too, a good illustration in the hog. In its native or wild state tearing and crunching its liv-

ing prey, a thing of terror; domesticated—fed mostly on vegetables, we see its disposition greatly modified. It is noticed, too, that hogs fed on the refuse of the slaughter houses, as is often the case, revert rapidly to the original type and develop in one generation the old ferocious character.

Our North American Indian furnishes us as good an example of a flesh-eating race as any of which history gives an account. Find him where his food is flesh, fish, and game, and he exhibits the savage, warlike nature of the carnivorous lower animals; like them is good for a dash on his enemies or game, but has little or no industrial capacity, manual or mental.

Anterior to 1492, when America was first discovered by Columbus, the whole of the North American con-

continent was exclusively inhabited by Aoneo Maranonians. In character these nations were warlike, cruel, unforgiving. They turned with aversion from the restraints of civilized life, and made but little progress in mental culture and the useful arts. They made but few or no improvements in constructing their houses or boats. Their inventive or imitative faculties were of the very humblest capacity, nor had they the smallest taste for the arts and sciences. They were capable of great exertion in war or the chase, but had an unconquerable aversion to regular labor.

But we find portions of the same race occupying Ancient Mexico and Peru where the national food was almost exclusively maize and bananas, and we see them reaching a comparatively high degree of culture; in character mild and industrious, as proven by their worship, their temples, palaces, and the dense population.

The Indian east of the Andes, and living upon the abundance of animal food supplied him by those immense, fertile plains and pampas, has remained barbarous and uncivilized.

From a general resemblance or affinity in language and customs, it is believed that all the inhabitants of the islands of the South Seas are descended from one general stock. The difference in character of the inhabitants of the several islands has evidently been produced chiefly by a difference in food. We notice the natives of some low coral islands destitute of fruits and other vegetable products described as being of a much darker color than those of the higher islands in the same latitude, and appearing to be more fierce in their disposition. This may be owing to their manner of getting a subsistence, which is chiefly from the sea.

The above description of the inhabitants of Tiookia and their manner of living, corresponds very nearly to the character and mode of subsistence of the natives of New Zealand, which being in a higher latitude did not produce the fruits, neither did the natives cultivate the soil, but the coast being extensive, derived their chief sustenance from the sea; therefore were more savage and war-like; were also cannibals. It will be remembered that Captain Cook on one of his voyages, took on board a young man, a native of one of the Society or Friendly Islands, and, as illustrating the difference in character of the natives of these islands from the New Zealander, relates the following incident: "In the second visit of our navigators to New Zealand, they met with indubitable evidence that the natives were eaters of human flesh. The proofs of this fact had a most powerful influence on the mind of Oididu, the youth of Bolabola, whom Capt. Cook had brought in the *Resolution* from Ulvie-

tia. He was so affected that he became perfectly motionless, and exhibited such a picture of horror that it would have been impossible for art to describe the passion with half the force with which it appeared in his countenance. When he was roused from this state by some of the English, he burst into tears, and continued to weep and scold by turns, telling the New Zealanders that they were vile men, and assured them that he would not be any longer their friend. He would not so much as permit them to come near him."

Another striking proof of the influence which the kind of food eaten has in the formation of character, we find in the natives of Australia and Tasmania. They are admitted by all to be the lowest in the scale of humanity of any known race, and are, like the North American Indian, fast becoming extinct. The food of the native Australian is almost exclusively animal, and that of the most repulsive both in kind and preparation. The country in its natural state produces almost no edible fruits, with some poisonous roots and herbs. The food of the natives consists of the flesh of the kangaroo, emu, river fish, roots, and the larvæ of insects. They are also cannibals. They live in small tribes without any social organization; always on the move, living in huts roughly and hurriedly made of leaves and bark; almost naked, destitute of metal implements and weapons, without bows and arrows, with no domestic animals, save *dingoes*, or half wild dogs; with no knowledge of agriculture.

In Adam's account of Livingstone's explorations in Central Africa, we find that up to the time of the discovery of the interior basin of the Zambezi, all the country traversed abounded in game both large and small, that the different tribes of natives were savage and constantly at war with each other, and that the explorers found it extremely difficult and dangerous to procure the necessary supplies. But the neighborhood of Zambezi was infested with a venomous fly called the *tisi*, so that the party could not travel but by water, or avoiding the neighborhood of the river, so destructive was the fly to horses and oxen, etc.

We will follow him into the region newly opened up, where game could not, owing to the vicious *tisi*, constitute the food of the natives. "And still more to cheer and encourage him, the people that he met with, though deeply sunk in ignorance and idolatry, were uniformly kind and attentive to his wants. Those with whom he came most in contact, were the Balonda, a fine athletic and skillful race of negroes, whose chief occupations were of an agricultural character. They were very numerous, and lived in small communities or villages, in which, as the traveler

passed, he saw on every hand, men, women, and children assiduously employed in the gardens and fields. Their chief crops appeared to be maize, kafir corn, millet, rice, pumpkins, beans, etc., which, on the low grounds periodically flooded by the Zambezi, yielded a large return for their labor. From pastoral pursuits they were debarred by the fly, which prevailed all along the course of the river."

Turning now to the ancient history of the Eastern continents, we find the desert portions of Northern Africa and Arabia occupied by migrating tribes living mostly on the products of their flocks and herds, and they have remained half civilized and unstable in character. Later, having conquered and inhabited the fertile valley of the Nile, the natural food having become, in consequence, almost exclusively vegetable (chiefly dates and a species of millet), they attained perhaps the highest degree of culture of any ancient nation.

Looking at India and Persia, we find these nations attaining their civilization under very like conditions. Warlike, flesh-eating Tartar tribes conquer and occupy those fertile countries, and, adopting a vegetable diet (the national food of India has always been rice), much the same change in character followed as in Egypt, Mexico, and Peru.

Where we now see the enlightened nations of Europe, the dawn of history found numerous savage tribes subsisting by the chase, and such herds and flocks as their predatory and precarious modes of life permitted, and their progress in civilization has been marked and largely measured by the degree of application to agricultural pursuits, and the consequent substitution of vegetables for animal diet.

In reviewing the foregoing, we have found that nearly all the civilizations had their origin under very similar conditions, and have shown a marked likeness to each other, whether on the banks of the Nile, or Ganges, Euphrates, or Tigris, or the table-lands of Mexico, or Peru, while once kindred tribes occupying neighboring regions not so favorably situated for agricultural pursuits, and subsisting chiefly on the more easily procured animal food, have always re-

mained semi-civilized or barbarous, deficient in physical vitality, self-control, and energy except when, like the carnivorous animals, they are in pursuit of their prey. They have also a morbid thirst for artificial stimulants, and ever fall an easy victim to the effects of fire-water, nicotine, etc., as well as to small-pox, and other diseases.

Historians have attributed the great change in characteristics and the high civilization brought about in the people of Mexico and Peru, Egypt and India, to the more favorable conditions for the accumulation of wealth, thereby giving leisure for culture and improvement. But the same authorities inform us that the great mass of people of those countries were in a state of abject poverty, ignorance, and servitude; that all the wealth was in the hands of a few, and that the opportunities of the masses for culture were extremely limited, notwithstanding which we find the people docile, submissive to those in authority, and having large physical vitality, as evidenced by the dense population. We are told that ancient Egypt contained more than eighteen thousand cities.

Again: the civilized native tribes of South America, where nature has lavished her bounties more freely than in almost any other country, have not surely lacked for leisure to improve their condition — their life is nearly all leisure, the climate demanding very little clothing or shelter, the superabundance of animal life supplying their food. But never settling down to the cultivation of the soil, which implies the substitution to a great degree of a vegetable for an animal diet, these people have made little progress toward civilization.

A summary of the foregoing facts will amply warrant the conclusion that a vegetable diet is that originally designed for man, and that only by returning to it can he hope to attain the best possibilities of his physical, intellectual, or spiritual manhood.

"And God said, Behold I have given you every herb bearing seed which is upon the face of all the earth and every tree in the which is the fruit of a tree yielding seed; to you it shall be for meat." Gen. 1:29. — *Sel.*

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THE Italians have a proverb, "When you let the sunshine in, you drive the doctor out."

THE first wealth is health; sickness is poor spirited; it must husband its resources to live. But health answers its own ends, and has to spare; runs over and inundates the creeks and meadow-lands of other men's necessity. — *Emerson.*

A LEADING physician in one of our largest cities, in speaking of those who had indulged in the use of tobacco for years with seeming impunity, adds: "But I have never known a habitual tobacco user whose children, born after he had long used it, did not have deranged nervous symptoms, and sometimes evidently weak minds. Shattered nervous systems for generations to come may be the result of this indulgence."

## HOW OSTRICHES DIGEST.

A CORRESPONDENT of the *Pharmaceutical Journal*, writing from the Cape of Good Hope, where the ostrich is domesticated, states that he is perfectly certain that the digestive powers of the ostrich are very small, and only effective on certain kinds of food, and that the ten-penny nails and iron bolts upon which its digestive reputation is based are not digested at all, but simply bent and crushed by a powerful gizzard that is so thick and tough as to be with difficulty cut by a knife. The writer vouches that he has himself seen buttons and coins that have been worn to the thickness of wafers by the grinding action of this organ, and that the hardest stones assume a fine polish under its action. It would be a pity to spoil, by a paraphrase, the *naïveté* of what follows: "When a bird is in poor condition, and fed on maize, by carefully dividing the breast feathers, you can hear this

gizzard, or living grinding-mill, at work." Presuming upon the possession of such an apparatus, ostriches eat so enormously that stoppages, which, unless relieved, will kill a bird in twenty-four hours, not infrequently result; powerful drastics are then given, of which it is said they require a larger dose than would be given a horse. What this bird's long-enduring stomach can bear is, however, illustrated by the following list of articles which, according to *Nature*, were found in the stomach of an ostrich that suffocated itself at Rome, some years since, by thrusting its neck through the bars of its cage: "Four large stones, eleven smaller ones, seven nails, a necktie pin, an envelop, thirteen copper coins, fourteen beads, one five franc piece, two small keys, a piece of a handkerchief, a silver medal of the pope, and the cross of an Italian order."—*The Sanitarian*.

LOOK AFTER YOUR SLEEP.—Insomnia is rightfully regarded as one of the marks of an overwrought or worried nervous system, and, conversely, we may take it that sound sleep, lasting for a reasonable period—say from six to nine hours in the case of adults—is a fair test of nervous competence. Various accidental causes may temporarily interfere with sleep in the healthy; but still the rule holds good, and a normal brain reveals its condition by obedience to this daily rhythmic variation. Custom can do much to contract one's natural term of sleep, a fact of which we are constantly reminded in these days of high pressure; but the process is too artificial to be employed. Laborious days, with scanty intervals of rest, go far to secure all the needful conditions of insomnia. In allotting hours of sleep, it is impossible to adopt any maxim or uniform custom. The due allowance varies with the individual. Age, constitution, sex, fatigue, exercise, each has its share of influence. Young persons and hard workers naturally need, and should have, more sleep than those who neither grow nor labor. Women by common consent have been assigned a longer period of rest than men, and this arrangement, in the event of their doing hard work, is in strict accord with their general physical construction and recurrent infirmities. Absolute rule there is none, and it is of little moment to fix an exact average allowance, provided the recurrence of sleep be regular, and its amount sufficient for the needs of a given person so that fatigue does not result in such nerve prostration and irritability as render healthy rest impossible.—*London Lancet*.

A BUDDHIST'S VIEW OF CHRISTENDOM.—Nine tenths of the space of the Western newspaper is devoted to the record of vice and crime,—the outcome of an earthly hell. In mechanical arts the carnivorous nations of the West surpass the vegetarian nations of the East. Still this does not make them healthier and happier. While mentally drunk and in public, they are boastfully optimistic; while sober and in private, they are shockingly pessimistic. The vices and diseases of the carnivorous Western nations have, within a century, been the direct cause of the extinction of whole races. On the carnivorous diet they will never experience the "peace and good-will among men," spoken of in the Christian Scriptures. The dream of a pearly-gated peaceful "New Jerusalem" on a carnivorous diet, is the dream of a fool or a visionary, be his name St. John or St. Swedenborg.—*Buddhist Ray*.

*Mistress*—"Well, Bridget, what is it? Have you dusted the parlor already?"

*Servant* (recently imported)—"Dust the parlor, is it? Faith an' everything's all covered with dust now."

"Did the plumber come down to inspect the pipes this morning?"

"Yes."

"What did he say?"

"He said there was nothing the matter, but he could very soon remedy that."—*N. Y. Sun*.

OVERWORK vs. OVEREATING.—An abuse that tends to the injury of brain workers is excessive eating. I recall to mind several active brain workers who suddenly broke down, and fancied that it was due to brain fatigue, when, as a matter of fact, it was due to overstuffing of their stomachs. The furnace connected with their mental machinery became clogged up with ashes and carbon in various shapes and forms, and as a result, disease came, and before the cases were fully appreciated, a demoralized condition of the nervous systems was manifested, and they laid the flattering unction to their souls that they had indulged in mental overwork. Hard work, mental or physical, rarely ever kills. If a mild amount of physical exercise be taken, and a judicious amount of food be furnished, the bowels kept open in the proper manner, the surface protected with proper clothing, and the individual cultivates a philosophical nature and absolutely resolves to permit nothing to annoy or fret him, the chances are that he can do an almost unlimited amount of work for an indefinite length of time, bearing in mind always that when weariness comes, he must rest, and not take stimulants and work upon false capital.

The tired, worn-out slave should not be scourged to additional labor. Under such stimulus, the slave may do the task, but he soon becomes crippled and unfit for work. The secret of successful work lies in the direction of selecting good, nutritious, digestible food, taken in proper quantities, the adopting of regular methods of work, and the rule of resting when pronounced fatigue presents itself, and determining absolutely not to permit friction, worry, or fretting to enter into his life, and the cultivation of the Christian graces, charity, patience, and philosophy.—*Medical Mirror*.

DR. WILLICH, of England, who lived and wrote a century ago, says of figs, that they abound in saccharine matter, and are uncommonly nutritive. Respecting our native acrid and astringent fruit, he writes: "It is less hurtful than is commonly imagined. Instead of being noxious in inflammatory disorders, it is the greatest service. Persons of thick and languished blood cannot eat anything more conducive to health than fruit, as it possesses the property of alternating and putting such blood in motion."

DIED OF DINNERS.—As a rule, our prominent men have been abstemious, hard-working individuals, until, as the direct results of this very work and abstemiousness, they have become prominent. Then they give loose rein to the appetite, until gout, apoplexy, or fatty degeneration of the heart or other internal or-

gans, prematurely terminates their brilliant career. If liquor unmistakably affects the stomach and the brain, banqueting most certainly deranges the liver, even though gluttony and over-indulgence in wine be not parts of the banquet. The author compares the methods of living of prominent men above sixty years of age, in Europe and America, and reaches the conclusion that banqueting in public life in this country is the enemy to old age. A man of sixty who does not materially modify his life of forty so as to avoid all excitement, to live slowly, and to have plenty of rest, is doing himself an injustice that is likely at any moment to prove fatal.—*Prof. Bartley, in Brooklyn Med. Journal*.

LOCATION OF LIVING-ROOMS.—The father and mother of a young family, full of enlightened sanitary zeal, were planning a new house. The first insurmountable difficulty they met was "that all the rooms could not be on the south side," but by judicious planning, and a vivid sense of "the more sunshine the more health," they reduced the difficulty to a minimum. The nursery was so arranged as to get the sunshine morning, noon, and night. Every sleeping-room got it in some part of the day; even the rarely-to-be-used guest chamber on the north side got some reflected light thrown in at an angle from a portion of the side wall. The entrance-hall was on the north, and also the dining room, though this was amply lighted by large windows; but the mother wisely decided that the living-room, where she and the children were to spend many hours, and the library that constituted papa's sanctum, must not be sacrificed to a room where meals were to occupy but a relatively short time, and where artificial light during many months supplied the illumination and cheerfulness. A judiciously planned bay-window aided in throwing light where it could not otherwise reach. Thus the home-rooms were on the sunny side, while the formal drawing-room had to content itself with being half-and-half.—*Sel.*

A VEGETARIAN SOCIETY has lately been organized in New York City, with Mrs. Le Favre as President. Many other well-known people are included among its officers and membership.

A GERMAN proverb says: "Intemperance drives reason out of the head, money from the pocket, the elbows through the sleeves, and health from the body."

MANY a man signs his death warrant with his teeth.



### SMALL WAISTS OF AMERICAN WOMEN.

OUR studies of the effects of fashionable dress upon the health of American women has convinced us of the truth of the assertion of a keen observer upon this subject, that "If civilized women did not exterminate the corset, the corset would exterminate them;" but it is not of the corset only that we complain. Tight bands, whether with or without corset, are worse than the corset itself. Compression of the waist and the suspension of dragging weights from the waist by bands are the worst evils connected with the ordinary dress of civilized women. We do not say *fashionable* dress, but ordinary dress; for some of the most extreme examples of injury arising from improper dress which we have ever seen, were in working women who had no particular anxiety about their figures, but in simple compliance with custom, drew their waistbands tight, and wore from two to half a dozen heavy skirts.

Probably the most damaging of all popular errors respecting dress is the idea that the small waist is an element of beauty in a woman's figure. Where this notion originated, it is difficult to comprehend. Certainly, it is not recognized in either ancient or modern art. The Parisian artist, perforce of fashion mandates, permits his wife to wear her dresses *a la mode*, but will not allow his model to abuse herself in such a manner. His model's figure is to be reproduced on canvass, and to be held up for criticism. The beauty and graceful curves of the natural outline must be preserved. His wife's figure serves a purpose similar to that of the lay figures which stand in front of dressmaker's establishments, and so its preservation is a matter of small moment, as the outlines of the dress, not the figure, constitute the matter of chief interest. The small waist means small vital capacity; a large

waist means large lungs, large vital capacity, and consequently ability for a long and vigorous life.

I have made a great number of measurements of civilized and uncivilized women, for the purpose of determining the comparative relations of waist measurements to the height and other proportions of the figure. The following is a partial summary of the results, the measurements being expressed in inches:—

	Height.	Waist.	Percentage of waist to height.
American women	61.64	24.44	39.6
English women (brickmakers who wear heavy skirt)	60.4	25	41.3
French women	61.6	28	45.4
Telugu women of India	60.49	24.65	40.6
Chinese women	57.85	26.27	45.4
Yuma women	66.56	36.84	55.2
Civilized men — American	67.96	29.46	43.3

The averages of the measurements of 1,100 young women between nineteen and twenty-one years of age, made by Dr. M. Anna Wood, of Wellesley College, were for height, 63 inches, for waist, 24.6 inches, making the percentage of waist to height 39, instead of 39.6. These figures are probably more nearly correct than my own measurements, as they represent the average of a much larger number.

A few words of explanation are necessary to present the full significance of the above figures. The civilized American corset-wearing woman has the smallest waist of any of the classes examined. The next in order is the Telugu woman, who suspends her clothing by a cord tied tightly about the waist. Miss Dr. E. J. Cummings, of Ramapatam, India, who kindly made for me the measurements from which the above figures relating to Telugu women are deduced, tells me that it is customary with these women to draw the cord which suspends their clothing as



tightly as possible, yet the amount of harm done thereby does not seem to equal the mischief accomplished by the American corset. The women brick-makers of England, who come next in the scale of waists, doubtless diminish the size of their waists and produce considerable distortion of their figures through wearing many heavy skirts suspended by bands drawn rather tightly about the waist. Civilized men, next in the scale, have much larger waists than civilized women, yet do not equal in waist measure women who have had opportunity to develop naturally.

French peasant girls, who are the principal recruits for the *maisons d'honte* of Paris, from their outdoor life acquire fine figures, which, at least in the early years of their life in Paris, are not much restricted by clothing, hence they have as good waists in proportion to their height as have Chinese women, whose loose garments afford ample room for natural development of the figure. But the Yuma Indian woman has a waist which seems almost disproportionately large, but which is doubtless the result of her active outdoor life, free from other restraint than a little bark apron before and behind, and even this restriction is lacking before she has attained the age of fourteen or fifteen years, so that she enjoys absolute freedom from restrictions of any sort during the years when the civilized girl is already beginning the process of fashion torture which deforms her body, destroys its natural grace and beauty, and renders her the feeblest and most diseased of all human beings.

The measurements which I have made of savage men and women of the same tribe, convince me that women naturally have larger waists in proportion to their height, than do men. The liver and other viscera of the abdomen are larger in a woman, in proportion to height, than in a man, and hence require more room.

THE EFFECTS OF EXCESSIVE EXERCISE.—We are glad to copy the following from the *Canada Health Journal*, as confirming the protest we have often entered against the practice of boat racing, running matches, and various violent sports in which young men, especially college students, are often induced to indulge.

"An English surgeon states that of 5,000 decrepit or aged soldiers that have been brought under his notice, fully 80 per cent were suffering from heart trouble in one form or another, due to forced exertion. He predicts that as large a percentage of the athletes of to-day will be found twenty-five years hence to be the victims of the same causes, engendered by muscular strains. With regard to the effect of exercise on the prolongation of life, it may be said

It will be noticed by referring to the table of waist measurements here given, that the waists of French women, Chinese women, and Yuma Indian women are larger in proportion to their height than the waist of the average civilized man, the proportions being 45.4 for French and Chinese women, and 55.2 for Yuma Indian women, as compared with 43.3 for civilized men. Careful measurements of an excellent model of the Venus de Medici which I have in my possession, shows the waist proportion to be 47.7 when compared with the height, the height being five feet seven inches, waist measure thirty-two inches; certainly a great contrast with the modern woman. The following is a recently published comparison of the figure of the famous Mrs. Langtry with that of Venus de Medici:—

	Mrs. Langtry.		The Venus de Medici.	
	5 ft.	7 in.	5 ft.	7 in.
Height	5	7	5	7
Across the shoulders	15	"	16½	"
Bust	36	"	38	"
Arm	12	"	12	"
Thigh	24	"	24	"
Calf	12	"	12	"
Neck	12	"	13½	"
Hips	45	"	42	"
Length of leg	28	"	32	"
Waist	26	"	32	"
Length of arm	26	"	28	"
Ankle	8	"	9½	"

It will be noted that in Mrs. Langtry, who probably fairly represents the modern civilized woman, the hips are broader, the shoulders narrower, and the bust and neck smaller than in the Venus, although the height, and many other proportions are identical. The most glaring difference, however, is in the measurement of the waist, which in the case of Mrs. Langtry is 26 inches, or 38.8 per cent of the height, while that of the Venus is 32 inches, or 47.7 per cent.

that there are more people living in France who have passed the age of sixty than there are in England, the home of athletic sports, and there is probably no nation in Europe more averse to muscular cultivation for its own sake than the French. Great athletes die young, and a mortality list of Oxford men who had rowed in the 'varsity races shows that a comparatively small percentage of them lived out the allotted time. People must recognize the difference between 'athletic sports,' as typified by *contests*, and rational exercise, as typified by walking, riding, skating and the like in *moderation*. Moderation means health; excess, disaster and disease. Exercise carried to the point of great exertion is disastrous: exercise confined within the limit of but slight fatigue is wholesome."

## HEALTH, GRACE, AND BEAUTY.—SEVENTH PAPER.

## Correct Standing Poise.

DOUBTLESS many of those who have been endeavoring to follow carefully the exercises directed in GOOD HEALTH, have found some difficulty in satisfying themselves with reference to a correct standing poise. We have previously described how to obtain a correct standing position, but the importance of securing a correct idea of one of the fundamental things in gymnastic practice has led us to have prepared from photographs the cuts presented with this article.

Fig. 1 shows the appearance of a round-shouldered, flat-chested person standing against the wall. It will be observed that the hips and upper part of the back are in contact with the wall, while the heels are not.

Fig. 2 represents a person who is trying to stand straight, but has an incorrect idea of a standing poise. The heels and shoulders are in contact with the wall, while the hips are too far forward.

By carefully observing the following directions, any person who is not seriously deformed can put himself at once in a correct standing poise: Standing against the wall,—a door is preferable, as it has no baseboard projecting beyond the general surface,—first place the heels together, the feet at right angles, and heels touching the wall. Now bring the hips

against the wall, bend the arms forward touching the shoulders with the ends of the fingers, and press the shoulders against the wall. Carry the head backward until the back of the head also touches the wall. This position is shown in Fig. 3. Now forcibly bend the head backward, keeping the heels, hips, and head in contact with the wall, but allowing the shoulders to advance. This position is shown in Fig. 4. Keeping the trunk and legs in the position shown in Fig. 4, move the top of the head forward and bring the chin down, then extend the arms forcibly by the sides, reaching down as far as possible, taking care to keep the head, trunk, and legs in exact position, as shown in Fig. 5. After having acquired the ability to take this position quickly, which in itself will be found to be

vigorous exercise, practice holding the position first for two minutes, then add one minute each day until the position can be retained for five minutes.

An excellent walking exercise consists of a slow walk, starting from the position shown in Fig. 5, taking care to keep the trunk precisely in position, and the feet at right angles, avoiding any swaying or twisting movement of the body.

## PROGRAM OF EXERCISES FOR JULY.

The warm days of July and August are somewhat less favorable to muscular activity than the cooler months of the year, nevertheless exercise should not be suspended, although the work may be lessened somewhat. The following program, if carefully followed, will secure a symmetrical and equable exercise of the entire muscular system. The exercises should be taken in the order given, the movements being repeated an increasing number of times from day to day.

1. *Marching in place.*—With the body in good poise, feet at right angles, heels touching, alternately move the feet forward as in stepping, taking care to keep the toes down, and to avoid changing the poise of the body except the slight change necessary to throw the weight upon the foot at rest.

2. *Breathing exercise.*—Repeat exercises 34, 35, 36, and 37 (see June number) each four times.

3. *Wing-toe-standing; knee-bending.*—Place the hands upon the hips, thumbs back (hips firm), raise the heels, bend knees to right angles, extend knees, then allow the heels to sink; repeat from two to eight times.

4. *Wing-standing, trunk backward bending.*—Hips firm, bend the trunk backward at the waist, keeping knees stretched, and head in line with the trunk. The relative position of the head, shoulders, and trunk should be preserved. While the trunk is bent back far enough so that the ceiling overhead can be seen, slowly raise the trunk upward, and repeat the exercise from two to eight times. Conclude by bending forward with arms relaxed, head and shoulders



FIG. 1.



FIG. 2.



FIG. 3.

In flinging the arms forward upward, they are simply moved swiftly from the sides to the stretch-standing position. Repeat each from two to eight times.

6. *Prone-standing, arms sideways raising.*—Bend the body forward to an angle of  $45^\circ$ , taking care to keep the head, shoulders, and trunk in line. The bending movement should be at the hips, not at the waist. While retaining this position, slowly raise the arms to horizontal, then turn palms upward; turn palms down; let the arms sink; return body to position. Repeat from two to eight times.

7. *Wing-one-half-standing, knee upward raising.*—Hips firm, left knee upward raise until thigh is horizontal. The lower leg should hang vertically, and the toe should be pointed down. Replace foot, raise the right knee in the same way; repeat from two to eight times. Carefully avoid any change in the poise of the head, shoulders, or trunk. Do not allow the trunk to twist.

8. *Wing-stride-stand, trunk twisting.*—Hips firm, feet sideways place (step sideways about one foot; first with the right foot, then with the left foot), twist the shoulders first to the left, and then to the right. Repeat from two to eight times. Avoid twisting the head independent of the trunk, also avoid twisting the hips.

dropped. Retain this position for about ten seconds, then slowly rise to standing position.

5. *Arm flinging, sideways upward, and forward upward.*—With the body in good poise and the arms extended, raise them suddenly sideways until extended upward, the hands being about the width of the shoulders apart, and as nearly straight up as possible. In moving the arms sideways, turn the palms upwards when the horizontal position is reached, so that they will face each other when the arms are extended above the head.



FIG. 4.

9. *Facing.*—Raise the right heel and the left toe, turn half way around: bring down left toe, then bring the right foot forward into position. Do the same in the opposite direction, raise the right toe and the left heel, and turn toward the right. Repeat from two to eight times.

10. *Yard-prone-stride-standing, head twisting.*—Feet sideways place, trunk forward bend to  $45^\circ$ , bending only at the hips, keeping head, shoulders, and trunk in line, raise the arms to horizontal, twist head first to left, then to right; repeat four times. Let the arms sink, raise the trunk, and bring the feet together. Repeat from two to eight times.

11. *Rest-walk B-standing, trunk backward bending.*—Neck firm, hands to the back of the neck, elbows in line with the shoulders, left foot placed forward about two foot lengths, trunk evenly balanced between the two feet. Bend the trunk slowly backward, then raise forward, changing feet. Repeat the exercise from two to eight times.

12. *Stretch-standing, trunk forward bending to floor.*—Standing, stretch the arms upward, palms facing, the middle of the shoulders apart. Bend slowly forward until the floor can be touched without bending the knees. Slowly raise the trunk, keeping the arms stretched above the head. Rest a moment, and repeat the exercise from two to eight times.

13. *Jumping in place.*—Hips firm, raise heels, bend knees. From this position jump directly upward, raising the body from three to six inches from the floor, landing on the toes, the heels touching. Great care must be taken to keep the trunk in perfect poise during the exercise. The hips must not be allowed to sway either backward or forward, and the balance must be perfectly preserved during the exercise. Repeat from two to eight times.

14. *Stretch-standing, heel raising.*—Arms upward stretch, heels raise, heels sink, arms drop to sides. Repeat from two to eight times.

15. *Bend-standing alternate to rest-standing.*—Hands upon the hips, hips firm, change hands to back of neck, neck firm. Repeat from two to eight times.

16. *Breathing exercises.*—Repeat exercises 34, 35, 36, and 37, each four times.



FIG. 5.



## HOW TO DRESS.

[Abstract of lecture delivered by Miss Lydia J. Newcomb, in the Sanitarium Gymnasium.]

ONE reason why dress reform has proceeded so slowly is because the esthetic has not been combined with the useful. No doubt the old-fashioned Bloomer costume was perfectly healthful, but it was too hideous to be worn. In the matter of healthful dress there are three principles which must be considered; equalization of weight, equalization of warmth, and no pressure upon any part of the body. A dress which conforms to these three principles may be set down as a correct dress. Heavy clothing produces pressure, tight clothing produces pressure, and clothing which hangs upon any part of the body is objectionable. The worst garment we wear is the corset, and it need not necessarily be tight in order to be harmful. The corset violates every one of the principles laid down at the beginning. No organ in the body can be doing its work properly when a corset is worn. Some of you may remember how uncomfortable and hampering tight sleeves were found to be; yet such an interference with the action of the arm is slight compared with the interference in the action of the vital organs.

Most women nearly kill themselves with bad dressing before they are ready to reform, and then of course it is impossible to regain either the correct figure or the health which might have been without the abuse. I want to show you how to arrange your garments so that your clothing will not violate any of these laws. The undergarments must be perfect fitting from neck to ankles, in one piece, and of such material as you may select,— wool, silk, or balbriggan. Some of these garments are expensive, but when we consider the saving in making, and the saving in laundry, and the doing away with the expensive trimming which was formerly put on underclothing, the difference is not so great after all, and really nothing can be prettier than these silk suits. In any case, we should consider first comfort and health, and after that the esthetic may be appealed to.

The wearing of skirts is entirely unnecessary. I have tried all sorts of them, fastened to waists with

buttons and fastened with suspenders, and also have worn a divided skirt; but there are some objections to all these forms, and finally I discarded them entirely some years since. In the summer, if one wishes to wear light dresses, a skirt may be made of extremely light material and put upon a yoke, which will distribute its weight. However, the best garment is the equestrian tights, when the weather demands that something warmer than the union undersuit be worn. Stockings will stay very nicely in place without any support, if worn between the union suit and the tights. Under other circumstances, let them be fastened to the undergarments with safety pins. An important objection to the divided skirt is that it takes nearly twice as much material as it does for the single skirt. I prefer, therefore, a single skirt suspended from a yoke, when any must be worn.

As to the dress, make it upon the gown form, in one piece. This is becoming to every one who knows how to stand. It is a mistake to think that one must have a plain waist. There is nothing beautiful about plain waists, and certainly nothing comfortable, because they must be quite tight to look well at all. The waist should always be made with some sort of fullness, and soft, clinging material is much the best. If the waist is full at the shoulders, back and front, and then confined at the waist line, the effect is very pretty. It may sometimes cross, surplice fashion, from one side to the other.

Some ladies say they would be very glad to reform, but they cannot afford to throw away their old clothes. But a garment that is made in two pieces can be put together, nearly always, so that it will form a comfortable and pretty gown. Let the waist and skirt be sewed together, strongly at the seams and lightly between the seams, and then with overlapping drapery which can be fastened with hooks, they are easily adjusted.

In order that a dress shall be comfortable, it must be very loose. My rule is to take my measure around the waist without clothes, and then take a full, deep

breath, and have the dress made large enough to allow for the expansion. One's dress should be loose enough so that one can expand just as well in it as without it; otherwise it is harmful. Round waists are more artistic than basques; and there are very pretty jackets which can be adjusted with skirt drapery upon the gown form. This is an especially pretty fashion for children and girls.

From long use of the corset, the muscles of the waist become weakened, and it is necessary that they should be strengthened in order to support the body firmly, and this can best be done with general exercise. The muscles of the waist are very easily cultivated, and the form may become just as upright and firm as though a corset were worn, and yet entirely flexible. We have come to be a race of deformed women, and a perfectly natural form is hard to find, although they are getting to be a little more common than they were ten or fifteen years ago. We should be dressed so as to be ready for gymnastics all the while, and then we will be ready alike for rest, work, or exercise. Do not have one suit in which you are comfortable for exercise, and then spend the rest of the time in a pinched up, uncomfortable dress. Women are coming to be more sensible in the matter. Many welcome a gown which is inconspicuous in itself, make it up in some pretty

fashion, and wear it until it is worn out. The greatest difficulty is to find dressmakers who will carry out ideas of dress reform; for, as a rule, dressmakers have fewer ideas upon healthful dress than anybody else.

A fleshy person always appears to better advantage with loose clothing and a large waist. When such a one is pinched up, it makes her figure extremely conspicuous. The outlines of her dress should be soft and flowing, and should indicate rather than follow the outlines of her body. And then, too, it is necessary that she should stand right. It will take at least twenty pounds' weight (seemingly) from a woman who is large, if she knows how to stand in a manner that will retract the abdomen instead of thrusting it forward, and raise the chest instead of throwing the shoulders back in such a way as to take the natural curve out of the spine. For a tall woman to wear a gown well, she must be careful in the selection of her dress goods and the style in which it is made. The goods for a tall woman may be slightly stiffer and heavier than usual, while the short woman or the fleshy woman needs always to select soft, clinging materials. The tall woman should arrange the drapery of her dress so as to cross the front diagonally, or break up the long lines in some other fashion. Short people, on the contrary, want to keep to long lines, as they give the effect of height.

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### THE NEW STORM DRESS.

A BOSTON woman, Mrs. Evelyn Shaw Ingersoll, has originated an outdoor costume for women in stormy weather, which, by its unique blending of attractiveness and convenience, as well as by the wise provisions made whereby to introduce it, promises to meet with a measure of success. The garb itself not being a uniform, can be varied to suit the taste of each individual wearer. In the model it consists of a stylish reefer, or over jacket, a skirt of waterproof tweed, kilt plaited, and a hat made of the same fabric. The sole innovation lies in the length of skirt, which reaches only to the top of the ordinary walking boot. The foot gear is to be the Hessian top boots of waterproof leather with wrinkled tops, which conceal the outline of the limb, and make the foot below, by comparison, seem small. Or, other boots of any style may be substituted, and worn with the addition of rubbers and waterproof gaiters.

Mrs. Ingersoll, in a common-sense way, has set about making it possible for the timid rank and file of womankind to wear the new dress, by inducing a large number of women to appear simultaneously in it. She is now at work securing names and pledges of

prominent Boston women, who agree upon a certain day to show themselves in the streets in the shortened dress, and to wear it as their usual street dress in stormy weather always thereafter. Managed in this way, the novelty must soon cease to be a novelty, and the staring of the multitude will be divided among so many, that no one poor little timid soul will mind particularly the amount that falls to her share. Modest, fitting, convenient—this new rainy-day dress must commend itself to the most conservative. Boston, having set the good example, it will be left for other cities and sections to take up the reform, and carry it on in like manner.

Sensible English women are also rising in protest against the street-sweeping skirts. Mrs. C. Hancock, of London, is the originator of a costume, similar to the above, which was lately shown at an Exhibition of the Rational Dress Society, in London. This is dubbed the "Ellitto," or Anti-Muddy dress, and is chiefly distinguished by an absence of petticoats, warm, cloth knickerbockers reaching below the knee, admirably supplying their place. These are supplemented by gaiters which half cover the walking boot. E. L. S.

# SOCIAL PURITY

## MRS. NELSON'S "WAY."

THE following, from the *Ladies' Home Companion*, offers a suggestion, and a most sensible one, as to the manner of dealing with children in regard to trashy or impure books:—

"Six boys in a crowd talking so busily that they are perfectly oblivious to anything around! The head speaker, a bright boy of twelve, says emphatically:—

"'Now, remember, mum's the word, and each of you bring ten cents to-morrow, and we'll have six books to start with. I'll get them, and we can meet in our barn and read them. It is not in use now, and none of the folks need know anything about it, and we'll see if we can't read in peace, without all our mothers and big sisters throwing everything into the fire, and making such a terrible racket!'

"These boys, as you will see, had caught the disease so common to boys of that age—dime novels. Yes, and of the very worst kind: Stories highly seasoned with descriptions of the most improbable adventure. The more unlikely the story, the nearer the boys thought it approached the truth; and each boy's heart was aflame with a wild desire to experience some one of the very thrilling adventures so beautifully described in 'The Missing Trail; or Wild Will of the Rockies,' which well-thumbed and dog-eared copy had gone the entire rounds of the boys, until Mrs. Ellis, having discovered it in Rob's coat-pocket, promptly consigned it to the flames, and treated Mr. Rob to a long lecture on the sinfulness of such reading, and threatened him with a whipping which he'd remember the longest day he lived, if she found any more.

"This, however, only added fuel to the fire of his interest in the aforesaid books, and the fire, though apparently quenched, only smouldered under Rob's calm exterior, for in his short career he had been obliged, for more reasons than one, to use a little strategy concerning his movements, as family difficulties often arose and put an end to many of his most cherished hopes.

"The money was collected and the books bought. The boys became so interested in the contents as to forget everything else, even meal time, which was a great advertisement for the books.

"Harry Nelson, who had one of the best of mothers, even went so far as to take his book home, and as his mother was not in, ventured to throw himself down upon the old sofa, stick his feet upon the back, and read just one more chapter.

"Mrs. Nelson was a very politic woman with her boy. She had always been his boon companion, had steered him clear of many of the temptations besetting a boy's life; and between the mother and son there existed the most perfect confidence. As she quietly entered the room, she noticed that Harry was absorbed, and stepping up behind him read, 'The Frozen Pirate; or' — When Harry heard his mother's voice, he sprang up and intended to hide the book, as he had been thoroughly cautioned to do, by the other boys.

"'Why, Harry, what is it?'

"'Oh, only a book a boy lent me.'

"'Is it a good one?'

"'Yes, it's awfully interesting.'

"'Well, I'm glad of that, for if there's anything I do enjoy it is a good book. Just lay it by till after supper, and this evening we'll read it together.'

"Harry complied, but feeling all the time as if there was something wrong about it somewhere. After supper, Mrs. Nelson got her sewing, and said:—

"'Now, Harry, you read, and I'll sew.'

"So Harry began. He read a little while, but somehow the book did n't seem the same to him; things came up in the story that he did not just like to read to his mother.

"'Do you like it?' he asked, anxiously.

"'Well, I can tell as you go on: if you are interested in it, I think I will be.'

"So Harry read on. It was n't quite as interesting as it had been for some reason. Finally, as his interest flagged, he told his mother all about it, and where they were reading them.

"'And can you get them all?' Mrs. Nelson asked. 'What a treat there is in store for us! We'll finish this one, and then you can get another, and they'll last us for most of the winter.'

"Harry winced a little. He was tiring of it already. He had expected his mother to act somewhat as Rob's mother had.

"Mrs. Nelson went on with her sewing, and Harry read until about nine o'clock. Finally, Harry laid down the book, and with some anxiety said:—

"What do you think of it, mother?"

"Oh, it's very thrilling; do n't you think so?"

"Well, yes; but do you s'pose these boys really did these things?"

"Why, you must just think how you would do under such circumstances."

"I should be scared to death," frankly admitted Harry.

"Would you?" and a funny little disappointed look rested a moment on his mother's face. "Why, I was just congratulating myself that if a bold, horrid man was to rush in upon us now and say, "Madam, your money or your life!" you would bravely spring up to my rescue and say, "Hold there, villain! Unhand that woman, or your life's blood shall pay for the outrage!" and that you would immediately draw out that immense knife you got a short time ago and made so sharp, and stab him to the heart!"

"Harry's eyes were big and bright by this time; he could n't understand his mother at all.

"But go on, Harry; I must hear the rest of that before I go to sleep." And Harry read a little longer.

"Ten o'clock came, and Mrs. Nelson began making preparations for bed. For their evening lesson she read the first Psalm. In guarded language, she drew Harry's attention to the climax of the verses, first, walking with the ungodly, then standing, stopping a little longer to listen, and finally being so taken up with the attractiveness of evil as to sit down and stay with it. She did not attempt to moralize, but just sowed the seed and let it alone; then pressing him to her heart, she kissed him fondly and said:—

"God keep you, my boy, in the time of temptation. Good-night."

"When Harry awoke the next morning, he lay

thinking, quite busily. As he started off to school, his mother called:—

"Be sure and get another book, Harry; and tell the boys to come here to-night, and read them, if they want to."

"The boys were thunderstruck the invitation. Rob Ellis, who was leader, was disposed to scold.

"Such a cad as you are, Harry Nelson, to blab everything to your mother."

"Well, what of it? She enjoys the books. I guess if I can read them, my mother can."

"Rob was a little confused at Mrs. Nelson's literary taste, but next evening Harry coaxed him around for the evening. The reading began, and although the boys took turns, it flagged. The color would creep up into Rob's face when he read some of the coarse, bragging talk that some of the characters indulged in; it did n't seem just the thing in Mrs. Nelson's presence. Before the evening was well over, both boys were completely nauseated with the book. When they were alone, Harry said:—

"I do n't believe I'll finish that book, mother; I do n't think it's nice?"

"Why not, Harry?"

"Well, it seems to me as if it could n't have happened."

"Mrs. Nelson wisely kept silent. There is a time when silence is more effective than any speech. If mothers only knew this better, their influence over their boys would be much greater, for there is nothing boys, and men, too, so utterly detest as constant nagging and pointing out a moral in everything. The world cannot be reformed in a day, but a great deal could be done toward it if every mother would reform her own boy. Mrs. Nelson, as has been seen, fulfilled this mission so perfectly in regard to *her* boy, that in after years Harry Nelson said he owed all that he was and hoped to be to the guiding wisdom and gentle tact of his mother, in his early boyhood.

HOMES NEEDED.—The highest, most helpful agency of civilization is the home. The best advancement that science, art, philanthropy, and religion can contribute to human culture is a universal possession of homes, first as a dwelling place, and second as the university of the humanities. When, by reason of want, and its harassing, grinding friction, and its general unfavorable conditions, the mother is unfitted and unable to cherish, guard, and train her children, home life and properly equipped members of society are lost to the commonwealth.

Money cannot replace to society, through any form of charities, the loss of home environment to the childhood of its membership. Home, a place of

attractive externals, of social enjoyment and cheer, of repose and retirement to weariness, is the greatest agency of human uplifting. Homes are needed for tired men, to hold them from the attractions of the saloon. Homes are needed for boys, where refined associations and language, with innocent recreation, will save them from degrading street influences. The education of environment is a mighty force for the betterment or the destruction of human society and the individual. A civilization that shall take woman from all undue severe muscular labor, and place her in her constitutional sphere of home-making, will help to establish the divine order that will bring peace on earth and good will to men.—*S. L.*



### SEVEN BARKS.

THE number seven is supposed to have a certain magic charm about it. This fact the manufacturer of patent nostrums has utilized in the name of this nostrum, which, in its composition, may better be called seven roots than seven barks. The composition of this drug reminds one of the story of the doctor who emptied the remnant of medicines found in the bottles of his customers, which were returned to be refilled, into a common receptacle, and whenever he had a case the nature of which he did not understand, consequently being at a loss for the proper remedy, he filled a bottle from his jar of "remnants," thus assuring himself that his medicine would at least contain something suited to the case. It is, indeed, surprising that intelligent people are willing to swallow such nauseous doses as are offered to them in these complicated mixtures. But the standard by which the ignorant American estimates the value of his medicine seems to be identical with that of the "heathen Chinese." In talking with a medical missionary some time ago, with reference to medical missionary work in China, we were informed

that sugar coated pills and bland medicines were very unpopular with the Celestials, whose estimate of the value of a remedy is wholly determined by the badness of its flavor and the disagreeable effects immediately resulting from its use.

Here is the composition of this wonderful Seven Barks: Extract of hydrangea, extract of poke root, extract of Culver's root, extract of dandelion, extract of lady's slipper, extract of colocynth, extract of blood root, extract of blue flag, extract of stone root, extract of golden seal, extract of mandrake, extract of black cohosh, extract of butternut, spirits of sea salt, aloes, borate of sodium, infusion of capsicum, powdered sassafras, ginger, sugar-house sirup, and water.

In reading the category through, we judge that it must have originated in about the same way as the country doctor's panacea, to which we have already referred. It seems to be pretty nearly a complete list of the drugs ordinarily found in the country doctor's *armamentarium*, or on the shelves of a country drug shop.

HAMLIN'S WIZARD OIL.—The description of this nostrum does not explicitly state whether it is really an oil of a wizard or an oil manufactured by a wizard. The reader is left wholly to his own conjectures upon this point. The evident purpose in the name is simply to excite the imagination, and suggest the idea that it possesses some magic properties akin to that supposed to be possessed by wizards, and is capable of accomplishing supernatural or apparently impossible results. For the last quarter of a century this nostrum has been peddled about the country by mountebanks who attract a crowd by singing songs and telling marvelous stories about the wonderful effects of the nostrum in relieving pain, curing disease, and even in bringing the dead to life. The name is

certainly a taking one, nevertheless the oil contains nothing wonderful, its composition being, according to Dr. Douglas, in the *Medical World*, as follows: alcohol, gum camphor, oil sassafras, tincture myrrh, tincture capsicum, and chloroform.

FEBRILINE.—According to the *Druggists' Circular*, "Febriline, or Tasteless Sirup of Amorphous Quinine," manufactured by the Paris Medicine Co., of Paris, Tenn., contains no quinine at all, although the label of each bottle states that it contains 24 grains of quinine.

HAMLET'S AGUE PILLS.—Sulph. quinine 2 dr., powdered myrrh 1 dr., powdered capsicum 1 dr.



CHRISTIE'S AGUE MIXTURE.— Each bottle contains 7 fluid ounces of a very dark, sirupy liquid, one fourth filled with sediment, and having a very bitter and peppery taste and the odor of common molasses. The sediment is powdered Spanish pepper and a little resinous matter. The solution consists of a tincture of cinchona bark, with the addition of sulphate of cinchonine and common molasses.

WILHOFF'S ANTI-PERIODIC FEVER AND AGUE CURE.— Each bottle contains 4 fluid ounces of a thin, dark-red liquid, with the odor of cinchona bark, and a very bitter and acid taste. It consists of an infusion of cinchona bark made with water, and the addition of a solution of sulphate of quinine in aromatic sulphuric acid. Each fluid ounce contains 3 grains of sulphate of quinine.

SEVEN SUTHERLAND SISTERS' HAIR GROWER.— We quote the following from the label of this nostrum :—  
 " *The Lucky Number Seven.* An elegant hair dressing. A sure hair promoter. Will permanently stop hair from falling out. A preparation free from irritating matter. For preserving and beautifying the hair, and rendering it soft and glossy, it is the best. Prepared only by the Seven Sutherland Sisters, Lockport, N. Y."

These seven wonderful sisters would doubtless be found on investigation to be one bad man, just as "Mrs. Winslow," the old lady who has been made world famous by her soothing sirup, a convenient means of killing off superfluous babies, turns out upon investigation, to be the *alias* of a graceless young man, instead of the venerable and benevolent old lady pictured in the newspapers.

According to *New Idea*, this wonderful mixture consists of the following ingredients: Stearns's bay rum, distilled extract of witch hazel, common salt, hydrochloric acid, and magnesia.

There is nothing in this mixture calculated to encourage the development of hair. The only benefit likely to be derived from its use is that arising from friction of the scalp, which might much more advantageously be rubbed with cold water, or with a soft brush, or with the finger tips, than with the "Seven Sutherland Sisters'" wonderful "hair grower." The manufacturers of "hair renewers," "hair growers," "hair tonics," and similar nostrums, reap a rich harvest from the ignorance of the people who suppose, from the representations made by the unscrupulous manufacturers of these mixtures, that hair can be made to grow anywhere by a sufficiently persevering use of the remedy, whereas, every scientific physician knows that to undertake to develop a growth of hair upon a smooth and shiny pate is as hopeless a task

as to undertake to develop a beard upon a board. One might apply the remedy to a marble head with as good a prospect of success. In cases in which the scalp presents a large number of fine, short hairs, a growth of hair can be secured by simply improving the nutrition of the scalp by means of massage, shampooing with water, and improving the general health.

SEVEN SEALS, OR GOLDEN WONDER.— Here is the magical number seven again. This very popular nostrum is claimed by the *National Druggist* to be composed of the following ingredients: Ether, chloroform, camphor, oil of peppermint, tincture of capsicum, and alcohol. This singular combination is recommended as equally good for cholera morbus, corns, rheumatism, and warts; in fact there is scarcely a disease in the whole category of human ills for which it is not highly recommended. Doubtless it might prove of service as a stimulating liniment, but a hot fomentation, or a poultice, would, we dare say, be found much more effective. At any rate, if one cares to make use of this "golden wonder," he can save money by having the mixture compounded at any drugstore, instead of buying it under its advertised name. The golden part of the name of this patent mixture doubtless has reference to its value as a means of lining the pockets of the manufacturers.

DANGEROUS NOSTRUMS.— Since the discovery of anti-pyrine, anti-fibrine, and other pain-relieving and sleep-producing products of coal tar, a great number of nostrums have been thrown upon the market, and are advertised in newspapers under a variety of taking titles, such as, Megrinin, Anti-Megrin Pills, etc., which guarantee to cure headache, to relieve pain, to produce sleep, and to fill a variety of other medical indications for which the drugs referred to have been recommended. There are hundreds of persons using these nostrums, and doubtless many times to their great injury, not knowing that all of them are powerful poisons. There seems to be a great difference in the susceptibility of different persons to the effects of these drugs, some being able to tolerate large doses, while others are made ill by doses almost insignificant. All of them are powerful depressants of the heart. In many instances death has resulted from the use of these drugs, and in doses which were considered perfectly safe. The nostrums referred to contain a sufficient amount of poisonous substances to produce fatal results in susceptible persons, unless used with great care. Manufacturers of such nostrums should be compelled by law to accompany each package by a notice indicating its poisonous character.

# GOOD HEALTH

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## THE CAUSE OF KIDNEY DISEASE.

THE alarming increase in the frequency of chronic disease of the kidneys, and in some forms of Bright's disease, has been noted by observing physicians in all civilized lands. The cause of the increase of so formidable a malady has been a matter of serious concern and careful investigation. Recent researches seem to indicate beyond a doubt that the most frequent cause of chronic disease of the kidneys is the elimination of unnatural poisons which have been formed in the system, the result, in the majority of cases, of errors in diet, such as the free consumption of flesh food, the use of pastries, condiments, confectionery, pickles, and other indigestible foods, causing derangement of the digestive functions. As the result of such digestive disturbances, the germs which are always found present in the alimentary canal develop with unnatural activity, producing in great abundance poisonous substances which must be eliminated from the system through the kidneys. The concentration of the poison in these organs results in tissue changes, in consequence of which the organ finally becomes diseased, and often hopelessly so, even before the presence of the disorder is discovered, since the pain and other symptoms, of which the patient might be conscious, are rarely present in the early stage of this disease. Indeed, it often happens that no symptoms whatever of disease

of the kidneys, which can be discovered otherwise than by a chemical analysis of the urine, appear until after the disease has assumed an incurable stage.

One of the early symptoms of disease of the kidneys is a deficiency in the quantity of urea eliminated. The amount of this poisonous substance removed from the system is by no means proportionate to the amount of urine, as the latter may be formed in great quantity, although but very little urea, the principal solid constituent of the urine, may be present. The long-continued existence of this symptom—a lessened quantity of urea—is always a suspicious sign. It has been noted that this symptom may be present for months, or even years, before either albumen or other evidence of kidney trouble appears. The amount of urea produced in twenty-four hours should be, on an average, from five to six drams. When the average is as low as two and one half or three drams, as determined by a chemical analysis, the patient's condition is one which demands immediate attention, and should lead to a careful regulation of diet, and all the habits of life with reference to the probable existence of disease of the kidneys. At this early stage the disease can usually be cured; not by drugs, however, but by careful hygiene.

GERMS IN TOWELS.—Towels are not infrequently a source of contagion in disease of the eyes, as well as in skin diseases of various sorts, especially in boarding schools, reformatories, and similar institutions. According to the *Boston Post*, "A specialist at Buffalo, Dr. Howe, has been investigating the condition of the roller towels used in the schools of that city, and finds that a square foot of the average towel contains from thirty-five to fifty million bacteria. In

case the mere statement of numbers is not sufficiently alarming, it may be mentioned that among these bacteria were the germs of various contagious diseases. The investigation was conducted primarily with a view to finding the sources of contagion in certain diseases of the eye, and that these particular bacteria were included in the fifty million was shown by the eyes of a rabbit which had been inoculated with washings from the towels."

"DOCTORED" BEERS.—A chemist has recently discovered that many of the beers sold in his State have been doctored with salicylic acid to prevent souring. The complaint is made that such beers are unwholesome, since it is well known that salicylic acid is irritating to the kidneys. This is no doubt true, and the beers are certainly unwholesome; but the question is, whether there is any greater ground for complaint against the salicylic acid than against alcohol. Alcohol as well as salicylic acid is irritating to the kidneys. The effects of ordinary beer upon the kidneys is too well known to require more than mention. We see then no ground for complaint against salicylic acid. It is a poison; so is alcohol. Salicylic acid affects the kidneys; so does alcohol. Beer containing salicylic acid is likely to make people sick; the same is true of beer which contains only alcohol. We see no reason for finding fault with the adulteration of alcohol, tobacco, tea, coffee, or any other of the stimulants or narcotics to which people resort as a means of producing a harmful and dangerous species of nerve tickling. There are but few substances used in the adulteration of these drugs which are worse than the drugs themselves, and in the majority of cases the substances used for adulteration are much less harmful than the drug which is adulterated. It might further be suggested that harmful adulterations of alcoholic drinks, and other allied substances, is not a matter which should be of very great concern to vegetarians, since it can hardly be considered a part of the proper work of the sanitarian to encourage the practice of health-destroying habits, even by rendering said practice somewhat less immediately dangerous to life and health.

DIPHTHERIA IN MILK.—Dr. Klein, the eminent English bacteriologist, has been studying the relation of milk to diphtheria, and with some very remarkable results. Dr. Klein claims to have discovered the bacillus, or germ of diphtheria, and finds the germ always present in the membrane characteristic of the disease. He has been able to communicate diphtheria to cats and cows by inoculation, and finds that when produced in cats in this manner, the symptoms are identical with those found in sick cats which had been obtained from households in which diphtheria was present. A cow inoculated with diphtheria germs which had been cultivated artificially, died on the fifteenth day. Another cow was killed on the twenty-fifth day after inoculation. The diphtheria germs were found in great abundance in both cases. It was noticed in the cases of both of these cows that, during the early period of the disease, while both appeared to be well and were giving milk as usual, small blisters appeared on the udders, which soon became pustules,

and later became ulcers covered with crusts. The examination of these blisters and ulcers showed the presence of great numbers of the germs characteristic to diphtheria. Further than this, and most important of all, it was found that milk drawn from an inoculated cow with the greatest care, when placed under proper conditions, was found to develop a great number of diphtheria germs, showing that the germs, or spores, must have been present in the milk when obtained from the cow.

The possibility of the communication of diphtheria in this manner adds another fact to the many already accumulated, pointing to the necessity for cooking milk used for dietetic purposes. In our opinion, cow's milk should never be eaten by either children or adults, unless first boiled. Boiling for ten or fifteen minutes is required.

NO SPECIFIC REMEDIES.—In discussing the question whether or not there is truth in the common theory that "for every disease there is a remedy, if we can only find it," the *London Hospital* remarks that "up to the present time, experience has not furnished us with a single remedy which can properly be called a 'specific cure' for a 'specific disease.'" This fact is a profitable one for the consideration of those who are addicted to the very common but very harmful practice of habitual dosing. When sick people get well, it is because nature cures them through the innate forces of the body which the ancients called the *vis medicatrix naturæ*.

Dr. John Hunter used to say, "Most people live above par." He attributed to this fact a great share of the diseases to which civilized races are subject, and the difficulty of cure in the accidents from which they suffer.

ENNUI.—Pain cannot be wholly avoided by humanity, but *ennui* is not a necessary evil. There are, however, people troubled with *ennui*. They hope for a better world, and seem not to know that they are to be held responsible for time misspent in this. Complain of *ennui*, and know not why the lily blooms so gloriously, why the violet is so deep a blue, and whence the fragrance of the rose. . . . Go learn something, do something, understand something, and complain no longer of *ennui*. He who employs his time wisely, lives every day a little life.—*Sez*.

A NEW MODE OF CATCHING CONSUMPTION.—A Polish physician recently exhibited a case in which a patient had acquired consumption of the skin of the nose, known as lupus, by using a handkerchief belonging to a sister suffering from consumption.

**POISONOUS HATS.**—The official chemist of the New York Mercantile Exchange, according to the *Anti-Adulteration Journal*, recently called attention to the use of lead compounds used for giving to the leather of hat-bands a high, glossy finish. These compounds have been in use for this purpose for a long time, although the fact is not generally known. According to the chemist referred to, they are the frequent cause of headache experienced while wearing certain hats, some hats being more likely to produce headache than others, in consequence of the lead being protected by an extra finish of some sort. The following curious circumstance related by the chemist was the means of calling attention to this new source of poisoning:—

“Several weeks ago I purchased a hat at a large wholesale house in this city. Within a few days thereafter I was subject to severe and peculiar headaches whenever I wore this hat, and more especially on very warm days. Although I paid no particular attention to this at first, I suspected that the symptoms were brought about by the wearing of the hat, and finally became convinced of the fact. About this time the hat was accidentally exposed to an atmosphere containing sulphureted hydrogen. On taking up the hat, a discoloration of the sweatband was observed, which on examination, was found to be due to the formation of sulphide of lead. The discoloration was darker in places where the perspiration had accumulated and dried.”

The above circumstance led to a careful chemical analysis which showed that the sweatband contained a very large quantity of lead.

**AN EPIDEMIC OF TRICHINOSIS.**—An outbreak of trichinosis recently occurred in Iowa as the result of eating bologna sausage. At the time of the report, three persons had died, and ten more were so seriously affected that they were not expected to recover. The disease was at first mistaken for typhoid fever, an error so common that probably the great majority of cases of trichinosis are never recognized as such.

**CANNED MEAT.**—It ought to be more generally known that canned meats, even when properly canned, deteriorate and become unwholesome after being kept for some length of time. A German physician has proposed that as a precaution, manufacturers of preserved meats should be required to stamp all their cans with a legible date mark.

LORD BACON said, “No joy is greater than that of standing on the watchtower of truth.”

**SALT NOT A GERMICIDE.**—The idea entertained by many persons that salt meat must be necessarily free from disease infection is shown by experiments to be erroneous. Dr. Freytag, of Amsterdam, has shown that the germs of typhoid fever survived five or six months when exposed to the concentrated solution of common salt, and that the germs of tuberculosis, or consumption, were still alive after three months. The diphtheria germ was alive after several weeks.

**GERMAN SCHOOLS.**—Notwithstanding its enormous debt, and the burden of maintaining a standing army large enough to populate one of our largest cities, Germany is far in advance of this country in the matter of providing its people with educational advantages. Most school-houses in Germany have work-houses, laboratories, and gymnasiums connected with them. Many are provided with facilities for hot and cold shower baths. Children educated with such opportunities may confidently be expected to excel in vigor and in efficiency those reared under the less favorable conditions afforded by the public schools of this country.

**RESULTS OF REFORM IN DIET.**—An Australian clergyman, Rev. John Higgins, writes the *English Vegetarian Messenger* that after having reached the age of fifty-six years, and having been for over forty years in the habit of eating flesh at least once a day, he was induced by his ill health to make a change in diet. He suffered much from dyspepsia, depression, and lack of energy. He was then living in the Australian bush, where but few varieties of vegetables could be obtained, nevertheless he abandoned at once the use of all forms of animal food, with the exception of milk, making fruits and grains the principle articles of diet. He says that as the result, “The effect, ere long, was exhilaration of spirits, increase of vigor of body and mind, and a sense of placid power. Work which before was a burden, became an enjoyment; life wore a new aspect; the mental faculties became brighter and more steadily available. After over fifteen years’ experience of the reformed diet, nothing but absolute necessity could induce me to return to the old system. Now, in my seventy-second year, I am, thank God, remarkably free from the infirmities of age, and can do full ministerial work, and enjoy it, besides handling spade and hoe in the early mornings in my garden. While not always, during those fifteen years, in circumstances to fully carry out my views, I have noted that the more simply I have lived, and the more rigidly I have confined myself to fruits and grains, the better it has been with me; also that for promoting working vigor, two meals a day are better than three.”

M. ROUSSY, an eminent French physician, has discovered that ordinary yeast, which is used in the fermentation of bread, produces a poisonous substance capable of inducing fever.

LIGHT-GIVING GERMS.—According to a French scientific journal, there are five different species of microbes which give rise to the phosphorescence of fish, one of which is brighter than any other light-giving microbe known. Two varieties of another species of light-giving bacteria are found in the Baltic Sea. Two others are found, one in the vicinity of the West Indies, and the other in the North Sea.

GARBAGE DIET.—The health officers of Chicago have recently unearthed an enterprise in that city which must have the effect to materially lessen the appetite for beef on the part of the usual consumers of this article of food in that city. According to the *Chicago Evening Journal*, a firm in that city "has contracts for the offal from the kitchens of large hotels, boarding houses, restaurants, and private homes. All this refuse has been cooked by steam and fed to cattle and swine. In the sheds adjoining the cookery, wallowing flank deep in the filth, were three hundred cattle and fifty or sixty hogs. For five weeks these animals had stood in that wretched place absolutely without exercise, and wholly uncared for. They were fed almost exclusively upon the cooked offal, varied only with hay occasionally. What the cattle would not eat, the hogs got. When the health department officials visited the place, the cattle were so fat that they could hardly stand, and since then they have been sent to the stock yards to be slaughtered."

The health authorities of Chicago appear to be horrified at the things they discover, and yet they must know, as does every one, that it is by no means so bad as the practice which may be found in connection with almost every slaughter house, big or little, in the United States. It is a common custom with butchers to keep in a yard in connection with their slaughter pen, a quantity of hogs that are fed with the unused portions of slaughtered animals, and when thus fattened, are themselves in turn slaughtered and sent to market. Trichina, and various other parasitic diseases are thus extensively propagated.

The consumption of animal flesh as food leads to many horrible and loathsome practices, and the perpetration of many base and disgusting frauds which would be quite impossible in connection with the use of other more natural foods. A radical cure for all of this business would be the abolition of slaughter houses altogether, and the use of animals for only natural purposes.

MICROBES AS SCAVENGERS.—It is well known that many microbes are intended to act only as scavengers to remove dead material. It is through the agency of these microscopic creatures that dead forms of all sorts, whether animal or vegetable, are reduced to the original elements from which they were produced. Taking this fact as a starting point, Mr. George T. Chapman, of New York, has worked out a theory in which the microbe is considered under all circumstances as a minute scavenger, his connection with disease being not that of a cause, but simply a scavenger whose presence is for the sole purpose of removing as rapidly as possible the dead matter occasioned by disease. His theory has not yet received the support of scientific men, and will probably be hotly contested. Possibly it may be proved to be in some instances true, although not applicable as a general principle.

MEDICAL USE OF DYES.—Recent experiments show that the aniline dyes have remarkable germicidal properties, and some of these coloring substances promise to be extremely useful in the treatment of various disorders. Methyl violet, methyl blue, and a number of other aniline colors, possess a remarkable faculty of being able to penetrate and fix themselves in the interior of most species of microbes. This action appears to have also the power of destroying the life of the microbes. The coloring matters are at the same time not to any extent poisonous or dangerous to health, and hence offer a ready means of combating microbes in the most efficient manner.

CHILDLESS.—As an illustration of the condition into which this country is drifting, we quote the following from *The Lancet* respecting the childlessness of French households:—

"In France at present there are 2,000,000 households in which there has been no child; 2,500,000 in which there was one; 2,300,000, two children; 1,500,000, three; about 1,000,000, four; 550,000, five; 330,000, six; and 200,000, seven or more."

THE LONGEVITY OF QUAKERS.—A recent Report of the Society of Friends, in the British Islands, shows that 61 per cent of all the deaths in the Society were of persons upward of sixty years of age, which is certainly a very excellent testimony in favor of the simplicity of habits and sobriety of health characteristic of these people.

THE London Vegetarian Society reports a membership of nearly six hundred.



### DILATATION OF THE STOMACH.

THE extreme frequency of this disease has been pointed out by the eminent French pathologist, M. Bouchard. The investigations of this eminent medical savant show that dilatation of the stomach exists in at least seven-eighths of all cases of dyspepsia. In a recent work by this author entitled, "*Leçons sur les Auto-Intoxication dans les Maladies,*" we find much useful information upon this subject, some of which we propose to summarize for the benefit of the readers of GOOD HEALTH.

There are many causes of dilatation of the stomach. Among the most frequent must be mentioned errors in diet—excess in eating, too frequently repeated or too prolonged meals, drinking excessive quantities at one time, eating too rapidly, and irregularities in meals, which occasion eating with too short intervals between meals, in consequence of which one meal is introduced before the other is completely digested and dismissed from the stomach. Bad teeth, preventing proper mastication of food, is also mentioned as a cause.

Dilatation of the stomach sometimes results from catarrh of the stomach, and obstruction of the pylorus, due to cancer or cicatricial contraction, following ulcer. It is probable, also, that general debility may have a tendency in the same direction.

Dilatation of the stomach is found to be present in connection with other diseases, many of which doubtless grow out of this morbid condition, such as catarrh of the stomach, fermentation of food, and, in consequence, production of poisonous substances which are absorbed into the system and affect the entire economy.

In rheumatism, consumption, and many forms of skin disease, and various chronic maladies, dilatation of the stomach is found to exist in a large proportion of the cases.

M. Bouchard has observed, also, that dilatation of the stomach exists in a large proportion of persons who suffer from typhoid fever, and suggests that this condition of the stomach may be a predisposing cause of the disease named. The common foundation for this is found in the fact that in dilatation of the stomach the quantity and activity of the gastric juice is materially diminished. Active gastric juice, when produced in a sufficient quantity, is an efficient defense against typhoid fever, destroying promptly the germs of the disease, when taken in with food or drink. It is evident that any condition in which the efficiency of this important means of defense is lessened, may act as a predisposing cause of typhoid fever, or other infectious diseases which attack the body through the medium of the alimentary canal.

It has been observed that tapeworm, round worms, and other parasites which infect the intestinal tract, are much more frequent in persons whose stomachs are dilated than in those whose stomachs are normal. The reason for this is quite plain when we consider that these parasites are introduced into the body either in the form of eggs, or in embryotic state of development. The gastric juice of a healthy stomach is doubtless able to destroy and digest all living organisms. The feeble gastric juice of a dilated stomach may be unable to protect the body in this manner, so that the embryonic parasites are allowed to pass from the stomach and into the intestines, the fluids of which are less obnoxious to living organisms than the acid gastric juice.

M. Le Gendre, a pupil of Bouchard, has called attention to the fact that persons suffering from dilatation of the stomach are subject to attacks of continued fever, gastritis, intestinal catarrh, and similar affections which may be, in many instances, merely mild forms of typhoid fever. These attacks are

doubtless due to the action of microbes of some sort which the feeble character of the gastric juice has allowed to develop in the organism, either in the stomach or the intestinal canal.

The author recommends as remedies for this condition, whatever will improve the dyspeptic state and permit the stomach to contract itself. Such general measures as dry friction to the surface, change of air, sea air, residence in high altitude, recreation, and whatever means may improve the digestion, are recognized as being of value. Among more active measures are recommended the cold or hot douche, the alternating hot and cold douche, salt baths, sea baths, cold baths, inhalations of oxygen, but especially dietetic hygiene.

Our author summarizes the principles which should govern the dietetic management of this class of cases in the following axiom: *It is necessary that the stomach should be distended as little as possible, as seldom as possible, and for as brief a time as possible.*

It is first of all necessary to masticate the food thoroughly, consequently repair of the teeth is often essential. It is necessary, also, to eat slowly, and without mental disturbance.

It is necessary to abstain from hard work immediately after eating. Fatiguing labor is bad, even if it is muscular in character. That which is most useful is not repose, but muscular activity in the open air, avoiding so great activity as to induce fatigue.

It is necessary that neither food nor drink should be taken between meals.

It is necessary to lengthen the interval between the meals. *It is possible to eat but once a day.* (The writer has sometimes found one meal a day not only possible, but decidedly beneficial in cases of this sort, and in a few instances has obtained rapid improvement by prescribing total abstinence from food by the stomach for a number of days in succession, maintaining the nutrition of the patient in the meantime by rectal alimentation.)

Our author continues, "If one eats but two meals, shall they be separated by twelve hours?" No; the requirements of the body are much less during the period devoted to sleep. It is best to allow nine hours between the two meals as the diurnal interval, and fifteen hours for the nocturnal interval. This separation of the meals sometimes suffices to cause a disappearance of acidity, sensations of burning, and to arrest the loss of flesh of invalids who control their appetite in order to prevent their pains.

If more than two meals are eaten, the interval between the two principal meals should be eight hours, four hours between the first and second meal, the first meal being a very light one, composed of the most digestible food.

The following paragraph, which we quote entire, wholly agrees with the views which the writer has maintained for nearly eighteen years, and has been confirmed by many observations:—

"As digestion requires that food should be not only moistened but penetrated by the gastric juice, it is necessary that it should *not be fatty in character*. It is not the duty of the stomach to digest fat, and fats may prevent it from digesting that which it should digest, by preventing the solution of hydrochloric acid, which represents the gastric juice, from moistening, penetrating, and hydrating the food substances. It is important that fatty substances should be in a state of emulsion, as in milk."

Foods must be divided as thoroughly as possible. All substances which have a tendency to ferment must be discarded, as also hard substances and certain portions of bread.

Bread usually disagrees with dyspeptics, but rice, barley, oatmeal, and unfermented breads are well tolerated.

In the use of bread, only the crusts, made into roasted meal (granola), should be permitted. This is due to the fact that the baking which has interrupted the fermentation of the dough has not permanently arrested it. Fermentation begins again when the moisture and temperature are such as to furnish favorable conditions. In torrefied bread (twice baked bread, or zwieback), the fermentation is, on the contrary, permanently arrested.

The patient must take nothing except at meals, and must energetically resist the cravings of hunger and thirst, even when this resistance occasions suffering, and in spite of the momentary relief which the satisfaction of these needs seems to give. The food must be taken slowly, and patiently masticated until it is reduced to a *puree* (smooth paste).

The author recommends as suitable articles of food for persons suffering from dilatation of the stomach, soft boiled eggs, eggs beaten with milk, milk solidified (by the addition of a small quantity of lemon juice or rennet, and afterwards boiled), rice prepared with milk, *purees* of peas or beans, wrongly considered as increasing flatulent dyspepsia, and cooked fruits. Of fresh fruits, "only three should be permitted,—strawberries, peaches, and grapes. I do not know why these are better digested than others by dyspeptics, but experience shows this to be a fact."

Pure water is recommended as the only proper drink. Wine and other alcoholic drinks, and tea are prohibited. In cases in which starch is not well digested, the patient must be placed upon a milk diet. In extreme cases, it is necessary to begin with very small quantities of milk, as in cases of ulceration of the stomach. The quantity may be even so

small as one tablespoonful every two hours. The quantity may soon be increased to one quart in twenty-four hours, this quantity being divided into ten equal doses, or about three ounces for each dose. The quantity may be still further increased to two quarts, or two and one half quarts, daily. Gradually, other food may be added. At first, take the yolk of an egg well beaten in a glass of milk, gradually increasing the number until ten yolks are taken daily. One may then add, twice a day, a porridge of rice,

barley, or oatmeal, allowing eight hours to intervene between the meals, and omitting one or two doses following each meal. After a week or two, a soft boiled egg may be added to each of the two principal meals. Finally, as the principal meals are increased, the portions of milk taken between meals will be omitted. In cases in which the patient is very feeble, it is often useful to employ nutritive enemata of peptonized foods. Peptinized milk or gruel is to be preferred.

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### HOW TO STERILIZE MILK.

SINCE the subject of the sterilization of milk has been agitated, the question is often asked, What is the best method of sterilizing milk? that is, destroying the germs of disease or fermentation which it may contain. We have made many experiments, and from our experience can confirm the results of many observers who have given attention to this subject, that the complete sterilization of milk is a matter of no small difficulty. Any liquid, no matter how putrescible when exposed to the air under ordinary circumstances, when completely sterilized and excluded from the air will keep in a perfectly fresh condition for an indefinite length of time. Milk which has been boiled for half an hour once or twice each day for several days in succession, will keep for a number of days, and if boiled every day and quickly cooled, a given quantity of milk may be kept for an indefinite length of time; but our experience has been that milk thus sterilized by hard boiling will not keep sweet for more than two or three days without reboiling. This is due to the fact that some of the germs contained in milk are particularly hard to kill, and require a temperature above that of boiling water.

We have recently been conducting some experiments upon this subject, with results so satisfactory that we are glad to be able to communicate them to the readers of *GOOD HEALTH*. The first experiments were made with a tin receptacle capable of resisting a pressure of twenty-five pounds. This was partly filled with water and placed in boiling water, to the action of which it was exposed for half an hour.

The pressure indicator showed no very considerable increase in pressure within the closed receptacle. We then tried boiling the tin vessel in a saturated solution of salt in water, when the pressure, as indicated by the pressure gauge, rose to four pounds. This was the result which we expected. We accordingly proceeded to a further experiment, which consisted in boiling milk tightly sealed in strong bottles, in the saturated solution of salt. Milk sterilized in this way, by boiling in the salt solution for half an hour, will keep perfectly for an indefinite length of time. We opened, a few days ago, a bottle of milk which had thus been sterilized some two weeks previously, and found it to be of as fresh and pleasant a flavor as when placed in the bottle. It is only necessary to take the precaution to allow the solution of salt, in which the bottles are boiled, to cool before removing the bottles. If the bottles are removed from the solution while hot, they will almost instantly burst. The vessel containing the bottles of boiling milk should be set aside and allowed to cool gradually, when the bottles should be removed and placed in an ice chest or an ordinary refrigerator. Ordinary soda-water bottles are excellent for the purpose; or beer bottles may be used. Ordinary corks may be used for the purpose, but they should be previously boiled for half an hour. They should be pressed in tightly, and fastened with wire. After the bottles have been cooled and removed from the boiling kettle, the tops should be carefully dried, and covered with sealing wax, such as is ordinarily used for canning purposes.

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**LOOK OUT FOR ICE-CREAM.**—Ice-cream is unwholesome enough at any season of the year, but during the warm months it is particularly dangerous, and occasionally, even deadly. Recent newspapers contain an account of a church picnic held in a Western State, at which every person present who partook of ice-cream, — probably forty or fifty in all, — were made very sick,

and within a few hours the minister and two elders were dead, and several others were in a hopeless condition. Doubtless this is another illustration of tyrotoxin poisoning. Tyrotoxin is a deadly ptomaine which is formed in ice-cream, or rather in the milk from which it is made, by the action of germs. It is frequently found in cheese.



## ANSWERS TO CORRESPONDENTS.

**STOPPAGE OF TEAR DUCT.**—Mrs. D. B., N. Y., states that her right eye troubles her, by reason of (she thinks) the stoppage of the tear duct, which permits tears to constantly run down the cheek. This makes the eye inflamed and sore, and of late, instead of tears, the flow has been of a yellowish color. She has the catarrh badly; would that cause this discharge? She asks, "Is there any home treatment for closed tear duct?"

*Ans.*—You ought to consult a first-class oculist. Your case is not likely to be benefited by any home prescription.

**FROG HAMS AS FOOD.**—H. E. M., Mich., asks the question: "What do you think of frog hams as a food?"

*Ans.*—Frog hams may be excellent food for certain species of fish, turtles, snakes, storks, and cormorants, but cannot be recommended for the dietary of human beings.

**LIQUID OR SOLID FOOD IN DIGESTION.**—W. H. S. wishes to know which is more easily digested, liquid or solid food?

*Ans.*—In the stomach, food should always be in a liquid or semi-solid condition. Food swallowed in a solid state will, of course, be very difficult of digestion, but if properly masticated, solid food should be as easy of digestion as liquid food. In some cases solid food, properly eaten, is digested more easily than liquid food. Considering, however, that solid food is seldom thoroughly masticated, it may be said in general that liquid food is more easily digested than solid food.

**SPINAL PAINS, ETC.**—A lady correspondent between twenty and thirty years of age, of poor health, although regular habits of body, has been troubled, for several years, with sudden, sharp pains in the spine at the small of the back, which always attack her during the period of defecation. These pains come and go, never lasting beyond a moment, but they cause so great chilliness at the time that "goose pimples" rise upon the surface of the body. She would be glad to learn the cause of these pains, and also a remedy for them. She also asks, "Is it injurious to the eyes or stomach to study soon after eating?"

*Ans.*—It is probable that there is some rectal disease present which is the occasion of pains. Intense study soon after eating might interfere with digestion.

**ACETIC ACID.**—L. C., Texas, asks, "What effect does acetic acid have upon the mucous membrane of the stomach?"

*Ans.*—Acetic acid is an irritant, and when concentrated, has the effect to soften fibrous tissues. Its effect upon the stomach is to interfere with digestion, lessen the activity of the gastric juice, and irritate the mucous membrane of the stomach.

**CHRONIC IRRITATION OF MUCOUS MEMBRANE.**—L. R. K., Me., asks, "What diet and general treatment would you recommend for a chronic case of irritation (perhaps inflammation) of the mucous membrane of the stomach and intestines, especially of the ascending colon?" He asks for as minute directions as possible.

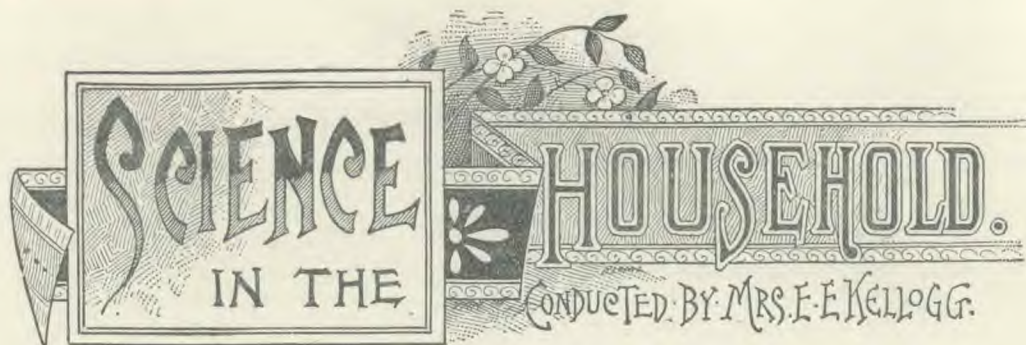
*Ans.*—Such a case as yours requires much more specific prescriptions than can possibly be given in these columns. It would also be necessary to make a personal examination to ascertain the cause of the irritation or inflammation. You ought to make a visit to the Sanitarium, if possible. If not possible, consult the best physician within your reach.

**CATARRH ABSCESSSES IN THE HEAD.**—Cod Liver Oil, etc.—C. J. H. writes regarding the case of a little boy of eight years, who has had catarrh from babyhood, culminating, during the last year, in gatherings in his head, which at first discharged through the ear and nose, and later—by reason of a wound received through a fall—also from an opening underneath his chin. He is now taking Cod Liver Oil, Beef and Iron, and Extract of Malt. Are these medicines suited to the case? The family would be deeply grateful for any advice concerning treatment.

*Ans.*—The so-called abscesses of the nose are usually the result of inflammation in some of the numerous bony chambers connected with the nasal cavity. It is impossible to make a prescription for a case of this kind, which can only be successfully treated by a skillful specialist. We would advise that the child be sent to the Sanitarium.

**FLUSHED AND BURNING FACE.**—A correspondent inquires, "If one's face becomes flushed and burns every day, from about eleven or twelve o'clock until two, or beyond, in the afternoon, does it indicate a rise of temperature? If so, please explain the cause."

*Ans.*—No, not necessarily. The cause may be either a rise of temperature, or some disturbance of the digestive organs.



## HOT WEATHER DIET.

BY E. L. SHAW.

THE diet, particularly during the hot-weather months, ought to be, both in material and in manner of preparation, simplicity itself. Heating, clogging, stimulating foods of all kinds must be utterly tabooed if we would pass unharmed through the trying conditions which summer imposes. Meats, which have, rightfully, little or no place on our tables at any time, have now, if possible, less than ever. Surely, Nature's provision — cereals, fruits, and vegetables in their season — is sufficient. We may borrow many a health hint from the kindly dame, who would not that any should perish, but that all might be saved — hygienically, which means mentally and morally too, much oftener than we are apt to think. Her agencies, if we notice, are all kindly, grateful, soothing; witness with what an altogether pleasing and comfortable sensation her mild, bland foods settle into their own place in the human economy, and how gratefully her cool fruit juices lave our heated and feverish throats!

Whole-wheat bread, oatmeal, cracked wheat, and other whole-grain preparations constitute the most perfect of summer foods, being the most nutritious and easily digestible. They possess the merit, too, of being easily prepared, and though needing prolonged cooking, by the use of the double boiler, they will need little care, after the swelling or thickening stage, beyond keeping the water boiling in the outer vessel. Grains may be cooked the day before, and warmed for breakfast, or cooked during the morning for the day's dinner. These, with the addition of bread, milk, and fruit, make a meal simple, healthful, delicious, and we must not forget to add — *sensible*, since it involves so little expenditure of time and strength. To those who regard eating and drinking mostly as a necessity, and find life at its simplest much too short for all they had set themselves to do, this last consideration will seem an important one. Contrast, at dinner time, the cheery and restful demeanor of the house mother who feeds her flock in such simple fashion, with that of a housekeeper who fancies that *her* duty to her family lies in spending the long hours of the forenoon in a hot kitchen, coming therefrom

to the table, heated beyond measure, and "too tired to eat;" and in hot weather, at least, the odds in favor of the former's management will be apparent to the most unobservant eyes.

Probably but a small proportion of people are wholly exempt from bowel disorders during the summer months, and many persons suppose these disorders to be necessarily incidental to the season. But this is a mistake. It is quite possible, by simplicity in habits and diet, to as readily secure immunity from all disturbances of digestion during this as at any other season of the year. Fruit has often been thought to be one great disturbing cause, but this is a rank libel upon this delicious appetizer. It is not the fruit, but rather the bad company that fruit is often found in, within the human stomach, that makes the mischief. Fats, meats, and fruit never did affiliate, — never will. Ripe, perfect fruit is of itself the rarest tonic; cooling, bracing, nutritious, and when eaten at proper times, one of the best of aids to digestion. One surely need not be a sybarite to prefer oranges to peptones, or strawberries to extract of malt!

Part of the price one must pay for perfect health during the summer months, is the renunciation of all iced drinks. Ices, too, must go. Even ice-cream, with its sweet suggestion of domesticity, is a delusion and a snare. Ice cold foods taken into the stomach, retard digestion, thus affording most favorable conditions for fermentation, to say nothing of grave maladies, both acute and chronic, which may be induced by the sudden chilling of so delicate and sympathetic a nerve center of the body.

But the summer thirst, which is at the bottom of all the great demand for ices and iced drinks, being a purely natural desire based upon a real need of the system, Nature has provided for its assuaging, — what so cooling, so refreshing, so altogether satisfying, as a long draught from the wine of her own brewing — that marvelous vintage crushed from the heart of the orange, the lemon, the currant, the grape? No hygienic ban is laid upon this delicious "summer drink," neither are there any after-effects to be dreaded.

TO CLEAN BLACK LACE.—Squeeze (not rub) the lace until thoroughly clean in one half cup of soft water in which a teaspoonful of borax has been dissolved, and a teaspoonful of spirits of wine afterward added. To impart body and requisite stiffness, wring the lace out of a soft liquid made by boiling a black kid glove in water until it is of the consistency of thin starch; then spread out smoothly on a cloth laid upon some hard surface. Spread a cloth also over the lace, and place upon it a board and weights. Keep in this press until perfectly dry, and the lace will be restored like new.

GLUE IN THE HOUSEHOLD.—The glue pot as a useful and economic factor of the home has scarcely been appreciated, but after its once doing duty in the way of patching up and general reconstruction of any number of can't-be-spared articles in a household, it will, we feel sure, ever after be regarded as indispensable to the family comfort. It is surprising how the glue pot can make life all over for the children! supplying a doll leg here, a doll arm there, and possibly doll hair and doll eyes also: in fact, giving the little ones a longer lease of all their toys, besides even saving dollars in the way of furnishing outsides or insides, or both, to their school books. By its

aid, too, the shabby volumes of Dickens and Carlyle—loved to their undoing—are once more able to stand alone in the bookcase; while Uncle Tom's Cabin—a leaf in a place—is gathered up, and lives to bless its careful friends. The family furniture is, also, not infrequently made “almost as good as new,” with slight cost beyond a little painstaking.

But the crowning achievement of glue is when it appears in the *role* of the family cobbler. Its possibilities in this direction are not as generally known as they should be. A contributor to the household department of one of the current magazines thus gives her own experience: “Having a pair of shoes that were breaking loose from the sole and had a hole in the toe, I experimented upon them. Cutting a neat tap for the toe out of an old shoe-top, I stuck it fast over the hole, and put one on the other shoe to make it correspond. I then glued the uppers to the sole where the stitches were broken, and cutting a half sole out of boot leather, stuck it fast to the bottom to protect the rest of the stitches. A coat of blacking made them look quite respectable. I now have worn them at home for two months since they were mended; they look as well as ever, and the patching is still tight. We have also repaired the children's shoes in like manner.”

E. L. S.

### RELISHES FOR THE SICK.

FRUIT JUICE EGG-NOG.—Beat the white of one egg to a stiff froth. Add a tablespoonful of white sugar, then beat again. Next, add the yolk of the egg and beat again. Then add a tablespoonful of milk, one of cold water, and one of raspberry juice, or the juice of any other fruit preferred which is not tart enough to curdle the milk. Serve at once.

LEMON JUICE EGG-NOG.—Prepare the egg-nog the same as above, only using two tablespoonfuls of water, instead of one of water and one of milk. Then put in a teaspoonful of lemon juice instead of the fruit juice. This is very nice.

EGG LEMONADE.—Beat the white of an egg to a stiff froth; then mix it with the juice of a small lemon, and a level teaspoonful of sugar. Add a half pint of cold water; stir thoroughly, and use at once. It will not do to let it stand.

LEMON OATMEAL GRUEL.—This is specially suitable for fever patients. Rub one tablespoonful of fine oatmeal smooth in a little cold water. Stir into this three pints of boiling water. Cook until

the quantity is reduced to two pints. Let it cool and settle, and then pour the clear gruel from the sediment. Add the juice of a lemon, and sugar to sweeten. This may be served cold or hot, but if served hot, it must be reheated before the lemon juice is added. It will not be so good if heated after the lemon is put in.

WHEAT CRISPS.—Sift a quart of graham flour into a bowl. Make a hole in the center and stir into it gradually two thirds of a pint of ice-cold water—that is, stopping to make a bit of dough with each teaspoonful of water before more is added. After the water is all added in this way, mix very thoroughly, or beat with a mallet to incorporate more flour and air. To do this, beat into a thin sheet; sprinkle on more flour; double over half, and pound quickly around the edges to keep in as much air as possible. Repeat the process, and keep up the beating for at least three-quarters of an hour. Then roll as thin as the blade of a knife, and bake quickly in a hot oven. Turn carefully, and brown upon both sides. It will be found nice and crisp and quite tender. These are very nice for people who are either dyspeptic or diabetic.

## LITERARY NOTICES.

WE have, before us, the handsome booklet of the Proceedings of the Twenty-third Annual Meeting of the Michigan State Press Association, for 1890, and in faultless taste it is, from its first cover, bearing the quill pen boldly sketched in gold, lying across it, to the last, with its fine monogram. Its contents, too, are most enjoyable, being a "continued story" of the happy and varied experiences of the State Press in their royal outing last year, written by the editors themselves, and embellished by numerous photo-engravings of individual members, together with Kodak "snaps" of scenes which they visited. To all concerned, this charming booklet must always constitute the most perfect of souvenirs of that series of rare entertainments, and delightful railway travel.

IN the July number of *Babyhood*, Dr. David Warman publishes a valuable paper on the subject of difficult dentition and lancing of gums, which is designed to correct erroneous impressions that prevail among mothers in regard to the teething process. Mrs. Felix Adler describes a plan for providing poor children with sterilized milk; Mrs. Christine Terhune Herrick contributes practical "Hints for the Toilet of Children," and various writers discuss such topics as "A Clothes-Basket Bassinette," "A Defense against Mosquitoes," "A Folding Bath Tub," "A Protest against Whipping," "Smiles and Frowns," etc. The department of Nursery Problems deals largely with seasonable subjects, such as "Fruit in Summer," "Summer Dress," etc., and altogether the number will be found to contain matter valuable to mothers and all having the care of young children. Babyhood Publishing Co., 5 Beekman Street, New York City.

WE have received the initial number of the *Hygienic Advertiser*, a new English monthly devoted to advanced ideas on all subjects pertaining to moral and physical health. This little magazine is the organ of the London Natural Living Society (T. R. Allinson, L. R. C. P. President), and will, we trust, be scattered far and wide to wage war against intemperance, gluttony, and kindred sins, and to teach the knowledge of pure and healthful living to many thousands of readers. The periodical promises, besides, to be an excellent vehicle for advertisers of sanitary, hygienic, or dietetic specialties. Ernest May, Publisher, Harlesden Grove, London, N. W.

*Good Housekeeping* presents, each month, a great variety of articles on important household topics, which are treated serially, each paper being complete in itself. This variety is particularly noticeable in

the July number, comprising one of Miss Parloa's "Ten Mornings in the Kitchen," "Company-Giving and Receiving," "Literary Snap-Shots," "Decorative Fashions and Fancies," "Amateur Entertainments," "Quaker Housekeeping," "Household Table Drinks," "Decorative Painting," etc. Besides, there are special provisions made for the entertainment of the young people, and a great number of stories, poetry, and articles relating to many of the interests of life. Clark W. Bryan & Co., Publishers, Springfield, Mass.

"TEACHING IN BOTH CONTINENTS" is the title of a carefully prepared volume by E. C. Grasby (Cassell Publishing Co.), which is introduced to American readers by Prof. W. T. Harris. It is a comparative study of our school system in connection with those of other nations. "In this book," says Prof. Harris, "we have the rare opportunity of seeing our educational system as it appears to one of our large-minded cousins from the opposite side of the world;" and he adds, "The very intelligent criticisms of Mr. Grasby will be read with profit by all our teachers and school directors." The book will no doubt be of great interest also to the patrons of our schools, as well as to those interested in our school system in a more general way.

"JOHN OF WYCLIFF" (Pacific Press Publishing Co.), is a brief but interesting account of the life and work of this noted reformer, as well as of the contemporaneous history of his time. Young people, for whom this and similar works are gotten out by this house, no doubt find these smaller installments of history and adventure more satisfactory than more pretentious works, while in this way, a few clustering facts and data are established in the mind, which otherwise, being jostled in a throng of others of equal importance, might be lost.

*The Woman's Tribune* is a frequent and welcome visitor to our table. This is an ably edited weekly newspaper, fully in touch with all that is pertinent to the progress of womankind in the different lines of their advancement. Not only is the special mission of this paper to educate the public conscience in regard to the rights of women, but with the enthusiasm of her bright brain and large heart the brave woman at its head attacks all wrongs, and labors to correct all abuses. That the good work she is doing meets with prompt appreciation in the shape of an ever increasing subscription list, we are glad to know. \$1.00 per year. Mrs. Clara Bewick Colby, editor and publisher, Beatrice, Neb., and Washington, D. C.

## PUBLISHERS' DEPARTMENT.

WE wish again to remind agents and new readers, who may wish to have the complete set of "Health, Grace, and Beauty" papers, that these articles will be issued in book form and announced as soon as ready.

\* \* \*

MRS. E. H. WHITNEY and daughter Jeanne represent the Sanitarium at Chautauqua this summer. Mrs. Whitney is specially engaged in the study of medical missionary work; Miss Whitney will devote herself specially to the science of physical culture.

\* \* \*

THE publishers of GOOD HEALTH feel almost compensated for their losses in connection with the recent fire which consumed the home of the journal, by the many expressions of sincere sympathy received, and the congratulations on the promptness with which GOOD HEALTH made its appearance a little behind the usual time.

\* \* \*

THE plates of the Health Science Leaflets and Social Purity Leaflets, which were destroyed by the recent fire, will very soon be reproduced. We have no copies of these small works on hand at present, but we shall be glad to receive orders from those who are likely to want a supply soon, to enable us in determining the size of the edition to be published.

\* \* \*

A NEW edition of the "Monitor of Health," the plates of which were consumed in our fire, is completed and ready for delivery. Several hundred copies have already been sent out. It was found necessary to reset the type for the entire book. The work has been pushed so rapidly that we have been able to fill orders without delay.

\* \* \*

THE Sanitarium class of medical students, numbering twenty, are having the benefit of a special course of instruction in bacteriology, by Prof. Paquin, State Sanitary Veterinarian of the State of Missouri, and Professor of Bacteriology in the University of that State. Prof. Paquin was a pupil of the eminent Prof. Pasteur, and is an admirable teacher.

\* \* \*

THE Sanitarium School of Scientific Cookery, to be held in connection with the Bay View Assembly, will begin July 27. Mrs. Kellogg, who will have charge of the work, will be assisted by Mrs. Kress and Miss Evora Bucknum, both of whom have taken a course of cookery at the Sanitarium, and have had a successful experience in conducting cooking-schools.

\* \* \*

THE Sanitarium patients are enjoying a most delightful Michigan summer. We are having a constant, cool, pleasant breeze, with just enough cloud to render the sunshine more delightful, which makes it almost impossible to stay indoors, even in spite of the attractions of the gymnasium, and various other interesting and improving features of the great Institution.

\* \* \*

WE have on hand several hundred copies of the cloth edition of Dr. Kellogg's popular work on nasal catarrh. The pamphlet edition was destroyed. The work is finely illustrated by plates, and contains a great number of valuable suggestions for the prevention and home treatment of this common malady. Doubtless it is the most practical work of the kind which has appeared in recent times.

A LIVE corps of canvassers for GOOD HEALTH, who have been at work in a neighboring city for some weeks, having nearly completed their work there, are now entering other cities, and with great success. One agent reported thirty-one orders in five days. Any intelligent young man or woman, who has been properly instructed regarding the introduction of this work, cannot fail to meet with success in any intelligent community.

\* \* \*

MISS LOUISE STORMONT, a former contributor to GOOD HEALTH and more recently a patient at the Sanitarium, has organized and is conducting successfully a very enthusiastic Health, Grace, and Beauty club. She writes us that the interest is good, and that each number of GOOD HEALTH is looked for with great interest. She has already received her premium, the Home Hand-Book, and states that she is more than pleased with the work, and feels amply paid for the effort she has made in a useful direction.

\* \* \*

THE Sanitarium Food Company received the other day, an order for its foods from a professional pugilist in a Western city, who is training himself for a prize fight. He said he had found these foods the best means of making muscle of anything he had ever tried. The Sanitarium Food Company are sorry to have their excellent food products employed for a purpose so little useful, nevertheless they filled the order, and recognize in the experience of the pugilist another evidence of the high character of their foods.

\* \* \*

MISS EVORA BUCKNUM has just returned from a medical missionary trip to Wisconsin and Minnesota. She reports excellent success and a great interest in her cooking-schools. In Minneapolis, the interest was so great that she was obliged to move from one place to another, as her audience grew, until at last the membership reached between three and four hundred. Equal enthusiasm was met with in Wisconsin. There is certainly no more practical means of teaching health principles than these schools of hygienic cookery.

\* \* \*

WE have on hand a small stock of "Sunbeams of Health and Temperance," a popular work which has always found a ready sale wherever it has been introduced. The book is full of practical suggestions on the subject of health, presented in an attractive and interesting manner. There are certainly hundreds of young men and women who might succeed admirably in the sale of this volume. There are few more meritorious publications offered for sale by subscription. Agents who wish to handle this valuable work should address the Good Health Publishing Company.

\* \* \*

THE rapid increase in the popularity of GOOD HEALTH, and the liberal additions to our subscription list each month, encouraged us to print an extra edition of several thousand copies of the June number, but these are already gone, so that subscriptions must hereafter begin with the July number. The enthusiasm of the friends of the journal has already gone far beyond our expectations, and the success of the canvassing agents who have engaged in the work has also more than realized our most sanguine hopes. Agents will please note the announcement that subscriptions from this date must begin with the July number. We shall print a still larger edition of the July number, so that hereafter all who wish to start with this number may do so.

## PUBLISHERS' DEPARTMENT.

WE call special attention to the advertisement of health foods by the Sanitarium Food Co. These foods are just the thing for summer use. Any mother who wishes to take her children through the summer without attacks of indigestion or bowel trouble, will do well to introduce upon her table the excellent food products prepared by this company. They are in constant use at the Sanitarium and Sanitarium Nursery. They are all guaranteed to be pure, made of the very choicest material, and are found indispensable at the Sanitarium in the treatment of various classes of invalids suffering from chronic stomach disorders.

\* \*

THE corps of physicians at the Sanitarium has been recently reinforced by three newly graduated lady physicians, who have all been students in the Sanitarium, and have had an excellent preparation for their work. The names of these ladies are as follows: Miss Lillis A. Wood, Miss Ruth O. Bryant, and Miss Addie C. Johnson. The large corps of well trained nurses, medical matrons, and physicians, added to the great unrivaled list of appliances afforded at this Institution, place it, doubtless, foremost in the line of medical institutions of like character in the world. At any rate, this is the testimony of all who have visited the Institution after having had experience at other establishments in this and other countries. There is already a large family of patients at the Sanitarium, but still there is room for more.

\* \*

THE patients at the Sanitarium are enjoying a course of lectures and lessons in cookery, delivered weekly by Mrs. Kellogg, in the lecture room of the Sanitarium Hospital.

\* \*

THE Sanitarium helpers had a lawn social Monday evening last, July 6, one of the features of which was a wedding. The principal actors in this part of the program were Dr. A. J. Hoenes and Miss Julia Bucher. Occurrences of this sort at the Sanitarium are not very frequent, as the strict rules of the managers place considerable restriction upon the association of the young people, a thing eminently necessary in an establishment where two or three hundred young persons of both sexes are constantly employed. The appearance of the young couple standing together under a big bell of flowers, which some of their friends had surreptitiously constructed for the purpose, was a very patent evidence of an infraction of the rules. Nevertheless, they looked anything but guilty while the chaplain administered some remarks appropriate for the occasion, and the happy couples received with evident satisfaction their sentence of banish-

ment from the Sanitarium family for a month or six weeks, and at the present moment are doubtless spending their exile in a most charming manner, sailing on a trip around the Great Lakes.

\* \*

THE publishers of GOOD HEALTH have always maintained that the publisher is responsible for his advertising columns as well as for whatever else appears in his journal, and consequently, make it a rule to admit nothing in the line of advertisements which they are not prepared to commend to its readers. Those who appreciate this fact doubtless find it to their profit to glance through the advertising columns as well as the other interesting matter furnished by each monthly issue, and have no doubt noticed an advertisement setting forth the virtues of Peroxide of Hydrogen. It is, perhaps, sufficient recommendation of this article to say that it is in use in the Sanitarium, and Sanitarium Hospital wards, and is considered by Dr. Kellogg and his assistants indispensable for many of the purposes for which it is recommended.

\* \*

GRAND EXCURSION TO TORONTO. NATIONAL EDUCATIONAL ASSOCIATION, JULY 8 TO 15 INCLUSIVE.—The Chicago & Grand Trunk, in connection with the Grand Trunk Railway, is recognized as the only first-class Pullman and Palace Dining Car Route to Toronto.

These companies have secured 100 Pullman Palace Sleeping cars to be used upon the occasion of the above Excursion, which will secure to its patrons every possible comfort without crowding. Tickets will be sold at the rate of single fare for the round trip, plus \$2 membership fee, July 8 to 15 inclusive, good to return until July 22; but by following instructions on the face of the ticket, they will be extended to September 25.

Hundreds of attractive trips can be made from Toronto at rates of single fare and less for the round trip. Apply to Agents of the Chicago & Grand Trunk Railway for some of this Company's magnificently illustrated advertising matter giving full particulars of this Grand Excursion, or to W. E. Davis, G. P. & T. A., Chicago & Grand Trunk Railway, Chicago, Ill.

\* \*

A NEW AND ENLARGED EDITION OF SOCIAL PURITY.—A new revised and enlarged edition of this popular pamphlet is now in press. It will be issued in a new form with extra linen paper cover, printed on fine paper. There has been a considerable addition of new and valuable matter, making an eighty-page pamphlet. The retail price will be twenty-five cents. It will be furnished in quantities at the same rate of discount as heretofore. The new edition will be ready in about two weeks.

## ADVERTISEMENTS.



Balcony Railing.

guards, and grilles. We make ornamental wire, iron, and brass work of all kinds.

# E. T. Barnum,

### ART WIRE & IRON WORK.

SEND FOR CATALOGUE of newest designs of artistic wire and iron work, iron fences, railings, stable fixtures, window

DETROIT,  
MICH.

## The St. Louis Hygienic College

OF

### PHYSICIANS AND SURGEONS

Will begin its FIFTH ANNUAL COURSE OF INSTRUCTION, TUESDAY, SEPT. 29, 1891. Men and women are admitted.

### This is the only Hygienic College in Existence.

It has a full three years' course. This course embraces all the branches taught in other medical colleges; also Hygiene-Therapy, Sanitary Engineering, and Physical Culture.

For further information, address for announcement,

S. W. DODDS, M. D., DEAN,  
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CH. MARCHAND'S  
**PEROXIDE OF HYDROGEN,**  
(MEDICINAL) H<sub>2</sub>O<sub>2</sub> (ABSOLUTELY HARMLESS.)

Is rapidly growing in favor with the medical profession. It is the most powerful antiseptic known, almost tasteless, and odorless.

This remedy is not a Nostrum.



Can be taken internally or applied externally with perfect safety. Its curative properties are positive, and its strength and purity can always be relied upon.

A REMEDY FOR

DIPHTHERIA ; CROUP ; SORE THROAT, AND ALL INFLAMMATORY DISEASES OF THE THROAT.

OPINION OF THE PROFESSION.

Dr. Geo. B. Hope, Surgeon Metropolitan Throat Hospital, Professor Diseases of Throat, University of Vermont, writes in an article headed "Some Clinical Features of Diphtheria, and the treatment by Peroxide of Hydrogen" (*N. Y. Medical Record*, October 13, 1888). Extract :

" . . . On account of their poisonous or irritant nature the active germicides have a utility limited particularly to surface or open wound applications, and their free use in reaching diphtheritic formations in the mouth or throat, particularly in children, is, unfortunately, not within the range of systematic treatment. In Peroxide of Hydrogen, however, it is confidently believed will be found, if not a specific, at least the most efficient topical agent in destroying the contagious element and limiting the spread of its formation, and at the same time a remedy which may be employed in the most thorough manner without dread of producing any vicious constitutional effect.

" In all the cases treated (at the Metropolitan Throat Hospital), a fresh, standard Marchand preparation of fifteen volumes was that on which the experience of the writer has been based.

" A steady, coarse spray, with an air pressure of twenty pounds or more, will in a few moments' time produce a more positive action than prolonged efforts to reach the fauces by means of cotton applicators. The force of the spray should be sufficient to cleanse at once the surface accumulations, as it destroys the necrosial elements with which it comes in contact. In this manner the removal of the *débris* and the action on the deeper structures go hand in hand.

" How frequently the treatment is to be followed up depends to a considerable extent on the density as well as the area of the surface involved. It may be said, however, that two applications a day, in the great majority of cases, should be sufficient, if thoroughly performed, to arrest all danger of extension and accomplish the gradual resolution of the local formation.

Dr. E. R. Squibb, of Brooklyn, writes as follows in an article headed "On the Medical Uses of Hydrogen Peroxide" (*Gaillard's Medical Journal*, March, 1889, p. 267), read before the Kings County Medical Association, February 5, 1889 :—

**CAUTION.**—I would earnestly impress upon the profession the very great importance of prescribing only my Peroxide of Hydrogen (Medicinal), from which all hurtful chemicals have been eliminated. By specifying in your prescriptions "Ch. Marchand's Peroxide of Hydrogen (Medicinal)," which is sold only in ¼-lb., ½-lb., and 1 lb. bottles, bearing my label and signature, you will never be imposed upon. Never sold in bulk. PREPARED ONLY BY

A book containing full explanations concerning the therapeutical applications of both CH. MARCHAND'S PEROXIDE OF HYDROGEN (Medicinal) and GLYCOZONE, with opinions of the profession, will be mailed to physicians free of charge on application.

☞ Mention this publication.

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

SOLD BY LEADING DRUGGISTS.

Laboratory, 10 West Fourth Street, New York.

# Sunbeams of Health and Temperance,



Which is just the thing for a Valuable and Entertaining *Christmas Present* for the Young Folks. The following are the titles of the principal sections of the work:—

*The House We Live In,*                      *The Habitations of Men,*  
*Some Strange People,*                    *The World's Bill of Fare,*  
*Dame Fashion and*                           *Health and Temperance*  
*Her Slaves,*                                   *Miscellany,*  
*Hygiene for Young Folks.*

One of the Most Unique and Interesting Volumes Ever Published.

240 QUARTO PAGES.      PROFUSELY ILLUSTRATED.      CLOTH, GILT-EDGE.

GOOD HEALTH PUBLISHING CO., Battle Creek, Mich.

## MICHIGAN CENTRAL

"The Niagara Falls Route."

Corrected June 28, 1891.

	†Mail.	†Day Express.	*N. Shore Limited.	*N. Y. Express.	*Atl'tic Express.	†Eve'g Express.	†Kal. Accom'n
<b>EAST.</b>							
STATIONS.							
Chicago.....	am 7.05	am 9.00	pm 12.20	pm 8.10	pm 10.10	pm 9.25	pm 4.55
Michigan City	9.10	11.10	2.00	4.48	am 12.25	11.25	7.00
Niles.....	10.20	pm 12.43	2.53	5.50	1.45	am 12.40	8.25
Kalamazoo.....	12.00	2.20	3.55	7.04	3.35	2.17	pm 10.05
Battle Creek.....	pm 12.55	2.59	4.25	7.37	4.29	3.04	7.27
Jackson.....	3.05	4.25	5.32	8.52	6.25	4.45	9.05
Ann Arbor.....	4.42	5.25	6.22	9.45	7.45	6.05	10.19
Detroit.....	6.15	6.45	7.20	10.45	9.20	7.30	am 11.25
Buffalo.....	am 8.00	am 3.00	am 6.25	pm 5.05	pm 5.05	pm 7.00	
Rochester.....			5.50	9.55	8.10	10.00	
Syracuse.....			8.00	12.15	10.20	am 1.00	
New York.....			pm 8.45	pm 8.50	am 7.00	7.45	
Boston.....			5.40	11.05	10.45	10.45	
<b>WEST.</b>							
STATIONS.							
Boston.....		am 8.30	pm 2.15	pm 3.00	pm 6.45		
New York.....		10.30	4.50	6.00	9.15		
Syracuse.....		pm 7.30	11.55	am 2.10	am 7.20		
Rochester.....		9.35	am 1.45	4.20	9.55		
Buffalo.....	pm 11.00	11.00	2.40	5.30	11.50	am 8.45	
Suspension Bridge			3.25	6.25	pm 12.50		
Detroit.....	am 8.20	am 7.40	9.25	pm 1.20	9.15	pm 4.45	pm 8.00
Ann Arbor.....	9.35	8.39	10.19	2.19	10.30	5.52	9.18
Jackson.....	11.25	9.40	11.18	3.17	11.50	7.15	10.45
Battle Creek.....	pm 1.00	11.12	pm 12.22	4.25	am 1.23	8.47	am 12.05
Kalamazoo.....	2.17	11.55	12.59	5.00	2.17	pm 4 9.30	1 10
Niles.....	4.15	pm 1.12	2.08	6.17	4.15	7.40	3.10
Michigan City	5.37	2.14	3.08	7.23	5.45	8.55	4.30
Chicago.....	7.55	3.55	4.50	9.00	8.05	11.15	6.50

\*Daily. †Daily except Sunday. †Daily except Saturday.  
 Accommodation train for Jackson and all intermediate points leaves Battle Creek at 6.16 P. M., arriving at Jackson at 7.55 P. M., daily except Sunday.  
 Accommodation train for Niles and all intermediate points, leaves Battle Creek at 7.53 a. m., arriving at Niles at 10.05 a. m., daily except Sunday.  
 Trains on Battle Creek Division depart at 8.03 a. m. and 4.35 p. m., and arrive at 12.40 p. m. and 7.00 p. m., daily except Sunday.

O. W. RUGGLES, General Pass. & Ticket Agent, Chicago.  
 GEO. J. SADLER, Ticket Agent, Battle Creek.



## Chicago & Grand Trunk R.R.

Time Table, in Effect May 10, 1891.

GOING WEST.						STATIONS.		GOING EAST.							
Chl. Pass.	B. C. Exp.	Limtd Exp.	Pacific Exp.	Pacific Exp.	Mail Exp.	Dep.	Arr.	Chl. Pass.	B. C. Exp.	Limtd Exp.	Pacific Exp.	Pacific Exp.	Mail Exp.	Day Exp.	Prt.H. Pass.
am	pm	pm	pm	pm	am			am	pm	pm	pm	pm	pm	pm	pm
5.59	4.14	12.13	8.53	7.24	7.16	Port Huron	10.31	12.31	7.35	8.21	10.45				
7.28	5.40	1.20	10.10	8.55	8.31	Lapeer	8.55	11.15	6.17	7.01	9.17				
8.05	6.27	1.48	10.43	9.45	9.05	Flint	8.0	10.45	5.40	6.27	8.35				
8.48	7.23	2.14	11.28	10.30	9.35	Durand	6.50	10.20	5.03	5.55	7.40				
10.00	8.25	3.00	12.33	11.30	10.30	LaSling	5.37	9.30	4.00	5.00	6.35				
10.37	8.58	3.25	1.06	12.05	11.00	Charlotte	4.58	9.01	3.25	4.37	6.02				
1.00	10.00	4.10	2.00	1.00	11.50	BATTLE CREEK	4.05	8.20	2.35	3.55	5.15				
1.48	pm	.....	2.50	1.48	12.30	Vicksburg	2.55	7.43	1.48	am	.....				
1.58	.....	.....	.....	1.58	.....	Schoolcraft	2.42	.....	1.33	.....	.....				
2.52	.....	5.23	3.48	2.45	1.22	Cassopolis	1.50	7.00	12.45	2.35	.....				
3.40	.....	6.00	4.25	3.35	2.10	South Bend	1.00	6.20	12.00	1.57	.....				
.....	.....	.....	.....	.....	.....	Haskell's	11.25	.....	.....	.....	.....				
5.15	.....	7.21	5.55	5.10	3.45	Valparaiso	11.25	5.00	10.30	12.40	.....				
.....	.....	9.30	8.05	7.30	5.50	Chicago	8.40	3.00	8.15	10.40	.....				
.....	.....	.....	.....	.....	.....	Chicago	.....	.....	.....	.....	.....				

Where no time is given, train does not stop.  
 Trains run by Central Standard Time.  
 Valparaiso Accommodation, Battle Creek Passenger, Port Huron Passenger, and Mail trains, daily except Sunday.  
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