

OCTOBER, 1889

GOOD



WIFE

CONDUCTED  
BY

J. H. KELLOGG M.D.

Price 15 Cents

GENERAL ARTICLES . . . . .	289-295
International Health Studies : 6. — Russia ( <i>Illustrated</i> ), by FELIX L. OSWALD, M. D.; The Absolute Signs and Proofs of Death; Short Talks About the Body, and How to Care for It: 8. American Vegetarians.	
DRESS . . . . .	296, 297
The Relation of Dress to Surgical Disease; Deep Breathing.	
HAPPY FIRESIDE . . . . .	298-302
In Autumn Woods ( <i>Frontispiece</i> ), by S. ISADORE MINER (poetry); A Missionary Pear; Some Wonderful Trees — 1, The Palm, by E. L. SHAW ( <i>Illustrated</i> ); What Shall We Do with Our Daughters? The Canal of Joseph.	
TEMPERANCE NOTES . . . . .	303
POPULAR SCIENCE . . . . .	303
TRUE EDUCATION . . . . .	304, 305
The Work of the Teacher; A New Professorship, by E. L. S.	
SOCIAL PURITY . . . . .	306, 307
Woman's Indifference; The Need of the Hour; Stagnant Minds; Impurity in Art.	
EDITORIAL . . . . .	308-313
Germes in Milk; The Mind-Cure Delusion; Food at First Hand; Had Taken Nothing; The Evils of Tea Drinking; Remember Plymouth; Catching Consumption from Cows; Illustrious Gluttons; Interesting to Meat-Eaters; A Delicate Dish.	
DOMESTIC MEDICINE . . . . .	314, 315
Rules for Dyspeptics; A Lesson About Diphtheria; Nettle Rash; To Relieve Cramp; How to Give the Baby the Cholera Infantum; Carpets; For Ingrowing Toe-Nails.	
SCIENCE IN THE HOUSEHOLD . . . . .	316, 317
The Marking System, by E. L. S.; Darning Stockings (poetry); To Mend Rubber Boots.	
QUESTION BOX . . . . .	318
LITERARY NOTICES . . . . .	319
PUBLISHERS' PAGE . . . . .	320

## GOOD HEALTH FOR 1889.

*A Number of New and Talented Writers have been Engaged for 1889, among whom are*

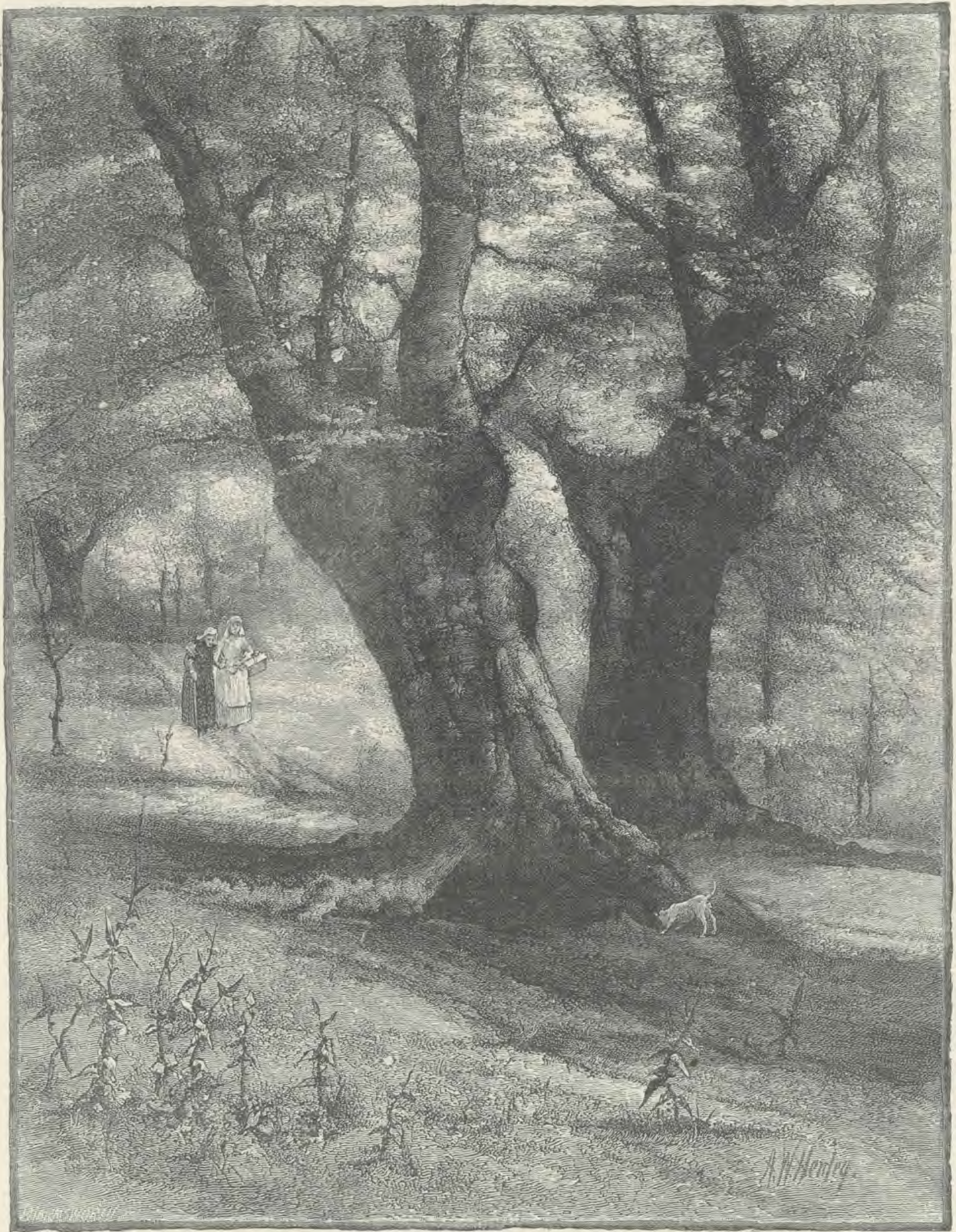
DR. FELIX L. OSWALD, Well known to the reading public as a leading contributor to the *Popular Science Monthly*, and other popular magazines. Dr. Oswald is one of the most talented of American writers, and his extensive travels and acute observations have given him a fund of material with which he cannot fail to interest many thousands of readers in a series of articles, the first installment of which appeared in the May number of GOOD HEALTH, under the general title, "*International Health Studies*."

DR. NORMAN KERR, OF LONDON, ENG., Will furnish a series of practical health papers, which will be of great value and interest to all students of hygiene. Dr. Kerr is well known throughout the civilized world as a physician of high standing, and a pioneer in scientific studies of the problems of inebriety.

Price, \$1.25 a Year.

GOOD HEALTH PUBLISHING COMPANY,  
BATTLE CREEK, MICHIGAN.





[See Happy Fireside.]

IN AUTUMN WOODS.



VOL. XXIV.

NUMBER 10.

BATTLE CREEK, MICHIGAN.

OCTOBER, 1889.

### INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

#### 6. — Russia.

It has been predicted that a time will come when fasting, exercise, and refrigeration shall form the principal items of *materia medica*. The efficacy of the first-named remedy is well illustrated in the physical vigor of savages whose carnivorous surfeits alternate with long periods of total abstinence; that of the second, in the survival of alcohol-worshipping Teuton gymnasts; that of the third, in the robust health of the East Slavonic nations.

The moral degeneration of the despot-ridden Muscovites has, on the whole, been exaggerated, while the depravity of their physical habits is apt to be much underrated. The philosopher, Lecky, in his "History of European Morals," observes that the sins of governors and kings are too often visited upon their subjects, whose characteristics are judged by those of their rulers; and there is no doubt that the moral reputation of the Slavonic races has been considerably prejudiced in that way. The Russians, in their domestic and social tendencies, are anything but a truculent nation. Their attachment to their rulers is something more than canine submission. In their compassion for human suffering, they equal the impulsive charity of the South European nations. An old French peasant who could remember the wars of the first Empire, once told me that of all the foreign invaders who were quartered upon French households in 1813-14, the Cossack troopers were, on the whole, the least disagreeable guests. Few of them could speak a word of French, and their unkempt appearance was rather unprepossessing; but their gluttony, uncleanliness, and uncouth manners were all redeemed

by the genial kindness of their disposition, and their fondness for the society of young children. A corporal of the Dnieper dragoons, reeking with stimulants, and looking like a cross between a poodle and a gorilla, would astonish his landlord by snatching up a waddling youngster, and rocking him on his knee for hours together, laughing at his mischievous pranks, and protesting promptly against every attempt at paternal interference. Even in their cups, Russian peasants are rarely quarrelsome, but are rather apt to become maudlin, treating strangers and friends to indiscriminate caresses. Their language, with all its guttural consonants, abounds in epithets of endearment: "Little father," "little brother mine," *moja duschka*,—"my own darling dear,"—are household words by no means confined to the conversation of lovers and relatives.

It would, indeed, seem as if un-free nations were specially apt to cultivate the virtues of social amenity, as a compensation for the rigors of despotism; but the yoke of that despotism has, in other respects, left a deep and perhaps indelible impression on the character of the Russian nation. In physical and intellectual energy the representative Muscovite ranks very low in the scale of modern nations. His habits of subordination imply a certain docility, a facile aptitude in the acquisition of drill accomplishments, of foreign manners, languages, and sciences; but there is nothing spontaneous in that culture. In deference to the arrangements of their Parisian model, a club of St. Petersburg dandies will embellish their rooms with books and works of art, but the binding



RUSSIAN OUT DOOR TEA-DRINKING.

of those books gives no evidence of wear and tear ; scientific journals accumulate uncut on their shelves, pictorial magazines attract readers chiefly by the comic or sensational elements of their illustrations. The opera, the ballet, and the theater, on the other hand, are patronized in a way that leaves on doubt about the sincerity of their devotees.

The same preference for *passive enjoyments* is evinced in the physical pastimes of the native Muscovites. In the leisure of a maneuver camp, Russian soldiers while away the evening hours in swings and whirligigs, leaving the Circassian conscripts to waste their muscular energy in wrestling-matches and foot-races. On the battle-field, too, Russian troops have won their laurels by their passive, rather than active, qualification. "It's all up with us, Iwan," a Livonian recruit whispers to his comrade ; "look at those men dropping dead all around us, and our ammunition nearly gone. Our regiment is lost !"

"Lost?" grunts Iwan, "what's the use of talking? That's the Colonel's business. We can't do more than mind our orders."

A "shooting-machine,"—Marshal Ney's nickname for a modern infantry soldier,—is a term specially applicable to the Russian ideal of military perfection. Dash, initiative promptness, and fertility of resource

are qualities not to be expected of soldiers who have been trained as troopers train their horses ; but their absolute abnegation of individuality makes those same drill-slaves confront death with a calmness which supreme heroism might equal, but could hardly surpass. During a sudden inundation of the Neva, the Empress Catharine saw a sentry quietly maintaining his post in front of the palace gate. "Man alive! that flood will drown you!" she shouted down from the window. "Quick, come in and run up-stairs to the servant's room before it is too late."

The sentry saluted, but never budged.

"Do you hear me? Do n't you know who I am?" she called down again.

"Oh, yes, your majesty, but only the corporal of the guard has a right to relieve me."

The surging flood had already risen above the man's waist, when at the stroke of the hour the corporal came wading to the rescue.

"Their main virtue and their main vice is thick-skinnedness," said an envoy of Frederick the Great, when asked to sum up his impression of the Russian national character, — a verdict apt to be indorsed by any

traveler who even now-a-days should carry his passion for inquiry to the length of entering the hovels of the North Russian Mujiks. Uncomplainingly they endure pinching penury, misfortune, and official oppression ; but with the same incomprehensible patience they also endure avoidable evils. Filth in a hundred forms is calmly tolerated as a minor affliction, not worth mentioning in comparison with such positive tribulation as hard work. "What is easier, standing over a steaming washtub all day, or despising the outlandish prejudice against soiled linen?" argues the Muscovite Diogenes, and possibly prefers the trilemma of dispensing with linen altogether, and working, traveling, and sleeping in the same hereditary fur coat. "Washing dishes? Do not rob the kittens of their due ; let them lick the plates off, or call in the dog, if you are in a particular hurry. And the idea of driving out a pig in weather like this! Are you Christians? or do you like trotting about in the slush to hunt the poor creature if you want him next morning? What's the use of making more trouble than Heaven sends you? Let the poor brute sleep in the house. The air may not get sweetened by it, but — *hospodi pomiloi!* let's all live and let live ; the smoke is so thick that the difference would n't be worth mentioning, anyhow."

"Your little boy won't get much rest that way,"

remarks the guest of a Mujik whose youngster is starting up in his bed every now and then to scratch his tow head with ten claws.

"Oh, well, he gets used to it," replies Iwan, after a meditative pull at his long pipe; "besides, that's my wife's business, little father."

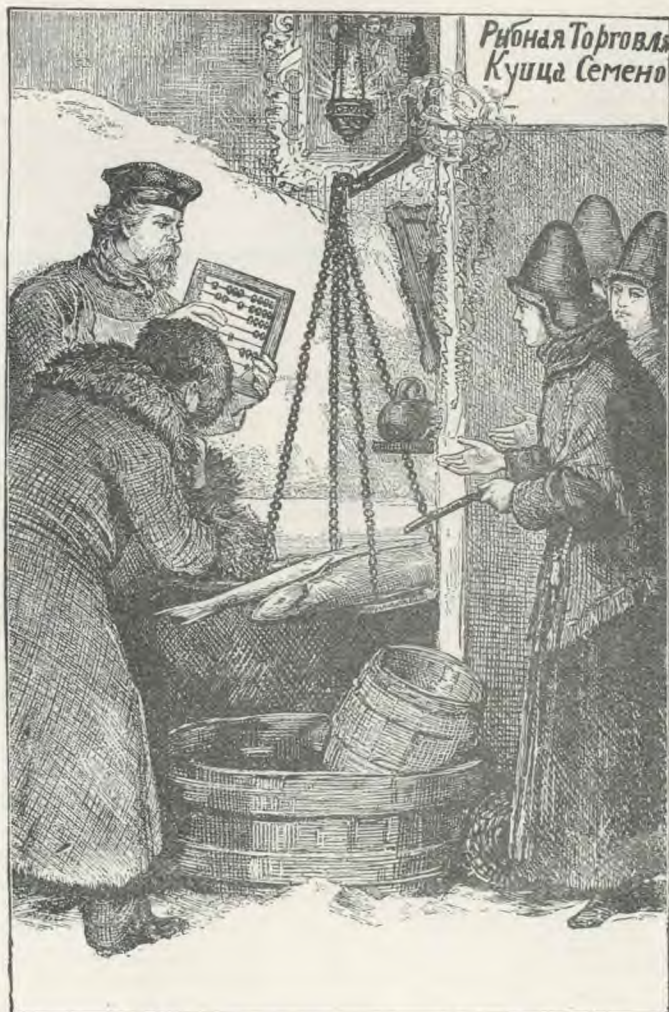
"Well, I did try to see about it," remarks the goodwife; "me and Fedor went to see the *Popatz* (village priest) to get a charm last Saturday, but we found him dead drunk, poor man, and I've not had time to go again."

Families of eight or nine persons often pass the night in a narrow hovel, hermetically closed all around, and reeking with turf smoke, mingled with a *bouquet de mil fleurs* of household odors, besides nicotine fumes and the strong sour smell of *quass*, or fermented cabbage-soup. Brandy, *quass*, and tobacco are found in every country home, and an ample supply of such stimulants reconciles their devotees to almost any deficiency both in the quality and the quantum of their solid food. Rye-bread and cabbage, with a small slice of pork, bread and *quass* for breakfast, and again for supper, form the usual bill of fare of the poor tenant farmer. His landlord adds wheat-bread, venison, and tea, but sticks to *quass*, and has no objection to an occasional dram of *vodka*, which, together with tea, is served in country inns with all meals, and, in cold weather, often late in the evening, by way of a night-cap.

In many towns of Northern Russia, tea-drinking has assumed the proportions of a true stimulant-vice. Tea is taken three times a day, but also between meals, on every possible pretext. Half-frozen travelers will swarm out of a morning train to "warm up" at the hot-tea counter of the railway *restaurant*; cold tea, with or without rum, is handed around in large jugs at a warm-weather picnic; dozens of laborers crowd around a market booth to fill up on cup after cup of the popular narcotic. "It's the Chinese vice spreading westward," said a Russian physician of my acquaintance; "we have caught it from our next neighbors, the Mongol pig-tails, and they will have it all over Europe before long, and, by and by, perhaps even in America."

As an alternative of brandy, tea is perhaps a lesser evil; but the trouble is that the minor vice is by no means incompatible with other poison-habits. There are absinthe-tav-

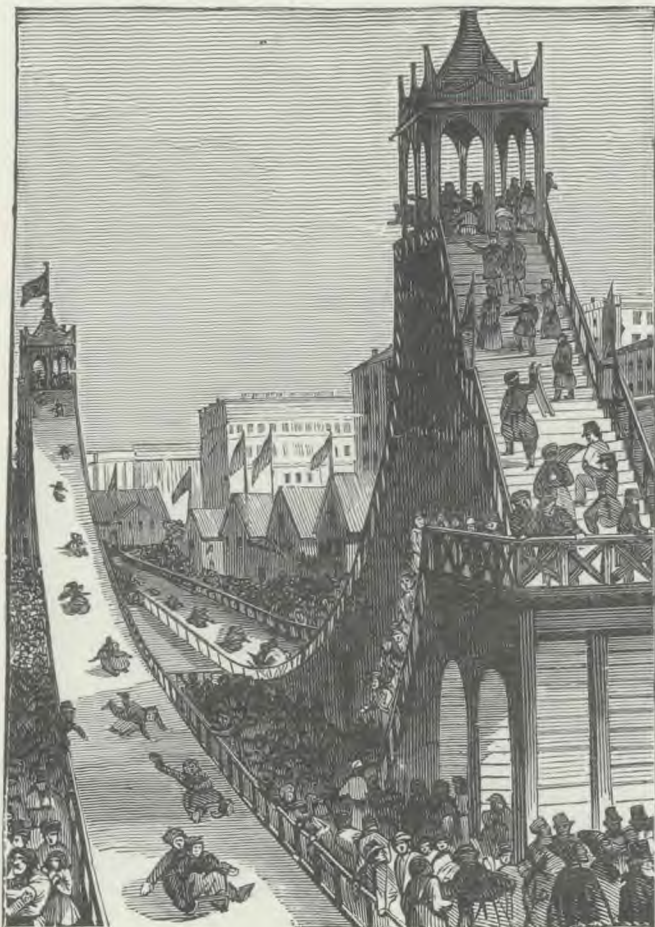
erns and opium-hells in St. Petersburg, besides rum-shops, beer-gardens, coffee-houses, and thousands of tea-stands, all abundantly patronized, and often by customers who seem to pride themselves on their cosmopolitan impartiality in the use of all possible stimulants. Like most people blest with a greater abundance of financial than of mental resources, well-to-do Muscovites are sad gluttons, with an ugly predilection for greasy made-dishes and over-spiced *ravigouts*; but nature's great specific, frost, counteracts the tendency of their sanitary sins, in that and many other respects. The winters of Northern Russia are rarely quite as severe as those of our sea-forsaken northwestern territories; but the frosts come very early, and prevail with remarkable steadiness till late in March. Fuel is not over-abundant, and no architectural contrivance can wholly prevent the expurgating effect of a six-days' north-gale, combined with a temperature of thirty-five to forty degrees below



FROZEN-FISH MARKET, ST. PETERSBURG.

zero. Before midnight, the air of the stuffy bedrooms has been purified by the penetrating force of the sharp disinfectant, and the occupants awaken refreshed, with re-invigorated lungs and braced-up appetites.

And as if instinctively appreciating the value of that sanitary atonement, the Russians pride them-



RUSSIAN TOBOGGAN-SLIDE.

selves on their thermal-staying powers. Gluttony, laziness, intemperance, incontinence, uncleanness, are far more easily condoned by the verdict of popular ethics than an effeminate dread of frost. "Let him alone!" a good-natured land-owner will call out to his overseer who tries to rouse a snoring toper from his stupor; "a fellow does n't feel like working so early on Monday morning after a harvest picnic. Let him alone." But the same toper would try in vain to plead a desperate frost as an excuse for his aversion to outdoor work. "Brace up like a man, *stupai!* Come on, you shiver-jack; what's the matter with you?"

"Hurry up! don't growl about the weather on a fine spring morning like this!" jokes the corporal of the day, if the March twilight breaks with a blood-freezing snow-storm. The hardihood of the old Scythian warriors has survived in the *hardiness* of their frost-braving descendants. The very city-children, girls no less than boys, vie in displaying their indifference to the rigor of their winter climate, and sleigh-riding, varied by coasting and toboggan-sliding, form the favorite amusements of the Muscovite aristocrats. Skating, requiring more active effort, is considerably less popular; and considering the abundance of their leisure, the Muscovite country magnates have never been very zealous followers of Nimrod. They pass their days in feasting and exchanging visits, perhaps blazing away at game starting up in the next neighborhood of their sleigh-track, but dislike the trouble of following their quarry through thick and thin, after the fashion of our American sportsmen. As a consequence, wolves, wild boars, and even bears, are still found in Russian provinces, which by this time have been under cultivation for more than a thousand years longer than many districts of North America, where the larger carnivorous brutes have been almost entirely exterminated.

And yet that physical indolence is by no means a universal characteristic of the Slavonic races. The Montenegro highlanders are the most indefatigable hunters on earth, and the wrestling-matches of the Servian rustics take precedence of every other holiday amusement. High latitudes are still less invariably concomitants of sloth, and the only logical explanation of the anomaly can be found in the lethargizing influence of a despotism whose yoke, with a wholly unprecedented strength of fetters, has so long been riveted upon the neck of a once proud and manly nation. After the evidently imminent removal of that yoke, the Slavonic Northmen will once more rise to their normal level in the rank of the Caucasian races.

(TO BE CONTINUED.)

*Hungry Tramp.* — "Madam, will you please give me something to eat?"

*Lady.* — "Well, here's a mince pie, but I'm afraid to have you eat it. The cook is n't sure that she did n't use 'rough on rats' by mistake, and I was just going to put it in the stove."

*Tramp.* — "No; lemme have it. I've eaten mince pie and lived, and I'll take my chances on 'rough on rats.'"



## THE ABSOLUTE SIGNS AND PROOFS OF DEATH.

THE proofs of absolute death are eleven in number:—

*Cessation of Respiration Test.*—The first of these signs of death,—the cessation of the indications of respiratory function,—although useful in a general sense, is not by any means reliable. The old breath test,—

“If that a feather move across the breath,  
Then life remains,”—

is too fallacious to be of real service, as is also the common mirror-test, a passive exhalation of water being quite sufficient to produce a deposit of moisture upon the bright reflector, even when life may be quite extinct.

*Cardiac and Arterial Failure Test.*—Of the two signs—the pulse and the sounds of the heart—the pulse is the more important.

*Venous Turgescence Test.*—I consider the vein-pressure proof one of the very best and readiest of all. It is carried out by placing a hard substance, like a bit of mill-board, on the forepart of the wrist, so as to prevent pressure on the radial and ulnar arteries; then a fillet is tied firmly around the wrist, so as to compress the veins at the back of the hand. If upon this the veins, after a time, fail to enlarge, there is *prima-facie* evidence that no circulation is going on, and that life is certainly extinct. While this test alone is not sufficient to disprove the fact of life, it is yet the one least of all likely to deceive.

*Reduction of Temperature Test.*—Reduction of the temperature of the body below the natural standard is a good test, but one that requires to be used judiciously. A reduction of a few degrees is not sufficient, since recovery after seven degrees of reduction has been known to take place. But if the temperature of the body found in the cavities, like the mouth, is below the temperature of the surrounding air, or if it even be reduced to 80°, the evidence is strong that life does not remain.

*Rigor Mortis Test.*—The existence of well-marked *rigor mortis* is one of the most certain proofs of absolute death.

*Coagulation of Blood Test.*—The condition of the blood in the veins, whether it be coagulated or not, is a most important matter. The act of coagulation is practically the same as that of *rigor mortis*, and when the two signs are present together, there can be no doubt of the fact of death.

*Putrefactive Decomposition Test.*—Of putrefactive decomposition as proof of death, little doubt is ever

entertained; but while in its slightest development it cannot be accepted as conclusive, there are certain decompositions that are definite. Whenever decomposition of the eyeball is pronounced, with shrinking of the ball and opacity of the cornea, it may be considered convincing proof of death.

*Strong Light Test.*—To the test made with strong light, in order to ascertain if in semi-transparent parts, like the hands, there is still redness of tint, I attach secondary importance.

*Electric Stimulus Test.*—I attach considerable importance to the excitation of muscular contraction under electric stimulus. It is a test which is often urgently called for, and it has its own value. A small battery for the Faradic current, a couple of long needles to attach to the electrodes, and two sponges are required. The muscles of the fore-arm are most convenient for testing, the needles being pressed into the muscles deeply.

*The Ammonia Test.*—To the hypodermic ammonia test, suggested by Montiverdi, I attach great importance. It is merely necessary in carrying it out, to inject thirty minims of ammonia solution of sp. gr. 891° under the skin. If there still be a circulation through the part receiving the ammonia, there will be a reaction in the form of a blotch of a red erythematous color, wine red, with raised spots on the surface. If death has taken place, instead of a red blotch there will be a blotch of a dirty skin color, without a trace of red spots, which Montiverdi affirms is the only criterion of actual death known at the present time.

*The Bright Steel Test.*—The oxidation, or bright steel, test of Cloquet and Laborde, has the advantage of being simple and physiological, and may be used as corroborative of other tests, if nothing more. A bright steel needle may be thrust into the biceps, left there in position a short time, then removed and put in a dry place. If it remains bright, it has plainly pierced a dead tissue. From the nature of the circumstances, the time for this test must be limited to a very short period after the supposed death.

## PRACTICAL SUMMARY.

The following are the salient points of practice to be observed in cases where proofs of absolute death are demanded:—

Assuming that the respiratory functions fail to give evidence of life; assuming that there is no arterial pulse or sign of cardiac motion; assuming that there is an absence of *rigor mortis*, and that there are some

remaining appearances of expression, of color, or of warmth, which suggest the idea of possible life at low cardiac pressure, the practitioner will apply —

1. The Venous Turgescence Test.
2. The Coagulation of Blood Test.
3. The Electric Stimulus Test.
4. The Ammonia Test.

One further point of practice should still be carried out. The body should be kept in a room the temperature of which has been raised to a heat of 84° Fahrenheit, with moisture diffused through the air;

and in this warm and moist atmosphere it should remain until distinct indications of putrefactive decomposition have set in. This final practice combines several practical advantages: it gives a favorable chance to restoration if so be the vital fire is not out, and if death has really occurred, it favors the development of *rigor mortis*, besides enabling the surgeon to carry out his responsible task in cases where he is not allowed to touch the dead, a condition not uncommonly enforced by members of the Jewish and other religious communities.

## SHORT TALKS ABOUT THE BODY, AND HOW TO CARE FOR IT.

BY A DOCTOR.

### 8.—Hygiene of Digestion.

WE are still occupied with the hygiene of digestion, and there is much more to be said upon this important subject before it is exhausted. As regards the manner of eating, it is important to observe that the processes of digestion require activity of brain and nerve, as well as of the stomach with its muscles and glands. The stomach, liver, and other digestive organs, are under the direct control of the small brain, which is also intimately connected with the muscular system, and with the various organs and apparatus employed in the nutritive processes of the body. The consequence of this physiological fact is evident; to eat in a state of exhaustion of mind or body is to invite indigestion, as the system is not then prepared to do the work of digestion well. For the same reason, sleeping immediately after eating is a practice which must be unhesitatingly condemned. The common practice among business men at the present time, especially in the cities, is to rush away from business for a short half-hour, drop into some restaurant, and swallow without proper mastication a meal which would require the most vigorous of stomachs for its digestion. This practice is doubtless much more prevalent in this country than in any other civilized country. It was once a custom in Edinburg, Scotland, to suspend all business in the middle of the day for a period of two hours, thus allowing ample time for meals. A similar custom once prevailed in Switzerland, as we have been informed, and also in Mexico within recent times. It is probable, however, that the practice would be considered too old fashioned to be tolerated, if an attempt was made to revive it in this fast age.

The process of digestion cannot be well performed during sleep; and although drowsiness is frequently

produced by eating a hearty meal, the sleep of a person whose stomach is occupied with digestion is not of that refreshing character which entitles it to be called "nature's sweet restorer." In short, sleep hinders digestion, and digestion hinders sleep. The evil effects of late suppers are well known. It is well agreed among physiologists that the digestive process is less active during sleep than during the waking hours. It has been argued, nevertheless, that the fact that animals sleep after eating is evidence that the practice is a natural one. Closer observation would show the fallacy of this argument. While it is true that most animals remain quiet for a time after eating, it is seldom that they are really asleep. The cow lies quietly in the shade after having filled her stomach with grass, but although her eyes are closed, the active motion of her jaw in chewing the cud indicates that she is not asleep. Dogs sometimes fall asleep after eating, but we have frequently noticed that they seem to be troubled with dreams, often starting and snarling while in their sleep, as though in rage, or whining piteously, as though suffering pain. The invariable rule is to take no food into the stomach within three hours before retiring. The "faintness," or "all gone sensation," of which many persons complain, is not hunger, but a sensation which is due to the irritable condition of the stomach, arising not from lack of food, but from disease. The unpleasant sensation is removed by taking food, not because the food is needed, but because the walls of the stomach are separated by the food, thus preventing contact of the irritable surfaces of the mucous lining. The proof of this statement is furnished by the experience of every person who is suffering in this way. The "all gone sensation" felt at night is

relieved by taking food, but re-appears in the morning, and perhaps in a more intense form; whereas, if no food is taken at night, but instead a little water, hot or cold, the individual awakes in the morning and finds that the "all gone feeling" of the night before has gone.

The influence of the mind upon digestion is a matter of too great importance to be overlooked. Strong and depressing emotions, such as anger, fear, and grief, check the flow of the digestive fluids, and thus interrupt digestion. The influence of the mind upon secretion is illustrated in the dryness of the mouth and throat, which often produces a choking sensation and difficulty in speaking when a person is overwhelmed by emotions of fear or anger. The East India judge uses this test as a means of detecting criminals. Each of the suspected persons is given a mouthful of rice to chew. The guilty one, under the influence of fear, can furnish no saliva, and consequently is detected by the fact that his mouthful of rice is not moistened. Such emotions as "good cheer" and "happiness," on the other hand, pro-

mote the secretion of the digestive fluids, and it is of the greatest importance to cultivate the latter class of emotions, avoiding all depressing influence during, or in connection with meals. The custom with many parents of severely reproofing children, is responsible for many a fit of childish indigestion. The intimate connection between the mind and the stomach is so apparent that it has long been recognized. Vanhelmont maintained that the stomach was the seat of the soul; and Chinese philosophers, entertaining a similar notion, hold that any mental emotion may suddenly stop the action of the entire digestive apparatus, while on the other hand, morbid conditions of the stomach are not infrequently the cause of various mental disturbances.

Hot or cold bathing should be avoided an hour or two before or after a meal. Several eminent persons have lost their lives by disregarding this rule. Boys and young men frequently suffer great injury by going into the water to bathe or swim immediately after a hearty supper.

(TO BE CONTINUED.)

#### AMERICAN VEGETARIANS.

PROBABLY most of our readers are familiar with the fact that vegetarianism is a subject much discussed in England at the present time, although little heard of in this country. Between forty and fifty years ago, however, this question was much agitated in the United States, especially by Dr. Wm. Alcott and Sylvester Graham. Many thousand converts to the practice of vegetarianism were made at that time. For a number of years, the College at Oberlin, Ohio, under the management of Prof. Finney and Dr. Jennings, was a stronghold of vegetarianism. Most of our readers will be interested in the following sketch of some leading vegetarians, by Wm. P. Alcott, son of Dr. Wm. Alcott, which we quote from a recent number of the *Vegetarian Messenger*:—

"Rev. Sylvester Graham and William Andrus Alcott, M. D., began the practice and advocacy of Vegetarianism about the same time, and in entire ignorance of each other. My father, as he states on the first page of his *Vegetable Diet*, published in 1849, gave up the use of flesh meat in 1830. He first committed his views to print in 1832 in an anonymous pamphlet entitled, 'Rational View of the Spasmodic Cholera.' This pamphlet is sometimes ascribed to Mr. Graham, but I am not aware that he himself ever claimed it, as did my father in *Vegetable Diet*, and in the list of his works which he prepared shortly before his death, in 1859.

"Sylvester Graham lived from 1794 to 1851. In 1830 he began lecturing on temperance, and his studies upon this subject subsequently led him to diet reform. His classic work, *The Science of Human Life*, was published in 1839, while his brilliant and profound advocacy of Vegetarianism originated the American words *Grahamism* and *Grahamite*, which are now disappearing, though the adjective *graham* still attaches to whole-wheat meal and flour.

"It will be seen, therefore, that any honor there may be in first adopting and advocating the system, belongs to my father.

"But, earlier still, Benjamin Franklin for a time, and many others here and there, had practiced the same reform.

"Amos Bronson Alcott, of whose life your number for April, 1888, gives an excellent sketch, was a distant cousin of my father, born in the same neighborhood. The two were as brothers, and are often confounded. Mr. Alcott left off flesh-eating in 1835.

"Rev. William Metcalfe, M. D., was born in England in 1788, and at the age of twenty-one was converted to a new diet, and joined the Bible Christian Church, founded that same year. He soon came to Philadelphia, where he preached until his death in 1862. Apparently we must count him the father of American Vegetarianism, as well as total abstinence."



## THE RELATION OF DRESS TO SURGICAL DISEASE.

THERE is no tyranny more exacting or despotic than that exercised by the conventionalities which govern our living. All stages of life from infancy to old age are under its domination. It dictates the education, the manners, the walk, the dress, the forms of speech—in fine, the whole being. Beyond all contradiction, the behests of fashion are vastly more influential in governing public conduct than any arguments drawn from the teachings of structure and function. As a rule, when the conflict is between taste and reason, the victory will be on the side of taste. In nothing is this more forcibly displayed than in the apparel used to protect the body.

It is not an agreeable task to peer into the wardrobes or dressing-rooms of our fair country-women. I have no special taste for exploring museums or bazaar collections. Indeed, without a key to interpret the curious and ingenious mechanisms for clothing the form divine, such an explanation would be like an archæologist attempting Egyptology ignorant of cuneiform inscriptions. I have, however, some knowledge of human anatomy in its broadest sense, and when I look upon the masterpieces of the human form, whether in marble or on canvas, a Belvidere, an Apollo, or a Venus de Medici, and contrast these with the dressed-out specimens of modern women, I am forced to admiration, not so much at the amazing ingenuity displayed in concealing the divinely appointed form, as at the plasticity and patient submission of mortal clay under the despotism of a conventional inquisition. Were these processes of mutilation and abnormality harmless, did the body consist of a mere mass of protoplasm, capable, under the application of certain stimuli, of assuming normally protean shapes, the subject might be passed over with the feelings of a naturalist; but this is not so. These violations of the laws of structure bring with them serious penal inflictions, which, did they terminate with the original offender, might be dismissed with a sentiment of pity; but projecting, as they do, their baneful consequences

to successors, they become proper subjects for criticism.

Let me name a few examples as illustrative of my subject: For some time the profession has been speculating on the causation of nasal and post-nasal catarrh, with its accompanying defects in the sense of hearing, the growing frequency of which cannot have escaped general observation. Doubtless no single agency will explain the presence among us of this unpleasant disease, yet there are facts connected with this affection which, to me, are very suggestive. I cannot recall an instance in which I have met with the disease among females belonging to the Society of Friends, Dunkards, or Menonites. If this, on more extended observation, proves to be true, may not the head-dress peculiar to these people be accepted in explanation of their exemption? The bonnet, which at one time over-shadowed the entire head, as all know, has been gradually shrinking in its dimensions, until it has become a mere shadow of its former self, and offers no protection whatever to the head. As a substitute, I would not insist upon the quaint head-gear of the Friend, though I believe that any modification which will protect this part of the body, will lessen the tendency to nasal catarrh.

As another example, I may notice the evils of displacement of various internal organs of the body, consequent on the wearing of tight bands, tight corsets, and heavy skirts. The constriction of the waist operates injuriously on the organs, both above and below the diaphragm. Any force acting on the base of the thorax, and preventing the expansion of its walls, concentrates the function of respiration, which should be general on the lower parts of the lungs; and hence, under these circumstances, the movements of breathing are, for the most part, confined to the summit of the chest. As the initial seat of tuberculosis is located at the upper part of the lungs, may not the inordinate work entailed on these parts by constriction have some part in hastening

such deposits in the female, where the predisposition exists? It is this forcing inward of the ribs which causes the groove on the surface of the liver, so familiar to anatomists. This pressure cannot fail to interfere with the descent of the diaphragm, and with the functions of the gall-bladder and the upper part of the intestines, and exercises no small degree of influence in favoring the formation of biliary calculi, females being peculiarly prone to such concretions.

The extent to which the liver may be damaged by extreme constriction of the waist, is well illustrated by a case quite recently reported in the *British Medical Journal*, in which a considerable portion of the left lobe of the liver had been separated from the right, the two being connected only by a band of connective tissue, and which enabled the operator to remove the detached mass without difficulty. The evil effects of this constriction on the organs of the abdomen and pelvis, is most strikingly witnessed in the embarrassed portal circulation, in the different uterine displacements, elongation of ligaments, displaced ovaries, inflammation of Fallopian tubes, hemorrhoids, hernia and other morbid conditions which either prevent or disqualify the woman for the exercise of the functions of maternity, and which, in addition, through reflex influences, entail a host of functional disorders, reaching into every avenue of the body, and invading both the mental and the moral constitution of the victim. So prolific have these infirmities become that a new department of surgery has been organized for their special management.

To what, if not to social causes, can these morbid changes be attributed? I can conceive of no agency more likely to induce that muscular degeneration than the modes and methods of modern living,

especially among the inhabitants of great cities. In the expression "modern living," much is embraced. It includes culinary pharmacy, over feeding and drinking, insufficient or injudicious exercise, improperly heated apartments, and a disproportion between the hours of exercise and rest. Contrast, if you will, the muscles of the hardy, country house-wife, who, bearing the cares and responsibilities of a dependent family, bustles about the live-long day in and out of doors, eats with a relish her plain and simple fare, repairs at seasonable hours to bed, and sleeps the sleep of the beloved, undisturbed by dyspeptic nightmare, and rising with the golden dawn, resumes the round of domestic toil with a clear head and supple limbs;—I say, contrast this type of a class with that of another,—the woman born to luxury and ease, whose capricious and exacting taste taxes the art of the professional caterer, who drags out the morning hours toying with some crazy piece of embroidery or trashy novel, lunches at one, rides out in the afternoon for an airing of two or three hours, returns to a dinner of five or six courses at seven, completes the evening at the opera, the theater, or the assembly, and coming home after midnight, crawls into bed weary and exhausted in body and mind, only to rise with the best hours of the morning gone, for another day of aimless routine life. Can it be doubted that in the first case, with a digestion unimpaired, with the products of textural change consumed by functional activity and eliminated through the proper emunctories, the woman should possess a vital resistance and a tone of tissue altogether superior to that of the other, whose habits of living must necessarily favor their faulty metamorphosis?—*Abridged from an Address by D. Hayes Agnew, M. D.*

DEEP BREATHING.—Deep inhalation is said to be the key to health and beauty. Breathing, like learning, is a dangerous thing taken in small draughts. Breathe, as well as drink, deep if you would be refreshed. Men of science frequently assert that if we breathed properly, we would have no impure blood.

How is this deep breathing done? Frank H. Tubbs says: "Simply thus. Stand, inhale deeply, fully, completely. As you do so, let the waist expand, and do n't be afraid to have the abdomen protrude. At the last of the inhalation let (do n't *make*) the chest expand. Let the air out gradually, and repeat the operation five to ten times. He who thinks he must begin inhalation by *making* the chest spread,

falls into a serious error, because this course *prevents* complete inhalation. Thirty or forty deep inhalations every morning in as pure air as possible, will do more to keep the circulation of the blood good, the blood itself pure, the lungs well and strong, and the movement of the secretions active, than all the medicine any one can take."

Ladies who incase themselves in corsets which narrow their waists to painful proportions, or no proportions at all, cannot practice deep inhalation. Neither is it for the tailor-made girl; she has all she can do to breathe at all, and stagger under the weight of the heavy skirts which hang upon her bustle.—*Selected.*

# THE HAPPY FIRESIDE

DEVOTED TO TEMPERANCE MENTAL AND MORAL CULTURE  
 HOME CULTURE NATURAL HISTORY AND  
 OTHER INTERESTING TOPICS  
 CONDUCTED BY MRS. E. E. KELLOGG A.M.

## IN AUTUMN WOODS.

BY S. ISADORE MINER.

[See Frontispiece.]

Who has not walked in autumn wood  
 Some fine, fair day of the waning year,  
 Has Nature missed in loveliest mood,  
 When arching skies are bright and clear,  
 Save for the faint blue vale of haze  
 That adds imagined charms to real,  
 Like haloed mem'ries of past days,—  
 Then is the heart empowered to feel  
 The rapture that with sunshine floods  
 The autumn woods

The rare, sweet atmosphere partakes  
 The buoyancy of Alpine height;  
 The springing branches' lacing makes  
 A fretted lattice 'gainst the light,  
 Which, sifting down, brings in relief,

In crimson dashes everywhere,  
 Each changing, fluttering, fallen leaf,  
 Crisp with the crispness of the air,  
 Deep-steeped in Nature's blood of bloods,  
 In autumn woods.

The thorn-tree casts its stony fruit,  
 The ripening nuts drop thickly down,  
 The quail pipes shrilly, clear as flute,  
 From crackling fern-fronds, dry and brown;  
 The chattering squirrels store and eat,  
 The timid hares frisk silently,  
 The wind-blown leaves add music sweet,  
 And all the myriad voices pay  
 A tribute to the joy that broods  
 In autumn woods.

## A MISSIONARY PEAR.

It was not a Sheldon pear, with its color of russet brown, that passed through such an experience, nor yet one of the excellent aristocracy known as the Duchess, albeit they are slightly coarse-grained; but it was the very queen of pears,—a Bartlett; color, light yellow, slightly tinged with red; large size, weighing nearly eight ounces; smooth as a baby's cheek, and tapering gracefully at the top into a stout stem of twice the usual thickness. It was exhibited at the Agricultural Fair, standing alone upon a plate, the perfection of its kind.

"I am going to send this pear to your wife, Colonel," said its owner, on the morning of the second day of the exhibition. "Tell her it has taken a premium, and, besides, is the finest specimen that I ever had the pleasure of raising."

"Or seeing either," replied the Colonel. "My wife will appreciate the honor, I assure you."

So home it went with him to dinner; and Mrs. Colonel thought she could not admire it enough, and, instead of giving it a place with the other fruit, brought out a china dish and an embroidered doily for its reception.

"But we must never eat it ourselves," she said. "Such a pear as this ought to have a mission. What do you say to my sending it to old Mr. Swallow?" Of course the Colonel assented.

A few streets farther on, Mr. Swallow was found, sitting by the window of his farm-house. On one side was the sunny orchard; on the other, the barn, that the old gentleman, now a cripple, liked to keep in view. The Colonel's little daughter brought in the pear.

"Your mother was very kind to send me such a present," he said, putting it down upon the window-sill before him. "It beats any that I ever saw raised."

"But I won't eat it," he added to himself after the child had left. "It was a mighty kind thing to spare one so nice, and I'll do the same by somebody else. There's Jimmy's school-teacher. She's another kind one, and she shall have it."

When Jimmy ran home at recess, he was greatly delighted by his grandfather's commission to take the pear carefully in a box to Miss Brown.

Miss Brown placed it upon her table, and allowed the whole school to look and admire without hand-

ling. Into the exercises of the afternoon she introduced an object lesson upon fruit, and, after school was dismissed, sat down to decide what should be done with her gift.

"I could n't have the heart to cut such a wonderful pear. How kind in old Mr. Swallow to send it to me! There's Mary Burch just getting over a fever. How pleased she'd be to have it!" And so again the pear found another resting-place.

"I won't ask to eat it, mother, if you'll just let me hold it and smell it. Oh, what a beauty!"

Mary's eyes sparkled; and she took, figuratively speaking, a long stride toward health from the vision of green fields and shady roadside brought to her by its mellow fragrance.

"Now, mother, who shall have it? for I would n't eat such a beauty if I could. Perhaps Mr. Jules will paint it. Let me send it to him."

Mr. Jules's studio was a pleasant place; but its owner was a little too fond of the fascinating easel, and a little too forgetful of other people's comfort. An invisible influence from the pear before him, began to make helpful suggestions.

"Very kind in that sick young lady. I'll sketch and paint it for her. I'll do it at once, before it grows dark; and I'll not eat such a present, either."

About eight o'clock that evening, the minister, who had entered into an argument with the artist the day before, and had left a little wounded and sore in feeling, was surprised and pleased by the present of an uncommonly fine pear.

"So kind in Brother Jules to take such a pleasant way of assuring me that he was n't offended; and such a magnificent specimen! If Catharine agrees, we'll pass it along to-morrow for somebody else to enjoy. How much comfort there is in kindness!"

One might begin to wonder, by this time, how the pear escaped bruises; but each owner had held it so carefully and admiringly that not a pressure was to be seen upon its surface.

In a doctor's office the next morning, a young man sat reading, when a tap at the door, and the minister entered.

"I was just going by, and I thought I'd step in a minute, and show you what New England could do in the way of raising pears."

Half an hour later, and the young doctor stood alone with the fruit in his hand.

"Well, I'll hire a seat in his church before next Sunday,—see if I don't. I won't neglect it any longer. I did n't know before that ministers could be so friendly. Now, what shall I do with this beauty?

It has helped me enough already. Somebody else must have it, to be sure."

Now, Mrs. Colonel, its first owner, was blessed with excellent health. To use her own words, she was "never sick." But this particular morning she awoke with a headache. The pain became so intense that she sought a lounge and a darkened room, and the Colonel went down town with an anxious face. Meeting the doctor's clerk, and knowing him well, he mentioned the fact of this unusual illness.

"Just the time," said the young man to himself as he hurried home, "for a chance to send her my splendid pear. She has been so kind to me here, I wonder I never thought of such a thing before."

Biddy, the maid at the Colonel's, answered the bell, and took the message and the plate to her mistress's room.

"The jintleman has called, mum, to say he's sorry you're sick; and he's lift the finest pear that was ever seen."

"A pear? Roll up the curtain a little, Biddy, and let me see it."

Then, greatly to Biddy's surprise and even terror, as she turned to leave the room, Mrs. Colonel began to laugh.

"Sure, I believe she's losin' her sines. I wish the Colonel would come;" and when he arrived an hour later, she sent him hastily up to the room.

Mrs. Colonel was sitting up in her rocking-chair, with a face as bright as if a headache had never troubled her.

"Look here, Ben. See my present."

"Why, it's our very pear again! Where did you get it, wife?"

"Charles Hadley brought it, and there's no guessing where it may have traveled. It's so funny to have it come back to me; and I've enjoyed thinking of it so much that my headache has all gone, and I'm going down to dinner."

Mrs. Colonel decided to take a walk that afternoon, and trace the pear's wanderings. Being of a cheerful turn herself, she brought a gleam of sunshine into every call. Old Mr. Swallow told his part, and he had n't felt so merry or laughed so much for a long time. The teacher, Miss Brown, wished she could put it into a story. Mary, the sick girl, was sure she could go downstairs the next day, that pear had been such a strengthener; and "Just look," she said, "at my present!" And there it was in a lovely painting. Then Mr. Jules put on his hat to walk over to the minister's too. At the parsonage they only wished the pear could have gone all through the town; and the young man who gave it

away at the last decided that his move was best of all.

The pear was finally cut into seven pieces, one for each stopping-place, and, of course, was delicious.

The decision was made that its history should be written out, for a suggestion to all holders of fruit in this season of abundant harvest.—*Henrietta Rea, in Christian Register.*

### SOME WONDERFUL TREES.

BY E. L. SHAW.

#### 1.—The Palm.

THE trees of foreign climes possess more or less of historical and legendary interest. The palm family, in particular, is associated in our minds with many an ancient chronicle, while many a tale of mythical mistiness and vagueness heightens the charm of its

a thousand feet, over bushes and trees to the very top of the dense forests, where it thus exposes its foliage to the light and air. Others degenerate into mere bushes and shrubs, but all, as proof of kinship, retain the graceful arborescent form.



THE IVORY PALM.

beauty and value. It comprises nearly one thousand varieties, and covers a wide geographical area; finding its home in the tropics, yet extending sometimes into the warmer portions of the temperate zones. Many of these are stately trees, others have a sort of scraggly running vine, instead of trunk, climbing by means of formidable hooked prickles, sometimes

eral millions in that country. Date-gathering time in autumn is a grand gala season. The trees, with their tall, straight trunks, can be climbed only by the device adopted by the natives. Pieces of wood are lashed upon their sides, and rope is woven in and out, and out and in, around them and the tree, forming in this way a sort of ladder which can be easily

The cocoanut palm is found in Africa and the islands of the Indian and central Pacific oceans, and towers to the lofty height of one hundred feet. It grows freely upon the otherwise barren and desolate coral islands of the Pacific, which, lacking its beneficent presence, would not support the life of bird nor beast for a single day.

The date-palm grows in northern Africa, Arabia, and Persia. The tree is the same tall, erect, slender stem, with its feathery crown of green, "plunging its foot into the water, and its head into the fires of heaven," in true Oriental imagery, but is only found near springs of water. There are many different varieties of the date, varying much in size and quality. In the Sahara alone, forty-six varieties are cultivated. One tree sometimes produces four hundred pounds of fruit. The date revenue in Egypt is a great source of profit, as the government taxes each separate tree, of which there are not less than several



ascended. Young men then climb up and gather the abundant harvest, while young girls in picturesque dress, encircle the tree with song, and dance, and laughter. When in triumphal procession the fruit is borne homeward, children strew the way with foliage and flowers, and the successful climbers are crowned with victor-garlands of roses and laurel.

Like the cocoanut-palm, this tree yields from its juices, palm-wine, vinegar, sugar, starch; from its leaves, material for baskets, mats, brushes, fans, coverings for roofs and walls; from its leafy fibers, rope and twine; from its stem, timber for fuel, fences, and furniture. It is supposed to have been some variety of the date-palm which furnished the branches cast under our Saviour's feet on his entry into Jerusalem.

The doum-palm also grows in Egypt, and Abyssinia. This does not grow as tall as most of its brethren, and has much wider-spreading branches. The fruit is about the size of an orange, grows in clusters, and though somewhat unpalatable, is the common food of the Arabs.

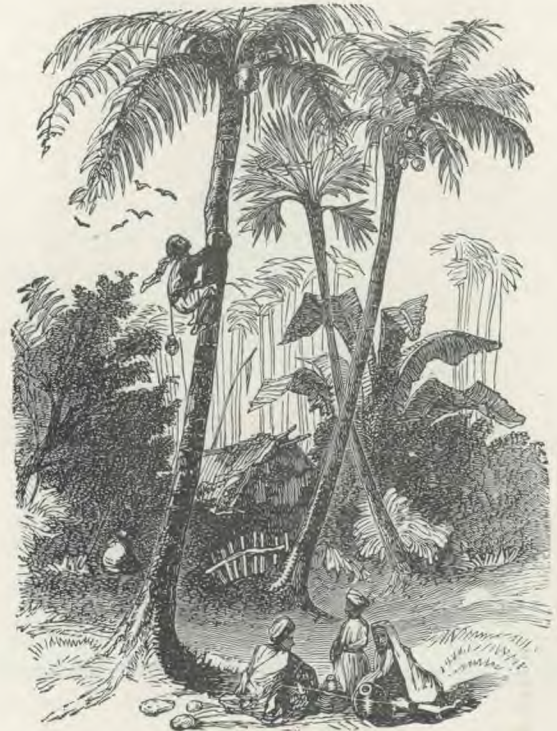
The Palmyra-palm is found in tropical Asia. This is a lofty tree with slender stem, and peculiarly beautiful, star-shaped foliage. The leaves serve the natives of Ceylon as paper, and all their important books of Buddha are written upon them, with wooden pens, also made from the same tree. The fruit is eaten both raw and roasted, and the young seedlings are dried and ground, making an edible flour. Of all the members of this numerous and kindly family, none is so generous of its sweet juices as the Palmyra-palm, and its palm-wine and sugar are justly celebrated throughout the East, and form important staples of Oriental merchandise. Another variety, the toddy-palm, found in the East Indies, is also singularly productive in wine and sugar.

The coquita-palm, of Chili, yields the famous palm-honey, in such general use among the natives of that country, and which is said to be equal in flavor and sweetness to the best of molasses. This species is of most unique shape and appearance. With its round, fibrous, and not over-tall trunk, large at the root and gently tapering upward, crowned with a feathery mass of green leaves, it looks like a huge, antique vase, filled with overhanging foliage. In the flowering season it is wonderfully beautiful.

The inaja-palm lives in the valley of the Amazon, and is remarkable for the salamander-like quality of its woody fibers, out of them being manufactured cooking utensils that resist any amount of heat.

Coarse brooms, which are exported to all parts of the world for street-cleaning purposes, are made from

the piassata-palm, of Brazil. This peculiar species of palm is commonly known as the ivory tree. Its exceedingly slender stem bends to the earth under the weight of leaves and fruit, and literally lies upon the ground, often for a distance of twenty feet or more. This tree is said to so impoverish the soil where it



THE COCOANUT PALM.

grows as to make it impossible for other vegetation to exist in its neighborhood. Its flowers diffuse a most delicious fragrance, and perfume the air for yards around. The fruit is roundish in shape, and from eight to twelve inches through, and weighs about twenty pounds. It has a hard, woody shell, containing many seeds, which when ripe are pure white, of very fine texture, and hard throughout. This is the exported vegetable ivory of commerce, used in the manufacture of many useful articles.

The palmetto of the Southern States, together with several varieties of dwarfs and low-growing plants, are the only ones of the species known in this country, save a few lovely diminutive plants, suitable only for greenhouse culture. The shrubs of the South yield our annual crop of hats and fans.

The Orientals have a saying that the enumeration of all the virtues of the palm would fill a book; who can wonder, then, at the affection bestowed by them upon this, the most beautiful and the most beneficent flora of the tropics?

## WHAT SHALL WE DO WITH OUR DAUGHTERS?

ALL women should have an early training commensurate with the greatness of the work that they only can perform. Let our young daughters be garnished with accomplishments, if you will. Let them have amusements, and live and breathe in a sunny, gay atmosphere. Encourage them to cultivate that habit of looking at the best and brightest side of things, which Dr. Johnson has pronounced "worth a thousand pounds a year." Do not repress their girlish enthusiasm over their pursuits or their pleasures. They will have need of a large store before they are done with life. Give to them the highest education demanded by the hunger of their souls, and allow them to fit for any calling or profession to which they are adapted by their tastes and capacities.

But by no means neglect what Canon Kingsley

calls their "lower education." Let them have an acquaintance with themselves, with their own physiology, and the laws controlling it. Let them be trained, as far as possible, as if you were sure they were to be wives, mothers, and housekeepers, even when they receive in addition, technical training. But few women reach adult life, even when they do not marry, without finding themselves so circumstanced at times that a domestic training is invaluable. Thus will our daughters be prepared to do better work in the world, to rear nobler children. Trained and self-poised, they will not be in bondage to ignorance; nor will they be as liable to become the dupes or the prey of those human sharks who are ever on the alert to lead astray unwary girls.

— *Mrs. Mary A. Livermore.*

THE CANAL OF JOSEPH. — How many of the engineering works of the nineteenth century will there be in existence in the year 6,000? Very few, we fear, and still less those that will continue in the far-off age to serve a useful purpose. Yet there is at least one great undertaking conceived and executed by an engineer, which, during the space of 4,000 years has never ceased its office, on which the life of a fertile province absolutely depends to-day. We refer to the Bahr Joussuf — the canal of Joseph — built, according to tradition, by the son of Jacob, and which constitutes not the least of the many blessings he conferred on Egypt during the years of his prosperous rule. This canal took its rise from the Nile at Asiut, and ran nearly parallel with it for nearly 250 miles, creeping along under the western cliffs of the Nile

valley, with many a bend and winding, until at length it gained an eminence, as compared with the river bed, which enabled it to turn westward through a narrow pass, and enter a district which was otherwise shut off from the fertilizing floods on which all vegetation in Egypt depends.

The northern end stood seventeen feet above low Nile, while at the southern end it was at an equal elevation with the river. Through this cut runs a perennial stream which waters a province named the Fayoum, endowing it with fertility, and supporting a large population. In the time of the annual flood a great part of the canal is under water, and then the river's current rushes in a more direct course into the pass, carrying with it the rich silt which takes the place of fertilizer. — *Scz.*

TEACH children early to distinguish between fun and mischief, which always has in it an element of evil.\* Join in their fun as heartily as you can, but beware how you applaud their mischief, however cute it may be. Don't let them hear you laughing over the good jokes they have played off on each other, if those jokes have in them, as nearly all practical jokes do, a spice of malice, or if anybody is made uncomfortable by them. Have the children remem-

ber that the Golden Rule holds good in play as well as in work, and that here, as there, the test is, doing as we would be done by. This will lead them to respect the feelings and rights of their playmates, so that they will not wound the former, or infringe upon the latter. A few general principles, fixed in the child's mind, will aid him in keeping play what it should be, pure fun, without malice, and the same generous principles will be carried through life. — *Scz.*

BRING biography and incidents of noble deeds to aid in forming your child's ideals. The world is full of them. Plain people, right here in our own town or city, are exhibiting the loftiest heroism, daily. Tell the children about that fireman who, a few nights

ago, burned himself so that he died, for the sake of saving the life of a stranger's little child. Keep before them the lives of noble men and self-forgetful women, and tell them stories of goodness, charity, tenderness, and compassion.

## TEMPERANCE NOTES.

AN example in subtraction: There are 175,000 saloons in the United States, and 161,000 public schools; how many more saloons than schools?

STATISTICS show that whisky causes, on an average, 1,300 funerals per day in the United States. There are, also, 3,000 penitentiary convicts and 285,000 occasional prisoners developed each year by the influence of liquor.

THE Southern Pacific Railway Company has closed all bars where intoxicating liquors are sold on its lines, and has established, for its four hundred employes, a system of hot, temperance lunches, at the low cost of sixteen cents per day.

IT is said to be a fact that in Massachusetts, within a radius of five miles from the State House in Boston, nine-tenths of the liquor is manufactured which we ship to Africa. Would n't it be a good idea to send some missionaries to *Massachusetts* as well as to Africa?

AN example in division: There is estimated to be about 600,000 drunkards in the United States; how many cities of 40,000 inhabitants each, would these drunkards form?

IN San Luis Obispo, Cal., a town of 1,300 inhabitants, there are *eighty* saloons. A local W. C. T. U. secretary, in trying to raise funds for a building for the Union, says, "Help us, for our children are being eaten like bread before our eyes!"

THE increase of tipping women in New York City, has rendered necessary by the liquor sellers, the establishment of what is called the "ladies' bar," at all fashionable restaurants. Whole tablefuls of women at these places order drinks,—"absinthe cocktails," "ponies of brandy," besides champagne and sherry, *ad infinitum*. We read too, of the woman's bric-a-brac store, which is largely patronized; where women of all ages drink freely of everything, from beer and milk punch, up to the stronger and more elaborate "mixed drinks."

## POPULAR SCIENCE.

IT is said that in the library of the British museum there are over thirty-two miles of well-filled book-shelves.

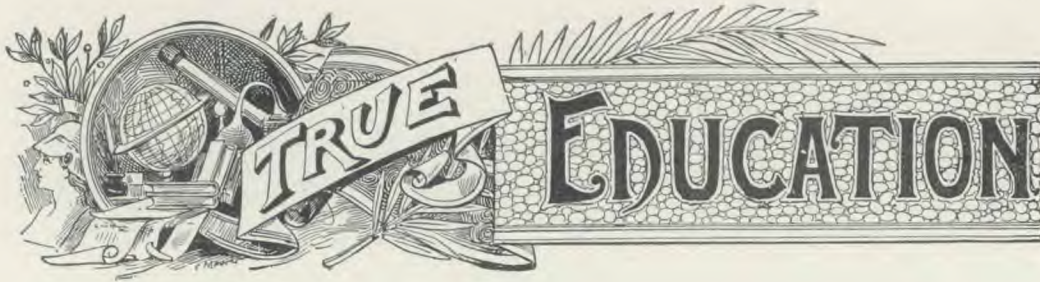
AERIAL navigation is again attracting attention. We think the successful air-ship is yet to come, and when it does arrive will be attached to *terra firma*, with electricity as the propelling power.

A VERY curious and interesting shrub has lately been discovered in South America, the berries of which, when subjected to the boiling process, yield a fatty, green matter, which makes excellent candles. It becomes very hard when cold, burning well, and giving a good, clear light.

A NEW method of manufacturing artificial boards has lately been perfected by a Swiss inventor. The materials used are, plaster of paris and reeds, which are pressed into shape by hydraulic process. They are light and incombustible, and are said to resist the warping tendency of atmospheric changes, a quality not possessed by boards made from natural woods.

THE Eiffel tower is to have many scientific uses. Three laboratories have been arranged to occupy it; one to be devoted to astronomy, one to physics and meteorology, which will also contain registering apparatus from the central bureau of meteorology, and the third will be devoted to biology, and micrographic study of the air. A great mercurial monometer is being arranged, which, it is confidently expected, will obtain pressure as high as four hundred atmospheres.

WHEN some distance from home or shelter, and rumblings of thunder are heard, it is quite convenient to be able to ascertain just how long it will be before it begins to rain. In order to do this, count carefully the number of seconds which elapse between the flash of lightning and the report of the thunder. Divide this number by four, which will give the number of miles the cloud is distant. After waiting a certain number of minutes, do this again. You can thus tell the rate at which the storm is approaching, and can calculate how long it will be before it reaches you. Thunder is seldom heard more than ten miles away.



## THE WORK OF THE TEACHER.

KNOWLEDGE is as much a necessity of the mind as food is of the body. Lack of either means starvation. The mere acquisition of facts, as a curiosity-hunter collects objects of interest, cannot be called education, or at least is a very poor and imperfect kind of education. Above and beyond the mere amassing of facts, is the work of training and disciplining those powers of the mind whereby knowledge is acquired. Accuracy and swiftness in observation and comprehension, the ability to recognize the relations of facts and things and to so group and arrange the fragments of knowledge in such a manner as to make them useful, and in so doing to make the greatest possible use of all the powers and faculties of mind and body which one possesses,—this is real education. Develop these powers in a child, by a suitable course of training, and the acquirement of knowledge becomes easy. It is, indeed, scarcely more than a delightful recreation, instead of an irksome task. A child thus trained is not compelled to wrestle painfully with facts, and dates, and formulæ. He seems to absorb them without apparent effort. A child whose mind has thus been made ready for the acquisition of knowledge must inevitably acquire it. He gravitates toward it naturally. Like hunger and thirst it is a necessity of his nature. There is an insatiable craving for it, which nothing else will satisfy. Knowledge he must have.

Now and then we meet a child whose mind seems to be naturally endowed with those qualities which we have mentioned as essential to the acquisition of an education of the highest type. Unfortunately, the vast majority of children are lacking in one or more of the grand essentials for this work. Here comes the opportunity for the teacher. The grand work committed to his care is that of making ready the child's mind for its life work. If he fails in a proper comprehension of the scope of his duties, or relaxes the "eternal vigilance" of his effort, his failure will be absolute and irretrievable.

It is to be feared that the average teacher has little appreciation of the gravity of his work and its comprehensiveness. School-teaching commonly degenerates into a "cramming" process, which consists of an effort on the part of the teacher to compress into the small cranium of the child, within a few short weeks or months, what he himself has required years in learning; and if he succeeds in making his pupil repeat, parrot-like, a sufficient number of rules, or answer the regulation questions to the satisfaction of the ambitious parent or superintendent, he considers his laurels fairly won. Teachers too often have before them a brilliant display on "exhibition day," rather than a useful and successful career in life. The true teacher sees in the child placed under his care, a plastic form, to be molded and shapen into a thing of beauty and of use; an animal with possibilities of eternal import, with faculties to be trained, disciplined, and developed. The untrained child can see, hear, feel, etc., but does so in a most imperfect manner, and often incorrectly interprets the information received through its several senses. The work of the teacher is to train the child to see correctly, to hear correctly, and to interpret correctly, the impressions received through each of its several senses, which are the only avenues of knowledge. Trained eyes and ears see and hear alike. Minds skilled in the interpretation of phenomena understand alike. With untrained eyes, ears, and minds, this is not true, and hence arise a very large share of the errors and differences from which result dissensions and controversies.

Next to inefficient or incorrect use of the senses, stands as the greatest obstacle in the way of the acquisition of knowledge, that most common of mental infirmities, mind-wandering. The disposition to mind-wandering seems to be inherent in the childish mind. Here, again, is work for the teacher, to train the child in habits of mental concentration. A few days ago a gentleman of great intellectual

vigor and extensive culture, said to the writer, with tears coursing down his face, "I have lost my memory. If, for example, I should leave my hat in your office, and a few hours later should miss it, I should not have the slightest idea where to look for it." In reply we said to him, "Suppose you should place your hat upon this stand, and should say to yourself, 'I will leave my hat upon this stand while I go to dinner. In half an hour I will return, place my hat upon my head and take a walk. Would you be likely to forget where you placed it?'" "Oh, no," said he in reply, "I should not experience the slightest difficulty." It was apparent, then, that the gentleman's memory was not at fault, but that he had simply fallen into the habit of mind-wandering, so that he failed to give attention to the numerous little occurrences of life, and consequently they were not impressed upon his mind in such a way as to enable him to recall them. This wandering of the mind is one of the very greatest obstacles in the way of the acquirement of knowledge by a child. His eyes may be upon his book, his lips may be repeating the lines which he is expected to memorize, but his

mind is upon the play-ground, his ears listening to some enticing sound out of doors, his imagination picturing a paradise in some shady grove, where flowers, bees, and birds abound, but books are not. The true teacher must know how to make books attractive, as well as birds; how to make of study and school work, a pleasant pastime; how to enlist the child's attention, and compel him to so concentrate his mind upon the task before him that it will be indelibly engraven upon the tablets of his brain. Education in its true sense means vastly more than the simple gathering of knowledge. It means to arrange, to classify, and to utilize. And with the rest, it means to acquire the art of acquiring knowledge. For the teacher, it means much more than the simple possession of knowledge, or even the power to impart information. It means a large comprehension of what a child is, and what it may be, and a knowledge of those means by which its crude, undeveloped faculties may be so directed, and disciplined, and enlarged by culture as to make it, in the highest sense possible for the individual, the image of his divine Creator.

A NEW PROFESSORSHIP.—Every one who has been responsible for the training and education of children, knows how much thought and care must be expended in the selection of the kind of reading suitable for them. In this task, he must too, have been confronted, more or less often, with the problem of their varying temperaments, whose needs in this direction would seem to be individually different. A late writer in the *Atlantic Monthly*, discussing this phase of the subject, proposes a new professorship. While this idea is of course fanciful, yet his suggestions are well worth our consideration. He says: "If some clever and cultured person were in a position to make this subject the serious business of life, then it might be possible to come to something like a reasonable solution of the problem; and the thing that follows as the logical sequence is, that some such person should be put in a position to give his whole time to it. In other words, there should be at once established professors of children's reading.

When such a man is found, what a blessed pros-

pect of relief opens before many a wearied parent! Tom is sulky, or Betty is getting too sentimental to be endured, or Harry is apparently dead to all sense of honor; Kate's whole small soul is given over to slothfulness, Dick will prevaricate, or Nancy's temper is the terror of the household. The professor of reading will be called in: he will give a prescription just as the physician does, only that his will go to the book-seller instead of to the apothecary."

In reference to the choice of books most likely to remedy these faults, he adds that "To Tom he will perhaps give a well written volume of exploration; Betty will have somebody's jolly adventures of travel, and just the right thing to each."

The difficulty in providing the suitable person to properly "prescribe" for these mind-ailments of the young folks, he hits off as follows: "In this scheme there seems but one difficulty of much magnitude. Children are plenty, parents might be induced to co-operate, books there are innumerable, but where is the professor?"

E. L. S.

THE mediæval sculptor, who, in defining his work, said, "I do but release a thing of beauty which is imprisoned in this block of marble," supplied us with a fit and beautiful illustration of the growth of character. But the material out of which we would fashion

our statue stands for years in the workshop. We chip from it each day, and bit by bit reveal the figure within. Woe betide us when sometimes the chisel slips or the mallet falls, and we make an unsightly angle where we intended only lovely flowing outlines!

# SOCIAL PURITY.

## WOMAN'S INDIFFERENCE.

THERE is a class of noble workers who labor unceasingly for the uplifting of their unfortunate sister-women; but there is a still larger class who do nothing of the kind. It is true these may live so far removed, "on the high table-land of circumstance and opportunity," that the cries which hourly go up to God from the oppressed, never reach their ears; but we doubt it. In all the world there is no blindness or deafness like the blindness and deafness of indifference. It is to this class, which never sees the pitiful sights, though pitiful sights are everywhere; and that never hears the plaintive moans, though moanings fill the air, that Mrs. Julia Ward Howe addresses herself in the following masterful appeal:—

"I will not say how far women attain or come short of the divine grace, charity, but I will say that without it they must always lack the crown and glory of true womanhood. I will say too, that in the present day, the especial and providential subject of this charity is their own sex. How does our record stand in this particular? We are held to be the depository of personal purity, but we give up a frightful proportion of our sex to recognized pollution and degradation. Some of us live and move on a high

table-land of circumstance and opportunity. All about us are the deep vales of misery and privation. The wail of women who cannot feed their children, who break their health with overwork, or waste it in ignorant idleness, comes up to us. We shrug our shoulders, fling an alms, fill up a subscription, are sorry—that is all. But if we had charity, Paul's charity, we should go down into these low places, and inquire into the causes of all this misery and degradation. And then, the superfluity of our wealth would all be directed to the true alchemy, the turning of society dross into human gold.

"Society women, apply yourselves to lifting up the women of the poorer classes. Young ladies, let each one of you help some young girl who stands on the threshold of life, unprovided with the skill and knowledge which are requisite to make a woman's life pure, honorable, and self-supporting. Mothers who lay your infants in a silken bed, or gather around you your well-grown children, have a care for the mothers whose infants pine in unwholesome dens, whose children, if left to themselves, will learn only the road to the gallows. Rise to the entertainment of this true thought:—'The evil which we could prevent, and do not, is in that degree our fault.'"

## THE NEED OF THE HOUR.

THE great need of the hour, is for men and women who are not afraid to take hold of active, practical work against the growing immorality of the age. There are plenty of persons who applaud the good deeds of others, and yet what are they themselves doing? Martha K. Pierce, L. L. D., in a little tract which constitutes number nine of the social purity series, issued by the Woman's Temperance Publishing Association, asks to such persons a number of very pertinent questions which are worthy of most serious consideration.

"Did you ever think how dangerous a thing it is for us to attend meetings where these evils are talked about, and to read articles about them in the papers,

and get into an agonized state of mind over them, and yet *do nothing*? There is no surer way to deaden moral energy. I fear that this is the danger of the hour. We are feeling dreadfully about it all, but are we doing much to stop it? How can we sit in our safe churches and lecture halls and listen in a perfect ecstasy of indignation to a denunciation of far away evils, when we might know, if we would, that in the next block some work as diabolical, calls to Heaven for vengeance? How dare we go home and quiet ourselves into obliviousness to disagreeable things, with the hope that sometime women will have the power to do something in some safe and effective and eminently proper way to prevent these shocking

things? How many of us are contenting ourselves now with praying that somebody else will do whatever it is "advisable" to do at this juncture? If we could only see ourselves as the pitying Eye above sees us when we try to put celestial aspirations into the strait-jacket of propriety, we would humble ourselves in the dust, realizing our utter unworthiness to receive those fleeting visitations of the Divine.

"There is real work before us. Are we watching the trains on which bewildered girls are being hurried to a future so terrible that those who love them can have no hope, except that merciful Death will find and secure them soon? Are we sure that the pretty saleswoman, who waits on us so patiently during an afternoon's shopping, is not wishing that she had some good, safe friend to go to for advice about some acquaintance whom she half distrusts? Is the hired girl so kindly and justly treated that she does not go to unsafe places for the scanty pleasures that her life of drudgery knows? Has our grumbling at the sewing girl's bill made her wonder, as she turns to go to her home, whether it would be so very wicked, after all, to accept the protection of some man, who, dissipated as she knows him to be, is the only person who seems to care whether she starves or not? Have we taken pains to secure the confi-

dence of the silly daughter of our careless neighbor, that we may give her an effective word of warning? Is there a place in our town in which any homeless woman could find shelter? and have we taken pains to have its location and purpose so well advertised that no one could fail to know of it? Have we joined hands with every other woman in our neighborhood who can be interested in this work (and what true woman cannot be?) that we may help each other in lines of effort that cannot well be carried on by individuals? Are the laws against abduction, kidnapping, and all others applicable to the traffic by which our sisters are enslaved, put in force in our locality, not spasmodically, as peculiarly distressing cases happen to come to public notice, but every time they are violated? Are we trying to gain for womanhood such a direct influence in the body politic that officials will find it to their advantage to enforce those laws and to guard the interests of women as scrupulously in all ways as they now do the interests of the voters upon whose support they depend?

"And whatever else we do or leave undone, do we speak in season the well deserved and sorely needed word of praise for the ones who dare to be the first in any line of this work?"

STAGNANT MINDS. — Mental stagnation is an invitation to evil thoughts, and from evil thoughts are born evil actions. Thousands of people fall into evil ways simply for want of mental occupation. This is especially true of the young. An unoccupied mind is like a stagnant pool, the water of which grows foul and impure, simply from want of activity. Turn a lively brook into a pond covered with green slime and teeming with filth, and send the putrid water dancing over the pebbles, whirling and boiling in a thousand eddies, and dashing over little waterfalls, and soon it becomes pure. Activity is life, mental, moral, and physical. Stagnation is death, moral, as well as mental and physical. If you wish to keep a child's mind free from unwholesome thoughts, and to develop a character which will prompt to good and useful acts, fill its mind so full of wholesome and useful truths and facts, that there will be no room for evil. Keep the child so occupied with mental and physical activities of a wholesome sort, that there will be no opportunity for the development of mental or moral uncleanness. Thousands of children not naturally vile or vicious are led to ruin by simple neglect. Complete occupation is the greatest of all safeguards to the young. J. H. K.

IMPURITY IN ART. — Under the guise of art, the genius of some of our finest artists is turned to pandering to a base desire for sensuous gratification. The pictures that hang in many of our art galleries, which are visited by old and young of both sexes, often number in the list views which to those whose thoughts are not well trained to rigid purity, can be only means of evil. A plea may be made for these paintings in the name of art; but we see no necessity for the development of art in this particular direction, when nature presents so many and such varied scenes of loveliness in landscapes, flowers, beautiful birds, and graceful animals, to say nothing of the human form protected by sufficient covering to satisfy the demands of modesty.

THERE are not two standards of right and wrong, — one for men and one for woman. Nor are there two standards of morality. It is as wrong for a man to be intemperate and unchaste as for a woman, no matter what a depraved public sentiment may declare to the contrary. And this we must teach our children, that there is but one law of right for both man and woman, which is supreme, and from which there is no appeal. — *Sel.*

# GOOD HEALTH

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

## GERMS IN MILK.

As germs are constantly present in the air at all times, it is inevitable that they should be found more or less abundant in milk, as well as other articles of food. They are found in milk in special abundance, however, as it affords a good soil for their development, and exposure to the air, which is usually considered necessary for its proper keeping, facilitates the entrance of germs. It is probable, however, that the most common method of the introduction of germs to milk is by the use of vessels which are not thoroughly cleansed. Prof. H. W. Conn, of Connecticut, has recently been making a large number of experiments at the Agricultural Exhibition at Mansfield, Conn., for the purpose of studying the mode of growth of the germs which are found in milk, and their effects upon the milk. He has found thirty or forty different species of germs in milk and cream, each of which produces characteristic effects. Nearly all are capable of producing souring, or curdling the milk, together with peculiar odors. One germ produces the ordinary odor of sour milk, another the odor of a pig-sty, another that of a barnyard, still others produce the odor of soft soap, mackerel, sour bread, and putrefaction.

Prof. Conn finds, as other experimenters have done, that if milk is kept wholly free from germs, it will keep sweet indefinitely. Germs in milk may be destroyed by simply boiling. A good method is to place the milk in a bottle, and put the bottle in boiling water, leaving out the cork. Boil for half an hour, three days in succession, carefully corking the bottle before removing from the kettle each time. Milk treated in this way will keep almost indefinitely. Occasionally a specimen of milk treated in this manner will spoil, but this is because all the germs are not killed. A single boiling greatly improves the keeping qualities of milk, as it destroys a large pro-

portion of the germs, but as these minute organisms grow with very great rapidity, even a few left behind alive will soon develop into such numbers as to produce the characteristic changes of fermentation or decomposition.

It now remains for some experimenter to determine the effects of the various germs found in milk upon digestion and health. It is very apparent that boiled milk is in every way to be preferred to raw or unboiled milk. This is especially true in warm weather when germs are very abundant. In the winter time milk keeps very much longer because germs are much less abundant in the air, as the lower temperature delays their development when they have found access to the milk. The boiling of milk is especially important for invalids and infants whose digestions are not vigorous. A healthy stomach produces a quantity of gastric juice capable of disinfecting milk or other foods to some extent by the destruction of the germs which they contain, but the gastric juice produced by feeble stomachs cannot do this. Prof. Conn observed also that the germs of milk were found most abundantly in cream. He also discovered them in butter, and observed that they were exceedingly abundant in rancid butter and "ripened" cream. They were always found in cream and butter to some extent, but in sour cream they were sometimes found in such numbers that one hundred thousand could be counted in a single drop. Butter that has the slightest strong flavor is swarming with germs. It is no wonder then that the use of such butter is a frequent cause of dyspepsia. The dairy women of Paris scald their cream before churning it, in consequence of which the butter made from it will keep a long time without spoiling or acquiring a strong flavor. Milk should always be boiled before it is set away for the rising of cream,



and should be kept as far as possible excluded from the air. A good method of doing this is to have the vessels containing the milk protected by a cover composed of several layers of cheese cloth or sheet lint. The cheese cloth, or lint, will allow air to circulate in and out of the pans, but will not permit the passage of germs.

It is evident from the above fact that thorough cleanliness is absolutely essential for the proper keeping of milk. All vessels which have contained

milk should be thoroughly washed with sal soda, and afterward scalded with boiling water. To pour the water from one pan to another is not proper. Fresh, clean, boiling water should be poured into each vessel in sufficient quantities to expose the whole surface to a temperature as near that of boiling water as possible. It is an excellent plan to invert the pans or cans over the stove, or to place them in a hot oven a few moments. This insures a thorough sterilization of the vessels.

### THE MIND-CURE DELUSION.

[Abstract of a Lecture by the Editor.]

I WANT to read you a few lines from a book by F. W. Evans, entitled the "Primitive Mind-Cure: the Nature and Power of Faith":—

"But you will ask me if the corn on your toe is not as real as the toe itself? To this the answer is, that neither of them has any real existence except as a thought on the lower range of the mind, and a false belief; and neither of them is any part of the Ego or self. Both of them could be removed by surgery, and the inner man not be mutilated or yet touched."

So the corn and the toe are merely "thoughts," and both can be amputated at will; doubtless it would be a good thing to "amputate" some thoughts.

"Even motion in its reality, or on the spiritual side of it, is not in the body. It is only a 'change of state of interiors,' as Swedenborg expresses it. When I raise my arm, the reality of the movement is a modification of the mind. So when we change our position from one part of the room to another, or go from Boston to New York, the real movement is an invisible change in our mental condition."

One would like to travel in that way. A man would simply have to "think" himself in San Francisco to be there. I would like to take a trip to Europe, and to go that way.

"In our dreams we travel through space and see objects in space and time. But where is that space?—It is most certainly *in* us; for by the closing of our senses we are shut off from the outer world."

Because the space we dream about is in us, then all space must be in us. That is sound reasoning!

"But to return to the subject of sensuous delusions. There is no such thing possible as headache, or what the patient calls the head, for that is never pained."

Here is bad grammar as well as bad philosophy.

"Pain can no more be predicated of the head than

of the hat or the bonnet. To come to the inward consciousness and certainty of this is a great step toward the cure of it."

I have no doubt that a great many of us have occasion to wish that a headache could be laid aside as easily as a hat or a bonnet. Unfortunately, most of us cannot take the "step" referred to.

"But I shall be asked, 'If the head does not ache, what is it that aches?' So the sun appears to rise, but does not. So if the head does not ache, nothing aches. It is an illusion, and a false belief of what does not and cannot exist."

The head "appears" to ache merely as the sun "appears" to rise! This is comforting, surely. A lady whose mother is suffering from grave mental disorder, called on me yesterday, to consult me about the effects of a blow her mother had struck her in an insane fury. The lady said a mind-cure doctor, a friend of the family, blamed them very much for the want of faith which kept the mother from being cured. The mind-cure doctor was finally allowed to try her art. She told the friends there was no such thing as insanity, and that if they would only keep this good thought in mind, the mother would be well. "But mother strikes me just the same," continued the poor woman, with a sad smile.

"The teeth never in reality ache. There has never been such a thing as a toothache since the creation of man. The teeth were made for the mastication of food, and it is beyond their power or function to ache."

This contains assurances as comforting as those set forth by the headache philosophy.

"It is a principle [see what an overwhelming principle it is] of the transcendental philosophy that time and space are not external entities, but exist in us as modes of thought, time being the succession of

ideas in the mind, and space the *distinguishing* of things, or the viewing of them as distinct rather than all at once. But both space and time are in us *as modes of thought*; it follows that *we locate a pain by thought and in thought.*"

Now I imagine that Emerson, Alcott, and Thoreau, and other transcendentalists of New England, would hardly have acknowledged this as one of the principles of their philosophy. It would take a very large mind to hold the space between New York and London, would it not? Here are a few lines very much to the point, which appeared originally in the "Editor's Drawer" of *Harper's Magazine*, and which have been floating around in the newspapers ever since:—

"One of our 'passion poets' has lately published a metaphysical poem, one stanza of which will suffice to give an idea of what it is:—

"Think health, and health will find you  
As certain as the day,  
And pain will lag behind you,  
And lose you on the way."

"Why not pursue this same line of reasoning to the bitter end, and somewhat after this fashion:—

"Think wealth, and you will get it—  
A million, more or less;  
Think silk, and in the closet,  
You'll find a gros-grain dress.

"Think land when you are drowning,  
Beyond all human reach,  
And by this happy theory  
You'll wash up on the beach.

"Think bread when you are hungry,  
And a feast will there be spread;  
Think sleep when you are weary,  
And you'll find yourself in bed."

There is, however, a true philosophy of mind-healing—a rational mind-cure. The imagination has a powerful influence in producing disease, and in curing disease. There is no doubt whatever that thinking disease makes for disease, and that thinking health makes for health. There is much truth in the old proverb, "As a man thinketh, so is he." There is an actual change in the structure of the mind because of thinking. When a man makes wry faces, and says that his wife is cross, and his breakfast is n't fit to eat, and his best horse is lame, his stomach and liver make wry faces also, and everything is out of joint, and the whole vital economy is

pitched in the same tone. When one begins to think about symptoms, symptoms grow.

Some time since we had a very peculiar case of dyspepsia. There was no other like it in the house, although there were a large number of dyspeptics. The patient was very garrulous, and went about publishing his symptoms and questioning others, and it was not more than two weeks before we had a dozen other patients who were sure that they, too, had this peculiar variety of dyspepsia; and their symptoms were identical with his; and they wanted the same kind of prescriptions made out for them. We had a regular epidemic of this peculiar dyspepsia. Disease can be cultivated, and taking in a new symptom is very much like the old story of the Arab and the camel. When a man gives up and feels bad and is sure he is going to be sick, he really is sick, and the old tyrant, disease, gets him down and tramples upon him and makes him a slave.

Here is a girl who has been practicing on the piano five hours a day, and studying painting and working for a prize at school, besides. She has a sore spot on her spine, is hyper sensitive, and has been sitting up nights, going to parties and places of amusement, until her nerves are all unstrung. She feels strange. Her thumb draws in; her fingers stiffen; her head pulls back. Her mother asks in great alarm, "What is the matter?" and runs for the camphor-bottle. Her mother's fright increases the nervous symptoms. Somebody is hurried off for the doctor, and that frightens her still more, and by the time the doctor gets there, she has a disease sure enough, and is pulled about and tortured by that demon, hysteria.

Another case: Fanny has been ailing a few days, and every morning when she comes down to breakfast, her mother begins: "How do you feel?" "How is that sore spot in your spine?" "And the pain in your side?" and so on until Fanny is reminded of every symptom of which she has complained for a week. And then the doctor makes a visit, and looks very grave as he counts her pulse and looks at the microbes on her tongue, and he plies her with questions similar to those which her mother put. We doctors, by our method of making examinations, really cultivate disease, by inducing our patients to make this unhealthy introspection.

THE editor of a religious paper in Michigan solemnly promised his subscribers that he would sample all the patent medicines offered to him by

advertisers, before he would insert the notices. This was four years ago. He is now an inmate of an inebriate asylum. — *Burlington Free Press.*

## FOOD AT FIRST HAND.

SECOND-HAND things are always at a discount, at least until they become so old as to be considered antique. The rule holds good in all other things, why not in respect to food, as well? Why should one prefer his corn and oats in the second-hand form of beef and mutton? Under the heading "Food from Prime Sources," *Longman's Magazine* says some good things which we think may be thought of with profit:—

"The food which is most enjoyed is the food we call bread and fruit. In my long medical career, extending over forty years, I have rarely known an instance in which a child has not preferred fruit to animal food. I have been many times called upon to treat children for stomachic disorders, induced by pressing upon them animal to the exclusion of fruit diet, and have seen the best results occur from the practice of reverting to the use of fruit in the dietary. I say it without the least prejudice, as a lesson learned from simple experience, that the most natural diet for the young, after the natural milk diet, is fruit and whole-meal bread, with milk and water for drink. The desire for this same mode of sustenance is often continued into after years, as if the resort to flesh were a forced and artificial feeding, which required long and persistent habit to establish as a permanency, as a part of the system of every-day life.

"How strongly this preference for fruit over animal food prevails is shown by the simple fact of the

retention of those foods in the mouth. Food is retained to be tasted and relished. Animal food, to use a common phrase, is "bolted." There is a natural desire to retain the delicious fruit for full mastication; there is no such desire, except in the trained gormand, for the retention of animal substance. One further fact which I have observed,—and that too often to discard it, as a fact of great moment,—is that when a person of mature years has, for a time, given up voluntarily the use of animal food in favor of vegetable, the sense of repugnance to animal food is soon so markedly developed that a return to it is overcome with the utmost difficulty. Neither is this a mere fancy or fad peculiar to sensitive men or over-sentimental women. I have been surprised to see it manifested in men who are the very reverse of sentimental, and who were, in fact, quite ashamed to admit themselves guilty of any such weakness. I have heard those who have gone over from a mixed diet of animal and vegetable food to a pure vegetable diet, speak of feeling low under the new system, and declare that they must needs give it up in consequence; but I have found even these (without exception) declare that they infinitely preferred the simpler, purer, and as it seemed to them, more natural, food plucked from the prime source of food, untainted by its passage through another animal body."

HAD TAKEN NOTHING.—The present enlightened age will, sometime in the distant future, be looked back upon and designated as the paradise of quacks. The world has never seen a period which could in any degree rival the present, in the quantities of patent medicines and nostrums of all sorts,—bad, pernicious, poisonous, and some absolutely deadly,—put upon the market, and eagerly consumed. The quantity of nauseous medicines swallowed by people who are accredited with at least an ordinary amount of intelligence, is simply astounding. Every new remedy recommended by some nostrum-ridden friend, or seen advertised in the newspapers, is greedily swallowed as though it were the panacea that it is represented to be. And not the least bit disheartened by the constant failure of these much-vaunted "sure cures," the devotee of nostrums goes on with his pill-swallowing, until he becomes as much addicted to the practice as the veriest inebriate or opium-eater. If remonstrated with, these persons

invariably insist that they have "taken nothing," a paradoxical assertion which is hardly exaggerated in the following memorandum of a few days' dosing by one of these medicine maniacs:—

"'Wal,' he said, 'I haint tuk nuthin', that is to say, nuthin' wuth mentionin'. I felt sorter peeked, Monday, and I tuk a half bottle o' Ayres' Sassy-parilly, and a spoon o' quinine, and a pint o' hot ginger tea when I went to bed; but they did n't 'pear to do me no good; and Chuesday I tuk a pint o' yaller dock and tansy and rue and calamus and other yarb tea, and six liver pills and a little pain-killer, and I felt wuss instead o' better; so Wednesday I got me a bottle o' castor-ile, and some ippycac, and a bottle o' stuff of a peddler, and took them all day, and they seemed to help me for a while, but I felt wuss soon, and I begun on sulphur and merlasses, and a bottle o' hoss med'cine that they say's good for mostly 'nything. Ceptin' for them, and two or three other little things, I ain't tuk a thing."

## THE EVILS OF TEA-DRINKING.

THE evils arising from the use of tea are so many and so manifest, and have been so often pointed out, that it is a marvel that the consumption of the drug continues to increase at so ominous a rate. No intoxicant, and we speak advisedly in calling tea an intoxicant, is so generally used as tea and its congeners, — coffee, cocoa, and chocolate, and considering its extensive use, it is, perhaps, safe to say that no intoxicant is productive of such a vast amount of harm, as is this class of beverages. We are glad to see that there is a growing disposition to recognize the immense power for mischief possessed by these drugs, and to call attention in the public press, both in this country and in England, to their use. We quote below from a recent article in an English periodical, and commend the writer's remarks to the attention of our tea-loving readers: —

"What is the charm of a cup of tea? — The leisure it excuses, and the gossip it inspires, nothing more. It debilitates the constitution, excites the nerves and weakens the eye-sight; and yet the fine lady in her *boudoir* and the char-woman in her garter would equally view the privation of tea as a calamity. The French were averse to tea-drinking for a whole generation. It was pronounced demoralizing, enervating, the origin of the limpness of English women in their habits, and, 'moreover, that of their long, projecting teeth, occasioned by the quantities of hot liquid consumed, which caused the gums to recede from the teeth and leave the roots bare.' All

this was said by the great Dr. Broussain, who adds to the dreary result of tea-drinking, the solemn adjuration to his fair countrywomen to abstain from the practice, lest they become nerveless and yet nervous, dim-sighted and inactive as their English sisters.

"There seems to be a fatality in tea, for it caused the severance from England of her American colonies; it occasioned the delay in the flight of Marie Antoinette from the Tuilleries, and thereby caused her death by the guillotine; Potemkin owed his ruin to the burst of laughter he could not control when his imperial mistress let fall the teacup, whose boiling contents burnt her delicate fingers. The teapot in the English parlor seems to have become a vehicle for the commission of murder by poisoning, as frequently as the *pot-au-feu* in the French kitchen, while *au moral* more outrageous slanders have been promulgated by feminine malice over a cup of tea than by the most malignant political partisans over their port-wine or brandy and water.

"Old Cobbett was often heard to declare that it was to the introduction of tea that our national decadence was owing: "It originates blue devils in the town lady, and slatternly habits in the country lass. Look at the time wasted by the cottage gossips, while the tea is "drawing," and again while it is being sipped, and the messing, and the dawdling, and the washing up. Again do I repeat that tea has been the curse of the country!"

## REMEMBER PLYMOUTH.

AT this season of the year it is well to recall the experience of the little town of Plymouth, Pa., in the remarkable epidemic of typhoid fever which prevailed there a few years ago, involving the sickness of more than 1,000 people, of whom 114 died of the disease. This outbreak of typhoid fever was traced to a polluted water-supply, which was poisoned by the fecal discharges of a single patient. The infection was brought through the medium of a little stream from the mountain side, which no one suspected of impurity. In the early spring time, when the earth was frozen and covered with snow and ice, a man returned from Philadelphia sick with this disease, to his little home in a cabin on the border of the mountain stream, high up the mountain side. The fecal discharges were thrown out upon the snow. Later in the spring the snow and ice were melted by the sun, and the

water running down into the brook, carried the poisonous discharges with it. In this way the water supply of the city was polluted.

The mode of pollution in this case was a most unusual one. In the majority of cases typhoid fever is contracted from well-water which is contaminated by means of cesspools, privy vaults, and various accumulations of filth in the back yard in the vicinity of the well. Wells in cities are not safe sources from which to obtain water for domestic purposes, as the water from such wells is always liable to contamination. This is especially true in seasons like the present. The summer has been very dry. As the fall rains come on, the accumulated filth on the earth, and in the earth, will be rapidly washed down into the wells, and the consequent pollution of wells will result in numerous epidemics of typhoid fever. By boiling all water used the germs may be killed.

CATCHING CONSUMPTION FROM COWS. — More people die in the United States each year from consumption than from yellow fever, typhoid fever, diphtheria, and scarlet fever combined, and yet an outbreak of yellow fever or small-pox in a community will produce a general panic, whereas no one seems to be disturbed by the fact that consumption claims not less than one hundred thousand victims annually. Careful investigations have shown again and again that cows are peculiarly susceptible to this disease, and that the use of the flesh or the milk of consumptive cows is a most active means of propagating this dreadful malady. Numerous cases like the following were reported by the *Sanitary Volunteer*, and might be cited as evidence of the general prevalence of the disease among cattle:

“Complaint was made to the Board that some dis-

ease existed in a herd of thirty cows, in a certain town of the State: and under the assumption that the disease might be pleuro-pneumonia, the Government, upon notification, sent a competent veterinary surgeon to inspect the herd. The inspector immediately diagnosed tuberculosis, had an infected cow killed, and the *post-mortem* examination revealed tubercles in nearly every organ of the body, including the udder. The inspector reported that about seventy-five per cent of the herd was already infected. All, or nearly all, the cows were being milked, and the product being sold daily to a milk dealer for distribution among his customers. The dairyman, ignorant of the character of the disease, was—horrible as it seems—bringing up a baby upon the milk of a single cow in which the disease had advanced nearly to its fatal termination.”

ILLUSTRIOUS GLUTTONS. — The list of illustrious persons who have fallen victims to appetite is appalling to one who has never given the matter attention. Leaving out of the list those who have been killed by alcohol, the number of those who have died prematurely in consequence of gormandizing, is a sad commentary upon the weakness of human nature, even in those who might fairly be expected to stand a little above the common level of humanity: Henry I. died of indigestion occasioned by a surfeit of eels. The death of Pope was imputed by his friends to a certain silver sauce-pan in which it was one of his chief delights to prepare potted lampreys. King George I. died in a fit of indigestion, the result of his habitual gormandizing. Charles Dickens was a great gormand, and doubtless owed his premature death to this cause. Della Porta, Manutius, Dujardin, and many others, justly celebrated as scholars, painters, architects, and in the various professions, are set down by their biographers as having died of dyspepsia, which ought to be regarded as a most ignominious death, fit only for a fool or a felon.

INTERESTING TO MEAT-EATERS. — The newspapers report that cattle are dying by thousands in Arkansas and Indian Territory, from Texas fever or some other plague. The reporter makes the significant remark: “Cattle are being shipped to market from pastures where carcasses are lying in hundreds, and of the same brand as those shipped. I am told they are considered good enough for canner’s stock, and everything goes.”

This is a significant fact. It will always be noticed that when hog cholera or any other plague breaks out

among domestic animals, there is an immediate increase of shipments to the market from the infected district. There is no doubt whatever that thousands of diseased cattle are consumed annually for food in this as well as other countries.

Prof. Gangee, an eminent English sanitarian, stated some years ago that more than twenty thousand diseased cattle were consumed in England every year—buried in the catacombs of human stomachs.

A DELICATE DISH. — The following conversation, said to have taken place between a French *chef* and a fashionable boarder, may never have occurred, but any hotel bill-of-fare might afford quite as good a foundation for dietetic squeamishness, with its “stewed kidney,” “fried brains,” “*pate de foie gras*,” and “deviled” abominations of various sorts:—

“Do tell me, monsieur, what this delicious dish is,” said pretty Mrs. H., the star boarder. “Zat, madam, zat is a grand triumph of ze art. Only ze Frenchman can make ze delicious deesh—zat is ze—vat you call ze owel—ze pet owel.” “Owl!” exclaimed a chorus of voices, and a dozen wry faces were made. “O monsieur, how could you have the heart to kill the poor thing?” shrieked the star boarder. “It ees you zat meek so cruel accusations, madam; I no keel him—he die!”

If there must be a cellar beneath the house, it should be large, light, and well ventilated. A good way by which to ventilate the cellar is to extend from it a pipe to the kitchen chimney, which will thus carry off all foul gases.

# DOMESTIC MEDICINE

RULES FOR DYSPEPTICS.—1. Eat slowly, masticate the food very thoroughly, even more so, if possible, than is required in health. The more time the food spends in the mouth, the less it will spend in the stomach.

2. Avoid drinking at meals; at most, take a few sips of warm drink at the close of the meal, if the food is very dry in character.

3. In general, dyspeptic stomachs manage dry food better than that containing much fluid.

4. Eat neither very hot nor cold food. The best temperature is about that of the body. Avoid exposure to cold after eating.

5. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Sometimes less than is really needed must be taken when digestion is very weak. Strength depends not on what is eaten, but on what is digested.

6. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating, nor within four hours of a meal.

7. Never eat more than three times a day, and make the last meal very light. For many dyspeptics, two meals are better than more.

8. Never eat a morsel of any sort between meals.

9. Never eat when very tired, whether exhausted from mental or physical labor.

10. Never eat when the mind is worried or the temper is ruffled, if possible to avoid doing so.

11. Eat only food that is easy of digestion, avoiding complicated and indigestible dishes, and taking but one to three kinds at a meal.

12. Most persons will be benefited by the use of oatmeal, wheat meal, or graham flour, cracked wheat, and other whole-grain preparations, though many will find it necessary to avoid vegetables, especially when fruits are taken.

A LESSON ABOUT DIPHTHERIA.—A member of the Ohio State Board of Health recently visited a village called Moscow, situated on the banks of the

Ohio river, which is being terribly scourged by diphtheria. According to report, "There are seventy-six cases of diphtheria there, seventy-three children and three adults, with already twelve deaths. The sanitary conditions are awful: the hog pens and outhouses have not been cleaned for years, and the stench is terrible in many parts of the town. Fathers and mothers are flying with their children for their lives, and in this way the disease will undoubtedly be carried to other places. The disease is most malignant. Death frequently results from blood-poisoning when the patient is apparently convalescing, sometimes within an hour after the child is up and walking around. A board of health has been organized at Moscow, and the town is now being cleaned. Will some other towns begin now? or wait for the epidemic first?"

NETTLE RASH.—This very annoying affection not uncommon among children, is usually the result of indigestion. For permanent relief, it is of course necessary to correct the errors in diet which occasion indigestion. For temporary relief, the following will be found very useful: Dissolve in a half pint of water a teaspoonful of saleratus. Common baking soda will answer the purpose, but saleratus is to be preferred. Apply this solution gently to all the affected parts, avoiding rubbing. Cloths wet in the solution, and wrapped about the parts affected, is an excellent method of application.

Another remedy of great value is menthol dissolved in alcohol, in proportion of one part of menthol to twelve of alcohol. This should be applied in the same manner, or may be gently dashed upon the skin by means of a small sponge saturated with the solution.

TO RELIEVE CRAMP.—For a quick relief of the suffering, grasp that portion of the body affected, and press it firmly. Persons subject to attacks of this kind should always carry about with them a strap which may be buckled tightly around the cramping muscle.

## HOW TO GIVE THE BABY THE CHOLERA INFANTUM.

DR. C. A. LINDSAY, the able secretary of the Connecticut State Board of Health, explains the operation in a recent circular. Dr. Lindsay holds, as do other sanitarians, that heat alone is not responsible for the excessive mortality of infants during the hot months, and maintains that while the combination of heat and cow's milk is often found to be exceedingly dangerous to babies, although neither one alone is injurious, there is some other fixed cause which renders this combination so exceedingly fatal.

"If, then, heat alone does not cause infantile diarrhea, and if diluted milk is not an improper food for infants, and again, if summer heat by its own effect does not change the milk, there must yet be some other hidden factor which makes the combination of these two agencies, heat and cow's milk, so dangerous to babies. Neither one alone is injurious. Recent investigations all point in one direction, which leads to the belief that the cause of the 'summer complaint' of babies is a poisonous agent *added* to the artificial food of infants, and that this dangerous

addition is a living germ, which when taken into their digestive organs finds there both nidus and pabulum for its development and multiplication, and either by its own action causes diarrhea, or through certain of its life processes a virulent chemical poison is developed."

The following rule for giving an infant the "summer complaint" is infallible in hot weather:—

"Expose its food before feeding, for an hour in any kind of an open dish, in a dirty kitchen sink—a shorter period will do if there is a pipe from the sink to a cesspool; or in a foul cellar in which there are decaying vegetables, or in an ill-ventilated pantry to which the effluvia and the flies from a neighboring privy vault have free access. It will not matter whether the food be cow's milk, or goat's milk, or ass's milk, or condensed milk, or any of the patented prepared foods in the market: they all afford a good vehicle by which these disease germs may reach the baby's bowels, and set up therein an intestine war."

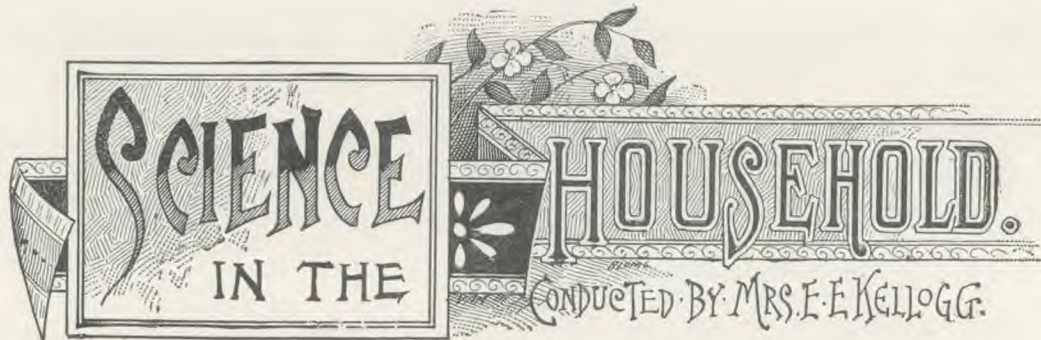
CARPETS.—The question has been asked us, "Is rag carpeting hygienic?" A rag carpet is just as hygienic as any, provided the rags from which it is made are clean. As a rule, rags are not the most wholesome materials for such uses. Diphtheria has been known to be scattered throughout a neighborhood through one person's selling infected rags to a rag-man. The rag-man sorted them over, and sent such as would answer to a carpet-weaver, and the family of the latter, and some others who visited them, had diphtheria in consequence. We are not very much in favor of rag carpets; but the chief objection to them would apply to all carpets, however, and that is, they are great reservoirs of dust and dirt. We would like to see people so educated that they would not want carpets in their homes. One comes in from the street with the soles of his shoes covered with street dust, and street dust is the worst of all dust; for in it are found all sorts of decomposing matter which has dried in the sun, containing a most miscellaneous variety of germs, ready for business when they get a chance. In their dried

condition they may remain inactive for months or years, but a little moisture and a proper location are all they want to work their mischief. The dust filters through the carpet, and the chambermaid churns it up with her broom now and then, and it settles on the curtains and other places. Every breeze showers it down, and we breathe it in. "Motes dancing in the sunbeams" is a pretty-sounding phrase; but the motes are germs, and, taken into our lungs, are liable to work injury.

A person with an uncovered wound taken into a room where there is a carpet and an ordinary amount of dust, would be sure to suffer from what the old doctors called "laudable pus," collecting in the wound from the contamination of the germs present. But if he were kept in a room where there was absolutely no dust, the wound would heal by immediate union. Mountaineers receive terrible wounds from conflicts with wild animals or from falling down steep precipices, and yet recover with little or no attention, because the air in such high altitudes is entirely free from germs.

FOR INGROWING TOE-NAILS.—One of the best remedies for ingrowing toe-nails, according to a writer in a German medical journal, is the following: "Raise the edge of the nail and tuck under it two or three thicknesses of tin foil, by means of a

small pair of pinchers. After a few days, make a new application of the same sort. Half a dozen applications of this treatment will usually effect a cure. The patient can perform the operation himself after the first time."



SCIENCE  
IN THE  
HOUSEHOLD.  
CONDUCTED BY MRS. E. E. KELLOGG.

### THE MARKING SYSTEM.

EVERY housekeeper ought to know, not only just what things she owns, but precisely where to put her hand upon each, at a moment's notice. A few of the wiser women regulate their households with such a delightful sort of precision, that they are enabled to do this, but the generic name of these is unfortunately *not* legion. To the average housekeeper, life would be a very different thing if she would inaugurate a system of marking, labeling, and memoranda, for every box, bottle, jar, or package in the house, from attic to cellar. These, properly classified, arranged, and kept in order, would be an unflinching source of comfort in her daily work. Indeed, she little knows what the plan would do for her in the way of saving steps, avoiding worries, and smoothing out tangles, until she tries it.

A good thing to begin with is the household linen, of which every article should be plainly marked. To those living in the country, where the family washing is done at home, under their own supervision, this might not seem so essential, still there are many occasions, even in the country, where the adherence to this plan would prevent confusion and trouble. In the exchange of the various courtesies and kindnesses of a country neighborhood, towels, napkins, etc., are quite apt to be exchanged also, while upon the occasion of a school or neighborhood picnic, table-napery and table-ware are sometimes "pied" irretrievably.

Mark carefully, too, all articles which have to be washed, belonging to each member of the family. The small properties of one's personal wardrobe, such as collars, cuffs, handkerchiefs, etc., have a much-to-be-regretted trick of suddenly disappearing, even when no one seems to be to blame. Whatever may be the explanation of it, articles certainly do not lose so readily when marked. A bottle of indelible ink and a clean pen will be found a paying investment. Stockings, and such things,

not easily marked, should have a bit of white linen tape with the name written on it, tacked to them. Short lengths of this tape, with the names of the various members of the family written upon them, should always be kept on hand for emergencies.

The paper patterns, together with the innumerable packages small and great, that accumulate about a house, should all be labeled, adding any qualifying memoranda needed to instantly identify them.

Then the old letters must be "sorted over," and those which are kept should be accompanied with memoranda of the writer, to whom sent, with the date, and allusion to the contents, if of special moment.

In reference to the bottles or packages of drugs, of which every family in the course of time accumulates a greater or less store, too much care cannot be taken to keep them apart from all other things. They should have a safe and separate place, entirely their own, and it must also be a place where no child can possibly go. They must be very plainly labeled; no housekeeper should allow herself to trust to her memory in a case of such vital importance to her loved ones.

One who systematically goes to work and "puts her house in order" in this way, will, we feel sure, never be willing to slide back into the old slipshod ways. Referring to the practical workings of this comfort-conferring system, a late writer in the Boston *Congregationalist* says: "I know a delightful family in which this system flourishes in full force. The father is a man who has served his State in many public offices with honor; the mother is one of the most cultivated women in America. Their six children are bright, amiable, and energetic. There is not a washable garment or household article in their home, which is not distinctly marked; nor a bottle, nor jar, nor tumbler, nor package. The house is beautifully kept throughout—a strict ob-



servance of the marking system leads to this result; yet no one ever hears the mistress talking of her domestic affairs. It is seldom that she even alludes to her household machinery. She reads nearly all the good literature 'going,' and her conversation is

enjoyed alike by cultivated men and intellectual women. 'And how does she ever get time to accomplish so much?' Because she spends none uselessly in hunting for things, — she manages her house by means of the marking system.'” E. L. S.

### DARNING STOCKINGS.

AROUND the hole to stay it well  
Must thread and needle weave the spell,  
With careful stitch that shall not show  
The mender's art that's hid below.  
Now catch the strands on either side,  
Whilst equal distance you divide,  
And over-under, deftly trace  
The dainty squares across the space.  
The heel is worn, the toe is through,

While on the bottom come to view  
The single threads that here and there  
Reveal the need of quick repair.  
O, patient, must the mender be,  
And armed with quick dexterity,  
That all these rents be smoothly patched,  
That darn and fabric be so matched  
The weary feet may wear with ease  
All stockings darned as well as these. — *Sel.*

### TO MEND RUBBER BOOTS.

THE following recipe for cement, which we clip from the *New York Independent*, is without doubt an excellent one, but, as unmixed benzine is highly inflammable, great care will need to be taken in the preparation of it.

“Procure from a depot of rubber goods, or from a large store where such goods are found, a piece of virgin India-rubber. With a wet knife cut from it the thinnest shavings possible; with a pair of sharp shears divide the shavings into fine shreds. Fill a wide-mouthed bottle about one-tenth full of the shredded rubber. With pure benzine, guiltless of oil, fill the bottle three-fourths full. The rubber in a moment will perceptibly swell if the benzine is a good article. If frequently shaken, the contents of the bottle in a few days will be of the consistency

of honey. Should there be clots of undissolved rubber through it, add more benzine; if it be thin and watery a moiety of rubber is needed. The unvulcanized rubber may sometimes be found at the druggists. A pint of cement may be made from a piece of solid native rubber, the size of a large hickory nut; this quantity will last a family a long time and will be found invaluable. Three coats of it will unite, with great firmness, broken places in shoes, refractory patches, and soles on rubbers; will fasten backs on books, rips in upholstery, and will render itself generally useful to the ingenious housewife, as it will dry in a very few minutes. It forms an admirable air and water-tight cement for bottles, by simply corking them and immersing the stoppers in it.”

MOLD and decaying vegetables in a cellar weave shrouds for the upper chambers.

WHOLE cloves are said to be more effectual in exterminating moths than either tobacco, camphor, or cedar chips.

ALL the broken and crooked carpet tacks will come handy and useful in cleaning bottles. They are much better than shot, on account of their sharp edges.

PAPER may be cleaned from oil stains by making a creamy mixture of powdered clay and water, and brushing it over the paper, letting it remain on several hours.

To restore black lace or grenadine which has turned brown, mix two teaspoonfuls ammonia with a cupful of vinegar, and after ripping, brushing, and shaking the goods thoroughly, dampen with the mixture, just right for ironing, using some soft, old cloth of a dark color. Iron on the wrong side.

THE following method is said to be an excellent one for the renovation of old, half-worn silks. Boil into a pulp three or four old kid gloves, using a bright, new pan, and putting the gloves into cold water. Strain this pulpy mass, adding a little hot water, and a teaspoonful of ammonia. Wash the silk thoroughly in this, putting into the rinsing water some borax and spirits of camphor. When cleansing black silks use gloves of any color, but when cleansing light silks use light-colored gloves.

## QUESTION BOX.

[All questions must be accompanied by the full name and address of the writer, as it is often necessary to address by letter the person asking the question.]

RHUBARB.—MEAT EATING.—J. H., Mich., asks the following questions:—

“1. Is rhubarb healthful? If not, why not? 2. Why should we not eat meat? 3. If a person lives upon a diet of brown bread, baked sweet apples and milk, what proportions of each should he eat?”

*Ans.*—1. We do not consider rhubarb an article of food fit to be eaten, for the reason that it contains a very large amount of oxalic acid. It is oxalic acid to which the acidity of this plant is due. It is well enough known that oxalic acid is a deadly poison in large doses, and it is certainly not wholesome in small doses. It is eliminated from the kidneys in the form of oxalate of lime. 2. Our objections to the use of meat are (1) it is not, in its best condition, the most wholesome food, since it contains waste elements and is likely to be eaten in a state of more or less advanced decomposition. (2.) It is very liable to be diseased. Numerous parasites, to say nothing about such diseases as consumption, typhoid fever, and other constitutional disorders, are communicated through the use of flesh. (3.) It is not the natural diet of man. (4.) The slaughtering of animals is brutalizing and debasing in its influence, and the consumption of flesh as food, bears in the same direction. 3. In the employment of a dietary composed of the articles mentioned, a person might suit his taste as to the quantity, as the brown bread itself contains all the elements of nutrition, and the same is true of milk. Apples contain little nourishment, and would be eaten more as an appetizer than as a food, although the abundant saccharine matter which they contain is easy of digestion and highly nourishing. Our correspondent will find much light on this subject by consulting the tables found on pages 370, to 373, of the Home Hand-Book.

WORMS.—ROARING IN THE HEAD.—SORENESS IN RIGHT SIDE.—DIRECTIONS FOR MAKING WHEAT CHARCOAL.—Mrs. L. A. C., Wis., asks the following questions:—

“1. Will you kindly give me a remedy for worms? 2. What treatment would you recommend for a constant roaring in the head? 3. And what for a soreness in the right side? 4. What are the directions for making wheat charcoal?”

*Ans.*—1. There is no universal remedy for worms. Different remedies are required according to the

nature of the parasite. The so-called thread worms are cured by the employment of a large enema consisting of a decoction of quassia. Round worms are killed by santonine in proper doses. This medicine should be administered under the care of a physician. Tape-worms are killed by various remedies. One of the best is pumpkin seeds. A recently discovered remedy which we have found of great value is *pelleterine de yanret*. This can be obtained from druggists. The treatment of tape-worms is a matter of too serious a character to be undertaken without the immediate supervision of a competent physician. 2. Roaring in the head may be due to any one of several causes. The most prominent causes are disease of the middle ear, and an anæmic condition of the blood. The cause must be removed. If the roaring be accompanied by deafness, the trouble is doubtless in the ear. A competent aurist should be consulted. 3. Soreness in the side will probably be relieved by the frequent application of heat, either moist or dry. Cloths may be wrung out of hot water and applied as fomentations, or a rubber bag filled with hot water may be applied for half an hour once or twice daily. 4. Wheat charcoal is made by roasting the wheat until it is thoroughly charred, and then grinding and bolting. The siliceous nature of the covering of the wheat grain renders the process a very difficult one.

HEALTHFULNESS OF RUBBER-BOTTOM SHOES.—G. H. S., Tennessee, wishes to know if rubber-bottom shoes are healthful when worn in summer?

*Ans.*—There is no objection to the use of rubber-bottom shoes at any season of the year. They are particularly useful for wear during those seasons of the year when walks and pavements are damp.

A NEBRASKA correspondent asks the following questions:—“If it is true that the lives of professional athletes are shorter than the average business man, is it on account of their violent exercise, or on account of their dissipated lives?”

*Ans.*—Athletes are, with few exceptions, men who plunge headlong into dissipation in the intervals between their periods of training. It is quite probable, also, that the exercise indulged in is sometimes quite too violent to be considered healthful.

## LITERARY NOTICES.

THE *Atlantic Monthly* for October contains much valuable matter, among which is another of Mr. Fiske's exceedingly valuable and readable papers on that period of the American Revolution which is devoted to "The Monmouth and Newport Campaigns." William Cranston Lawton contributes an article on "The Closing Scenes of the Iliad," which is of special interest to all classical scholars. An article which should be read by every individual connected with the government of this country, especially by senators and representatives in Congress, is an account of "The Government and its Creditors," by Mr. Henry Loomis Nelson. It is a record of the dishonest, shamelessly neglectful course of the government in its treatment of its honest creditors, and should rouse an indignant determination that the government shall hereafter try to be honest. Sophia Kirk contributes a paper on "Prismatics," which discusses color and poetry. L. D. Morgan writes of "Ladies and Learning," with reference to the old idea entertained concerning the education of women and the much broader and truer ideas which now prevail. Houghton, Mifflin & Co., Boston.

THE opening paper of the October *Scribner* is "How I Crossed Masai-Land," by Joseph Thomson, with illustrations from photographs taken on the spot, during this wonderful journey of hardship and privation through equatorial Africa. The finely illustrated scientific paper on "Electricity in War," is by W. S. Hughes, Lt. U. S. Navy, and John Willis, First Lt., Corps of Engineers, U. S. A. Harold Frederic's historical reminiscences of the Mohawk Valley, embodied in his paper "In the Valley," also illustrated, is continued, and Charles Sprague Smith contributes "A Summer in Iceland," which also abounds in illustrations. Prof. N. S. Shaler has an article on the much neglected subject of "Common Roads." Edward J. Lowell has a paper on "The Life of Benvenuto Cellini," the goldsmith and sculptor, and Donald G. Mitchell (Ik Marvel) closes the number in his own quaint way with—"A Scattering Shot at Some Ruralities." Charles Scribner's Sons, New York.

THE October issue of the *Chautauquan* is the initial number of Volume X., and appears in a new form and with a handsome cover of new design. It presents the following in the table of contents; "The Politics Which Made and Unmade Rome," by President C. K. Adams, L. L. D., of Cornell University;

"The Life of the Romans," by Principal James Donaldson, L. L. D., of the University of St. Andrews, Scotland; "Child Labor and Some of Its Results," by Helen Campbell; "Mental Philosophy," by John Habberton; "The Uses of Mathematics," by Prof. A. S. Hardy, Ph. D., of Dartmouth College. Dr. Titus Munson Coan describes some delightful tramps in "The Swiss Alpine Club;" the Hon. S. G. W. Benjamin, Ex-Minister to Persia, writes entertainingly of "The Women of Persia;" Bishop J. F. Hurst, L. L. D., tells much that is interesting about "The Current Literature of India;" Frances E. Willard furnishes a sketch of the life of Dorothea Dix. The price of the magazine has been raised to \$2.00, to cover the expense of the changes and improvements. Address, The *Chautauquan*, Meadville, Pa.

THE publishers of *St. Nicholas* announce that that popular children's magazine is to be enlarged, beginning with the new volume, which opens with November, 1889, and that a new and clearer type will be adopted. Four important serial stories by four well-known American authors will be given during the coming year.

THE *Forest and Stream* Publishing, Co. have ready "Log Cabins and How to Build and Furnish Them," by William S. Wicks. The volume is profusely illustrated with plans and designs by the author, and is said to be a pleasing revelation of the possibilities of this style of architecture.

"A YACHTING PARTY," a beautifully executed water-color, is the fitting frontispiece for *Demorest's Monthly Magazine* for September. This is followed by a handsomely illustrated article on Bar Harbor, which almost makes us feel the cool breezes of that delightful summer resort. From the extreme East we are carried to the extreme West, and are told how two women took up a quarter-section of land in Dakota, and successfully cultivated it. We then go on "A Voyage through Space" to the sun, and in an extremely interesting way, that even a child can understand, are told all about the spots that appear on the face of the "god of day." Jenny June writes for the department of "Our Girls," and the boys are given a seasonable article (profusely illustrated), on "Swimming and Diving." There are other interesting articles, all suitable to the times. Published by W. Jennings Demorest, 15 East 14th Street, New York.

## PUBLISHERS' PAGE.

STEPS are being taken to organize a great Temperance Institute at Birmingham, England. The representative of the American Health and Temperance Association at that point, Rev. E. W. Whitney, has been authorized to represent this Association at the institute.

\* \*

THE next annual meeting of the American Health and Temperance Association, will be held at Battle Creek, between October 17 and November 3. It is especially desired that the presidents of all State Associations should be present at this meeting, as important steps will be taken respecting the future work of the organization.

\* \*

THE managers of the Sanitarium Kindergarten wish to announce that the Kindergarten Normal is full. In other words, the number of applications from persons who wish to join this school, is already larger than can be admitted this year.

\* \*

WE are happy to announce that a valuable and interesting book on hygiene is now in press, and will shortly be ready for presentation to the public. The work consists of a collection of the writings of Mrs. E. G. and James White, which have been collected and compiled by a committee appointed for the purpose. These writings embody the most practical and sensible instructions on the subjects of health and sanitary reform, and we feel sure will be gladly welcomed by thousands who have listened to the authors, or who have been acquainted with their writings on this subject.

\* \*

MISSIONARIES WANTED. — The managers of the Sanitarium, and the Executive Committee of the American Health and Temperance Association have determined to undertake, in conjunction, a health and temperance missionary effort. Young men and women are wanted to fit themselves for this work. Persons of good address, good ability, and good education, are wanted to engage in this humanitarian enterprise. It is not a money-making scheme, but those engaging in it can hope to receive a fair remuneration for their labors. All who are interested in the matter should address the president of the American Health and Temperance Association, Dr. J. H. Kellogg, Battle Creek, Mich.

\* \*

REV. D. A. ROBINSON, of 48 Paternoster Row, London, England, vice-president of the American Health and Temperance Association, represents the Association in England, and is prepared to address meetings on various health and temperance topics. Mr. Robinson has been particularly complimented for his lectures on scientific temperance, which he illustrates by the use of colored charts, the stereopticon, and experiments. Bands of Hope and other temperance organizations, who are so fortunate as to secure the services of Mr. Robinson, will be more than pleased with the results.

\* \*

How many of our subscribers are indebted to GOOD HEALTH for benefits received during 1889? We trust there are few of our readers who have not felt that the valuable information contained in each number of the journal was ample compensation for the amount expended for the entire volume. Of

course we anticipate that all such have already made arrangements to renew their subscription before it expires, so they will not miss a single number; but we want to suggest, in addition, that each of our appreciative readers place a copy of the journal in the hands of some friend, with such explanations concerning its purpose and its merits as will give him a proper appreciation of it. In this way the philanthropic work in which we are engaged, may be extended. The sole object of the publication of this journal is the education of the people in a better way of living, and the testimony of thousands convinces us that this magazine has been a powerful means for good in this direction. We are anxious to influence healthwise, as many persons as possible, and by the co-operation of those who have received benefits from the journal, its sphere of influence might be more than doubled.

\* \*

THE Sanitarium Training-School for Nurses will graduate, about November 1, the largest class which has ever completed a course in this school. The present number of pupils in attendance is between eighty and ninety. A large number of persons have recently applied for admission, and some have already been accepted. As all who join the school are received on trial for one month, it is important that those who contemplate availing themselves of its advantages, should make application at once, sending to the managers their recommendations, stating age, qualifications, condition of health, etc.

\* \*

THE Pacific Press, of Oakland and San Francisco, Cal., and New York City, have recently established a publishing house at 48 Paternoster Row, London, England. The Pacific Press has been for years one of the most enterprising and flourishing publishing houses on the Pacific Coast. Their numerous publications are being sold wherever the English language is spoken. The London branch of this large publishing house will be devoted largely to the publication of works relating to health, temperance, sanitary science, and allied subjects. They are already issuing a number of subscription books, and expect to put into the field at an early date, a large number of canvassing agents.

\* \*

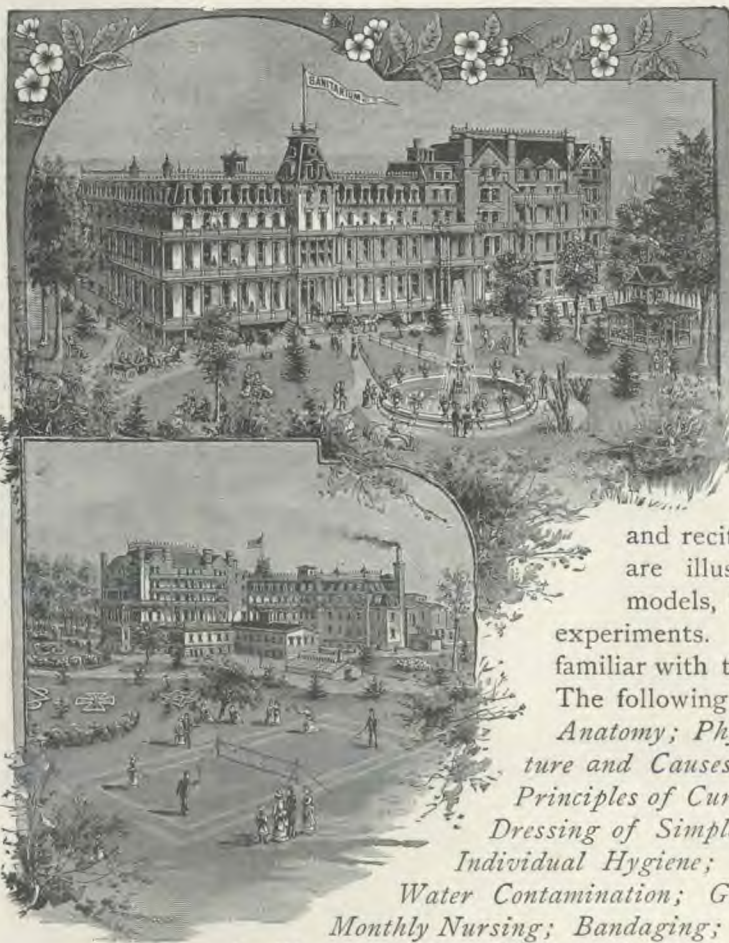
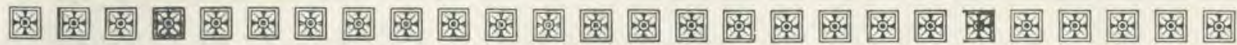
AMONG the improvements in progress at the Medical and Surgical Sanitarium, where something in the way of improvement is always going on, we notice several new buildings in process of erection. The managers have determined to devote the quarters now occupied by the laundry to a free bath, for the benefit of the public. A large new building is being erected for the steam laundry, and the building now occupied as a bakery, in which the various health foods sold by the Sanitarium Food Co. are manufactured, is also being nearly doubled in size. This business has twice outgrown its quarters. Mr. W. H. Hall, manager of the Food Co., recently informed us that granola, a single one of the health foods made by this company, was being sent out at the rate of two tons per week.

The managers of the Sanitarium are also making considerable additions to the green-house, which will more than double its size. The additions will include a large and very handsome conservatory, which will be connected with the main building of the Sanitarium by a covered passage, so that patients can visit it at all times, even during the winter season, without exposure,

# Sanitarium Training School

## FOR NURSES.

Regular Terms begin Nov. 1. Students Received at Any Time.



*This School has now been in operation for five years, with constantly increasing patronage and success.*

### Course of Instruction.

The course of instruction comprises two series of lectures, recitations and practical instruction, continuing through two years.

### Methods of Instruction.

The instruction is both theoretical and practical. Several lectures and recitations are given each week. Lectures are illustrated by means of colored charts, models, fine French Manikins, and numerous experiments. Each student is required to become familiar with the subjects taught, by actual practice. The following are among the leading topics taught: *Anatomy; Physiology; Elementary Chemistry; Nature and Causes of Disease; Language of Disease; Principles of Cure; Management of Common Diseases; Dressing of Simple Wounds and Injuries; General and Individual Hygiene; Ventilation; Disinfection; Air and Water Contamination; General Nursing; Surgical Nursing; Monthly Nursing; Bandaging; Hydrotherapy—theoretical and practical; Electricity—Faradic, Galvanic, Static; Diet for the Sick; Massage; Swedish Movements; Calisthenics; What to Do in Emergencies.*

### Special Advantages.

The advantages offered by this school are in many respects superior to those offered by any other, not excepting the older schools in the large cities.

TERMS.—Students pay board and tuition in labor the first year; wages are paid the second year.

For Circulars giving full information, address,

**SANITARIUM, Battle Creek, Mich.**

## The : Sanitarium : Steam : Inhaler.



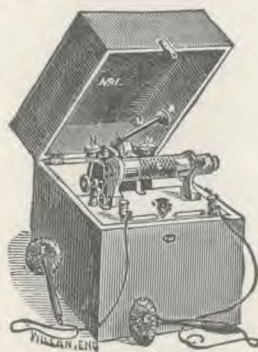
FIG. 2.

chronic, throat coughs, bleeding from the lungs, chronic catarrh of the bronchial tubes, and allied affections. Every family should possess one of these inexpensive and most effective appliances. In the treatment of croup and diphtheria its use is indispensable.

Price, including directions for use, 50 cents. When ordered by mail 15 cents extra should be added for postage.

### The Sanitarium Battery.

THE utility of electricity in the treatment of paralysis, general debility, and a great variety of common chronic ailments has become so well recognized that an electrical battery is considered in many households almost as indispensable as any ordinary article of furniture. One reason for this is probably to be found in the fact that while often effective for great good, the gentle electrical current furnished by an ordinary electrical battery is hardly capable of doing any serious injury.



SANITARIUM BATTERY.

The popular faith in electricity as a curative agent is to be seen in the enormous sale of electrical belts, brushes, and so-called magnetic and electrical garments of various descriptions which are being constantly effected through liberal and deceptive newspaper advertising. It is well enough known to scientific physicians that the majority of these appliances supply either no current at all, or a current so feeble as to be absolutely worthless as regards results.

The battery shown in the engraving is manufactured expressly for us, and is one of the most efficient, durable, and easily managed family batteries ever offered for sale. Many hundreds of these batteries have been sold, and the great satisfaction which those who have used them have expressed, warrants the belief that future purchasers will be equally well pleased with this very efficient and convenient electrical apparatus.

Full Directions for the use and care of this Battery accompany each instrument.

\* Price, { BY EXPRESS, CAREFULLY } \$10. \*  
                  { NEATLY PACKED. }                   

SANITARIUM SUPPLY CO. | Battle Creek, Mich.

THE above cut represents one of the simplest, cheapest, and most efficient steam inhalers ever advertised. It consists of an outer cup for holding hot water, and an inner cup in which is placed a small quantity of hot water, to which the medicament is added. The construction of the inhaler is shown in Fig. 1. As will be seen, the air passes down through the cover and over the top of the inner cup through the liquid, and is drawn up through the innermost cup into the tube, thence into the mouth, as shown in Fig. 2. All kinds of volatile remedies for throat ailments, such as the essential oils, balsams, etc., may be used with this inhaler. There is no simple remedy so effective in relieving sore throats, either acute or



FIG. 1.

# ADVERTISEMENTS.

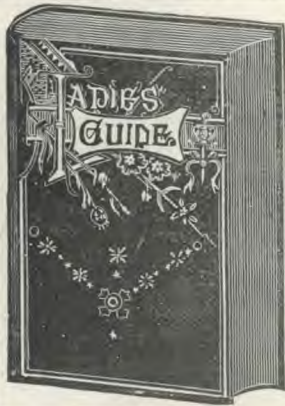
REVISED AND ENLARGED EDITION.

## LADIES' GUIDE IN HEALTH AND DISEASE.

BY J. H. KELLOGG, M. D.,

*Member of the American Association for the Advancement of Science, American Public Health Association, American Society of Microscopists, Michigan State Medical Association, State Board of Health of Michigan, Editor of "Good Health," Author of "Home Hand-Book of Hygiene and Rational Medicine," "Man, the Masterpiece," and various other works.*

A NEW BOOK.



672 OCTAVO PAGES.

123 ILLUSTRATIONS.

**T**HIS new work fills a want long recognized in all parts of the land, and is admitted by physicians to be the most complete and practical work of its kind. An eminent lady physician pronounces it "the best book ever written in the interest of humanity." Another writes, "It is destined to work a great reformation in the rising generation, and to alleviate the ills of the present." The author in a very chaste and delicate manner graphically describes the great mysteries of life—the Anatomy and Physiology of Reproduction, and considers the several phases of woman's life under the respective headings, "The Little Girl," "The Young Lady," "The Wife," and "The Mother,"—embracing all subjects of interest pertaining to the health or disease of the sex; as Education; Mora and Physical Culture; Clothing; Diet; Puberty; Mental Equality of Sexes; Personal Beauty; Marriage; Dignity of Wifehood; Prevention of Conception; Criminal Abortion; Change of Life; Heredity; Signs, Hygiene, and Disorders of Pregnancy; Complications of Labor; Symptoms and Treatment for Diseases of Women; and an Appendix giving Rational Home Treatment for Diseases of Childhood; Instruction for Baths, Swedish Movements, Postural Treatment, Electricity, Massage, many valuable Dietetic Recipes; Medicinal Recipes and Prescriptions.

"Know Thyself."

ONE LADY SOLD 205 COPIES  
FIRST MONTH.

NO OTHER WORK COMBINES SO  
MUCH OF INTEREST AND VALUE  
TO DAUGHTERS, WIVES, AND  
MOTHERS.

ACTIVE AGENTS WANTED.

ADDRESS,

GOOD HEALTH PUB. CO.,  
BATTLE CREEK, MICH.,

W. D. CONDIT & CO.,

*Sole Agents for the Eastern States, Canada, and the  
British Possessions.*

DES MOINES, IOWA.

## HEALTH FOODS.

In the effort to meet the necessities of a large Sanitarium, with its great variety of patients, we have produced a number of food preparations adapted to different diseased conditions, the merits of which are such as to secure for them a very large and increasing sale, not only to persons belonging to the invalid class, but those who wish by "good living" to avoid disease. The following are the leading preparations:—

Cents per lb.	Cents per lb.	Cents per lb.
Oatmeal Biscuit.....12	White Crackers.....10	Wheatena.....12
Medium Oatmeal Crackers....10	Whole-Wheat Wafers.....12	Avenola.....12
Plain Oatmeal Crackers.....10	Gluten Wafers.....30	Granola.....12
No. 1 Graham Crackers.....10	Rye Wafers.....12	Gluten Food.....40
No. 2 Graham Crackers.....10	Fruit Crackers.....20	Infant's Food.....40
Plain Gr'h'm Crackers Dyspeptic 10	Carbon Crackers.....15	White Gluten Food.....20

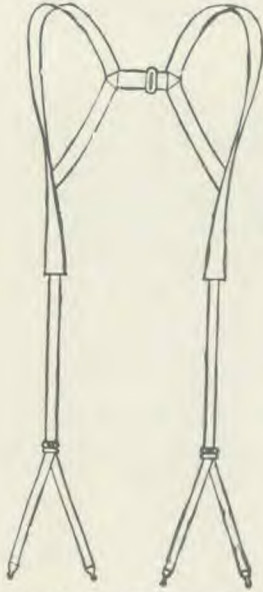
Sample Packages containing Specimens of each of our Foods sent postpaid for 50 cents. Selected Samples, 25 cents.

All grain preparations can be supplied in large or small lots, as we keep a fresh supply constantly on hand of goods, which are largely made expressly for us, of a superior quality of grain.  
Address

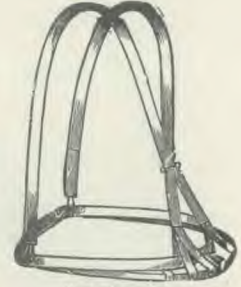
**SANITARIUM FOOD COMPANY,**  
*Battle Creek, Mich.*

# HEALTHFUL CLOTHING

FOR  
WOMEN AND GIRLS.



Shoulder Brace Hose Supporter.



Skirt-Supporter.



Hygienic Skirt-Supporter.



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

*"HEALTH WAISTS,"*  
*SKIRT AND STOCKING SUPPORTERS,*  
*UNION UNDER-FLANNELS,*

and

*Every Garment Needed*

for

*A Complete Outfit in Healthful Dress.*

We have also recently added a full line of the excellent and popular



Emancipation Waist.



## JENNESS-MILLER PATTERNS.

Which will enable any seamstress to construct the most elegant and healthful articles of dress for women and girls, and at a minimum cost.



*For Price-List of Goods and Patterns, address,*



Equipoise Waist.

Sanitary  
Supply Company,  
Battle Creek, Mich.



Peerless Corset-Waist.



Christmas!



The accompanying cut represents a new book, entitled

✦ ✦ ✦

*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 HER SLAVES,  
HEALTH AND TEMPERANCE  
MISCELLANY,  
HYGIENE FOR YOUNG FOLKS,**

*One of the Most Unique and Interesting Volumes Ever Published.*

Over 220 Quarto Pages.      Profusely Illustrations.      Cloth, Gilt-edge, \$2.25.

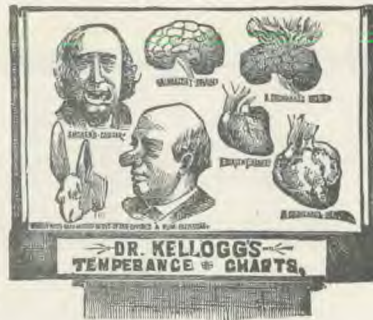
GOOD HEALTH PUB. CO., Battle Creek, Mich.

## New Temperance Charts.

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

AFTER a careful study for several years of the Physical Effects of Alcohol and Tobacco upon the human body, with unusually favorable opportunities for observation through post-mortem examinations, chemical analyses, and microscopical investigations, the author has prepared, by the aid of the best artists to be secured, a series of **TEN COLORED PLATES**, which depict in the most graphic manner possible, the ravages of alcohol among the delicate structures of the human body. The following is a list of what is exhibited by the several charts:—

PLATE 1. The Alcohol Family.  
PLATE 2. A Healthy Stomach.  
PLATE 3. Stomach of a Moderate Drinker.  
PLATE 4. Stomach of a Hard Drinker.  
PLATE 5. Stomach in Delirium Tremens.  
PLATE 6. Cancer of the Stomach.  
PLATE 7. *A.*—Healthy Nerve Cells. *B.*—Fatty Degeneration of Nerve Cells. *C.*—Healthy Blood. *D.*—Blood of a Habitual Smoker. *E.*—Blood of a Drunkard. *F.*—Blood Destroyed by Alcohol. *G.*—The Drunkard's Ring. *H.*—Healthy Nerve Fibres. *I.*—Fatty Degeneration of Nerve Fibres. *J.*—Healthy Muscle Fibres. *K.*—Fatty Degeneration of Muscle Fibres.  
PLATE 8. Smoker's Cancer. A Rum Blossom. A Healthy Brain. A Drunkard's Brain. A Healthy Heart. A Drunkard's Heart.  
PLATE 9. *A.* A Healthy Lung. *B.*—Drunkard's Consumption. *D.*—A Healthy Kidney. *E.*—Enlarged Fatty Kidney of Beer-Drinker. *F.*—Atrophied Kidney of Gin-Drinker. *G.*—Healthy Liver.



*H.*—Liver of Drunkard, Showing Nutmeg Degeneration. *I.*—Magnified Section of Fatty Liver of Drunkard. *J.*—View of an Eye Diseased from the Use of Tobacco and Whisky. *K.*—View of the Interior of a Healthy Eye.

PLATE 10. Alcoholic Drinks, showing the percentage of Alcohol contained in the common Alcoholic Beverages. Adulterants of Alcoholic Drinks, showing a list of poisons used in adulterating the various liquors. Sphygmographic Tracings of the Pulse, showing the effects of Alcohol and Tobacco upon the pulse. *A.*—Pulse of a Healthy Person. *B.*—Pulse of a Moderate Drinker. *C.*—Pulse of a Drunkard. *D.*—Pulse of an Old Tobacco-User. *E.* Pulse of a Young Smoker.

Statistics of Stimulants and Narcotics. A diagram exhibiting in a graphic way the fact that the annual cost of Alcoholic Drinks, Tobacco, Rum, Tea and Coffee, exceeds the cost of Bread, Meat, Clothing, Education and Missions.

*Nothing so Complete in this line has ever been attempted before. These ten charts constitute a most powerful temperance lecture, the impressions of which will not be easily forgotten.*

The accompanying cut illustrates a novel arrangement for exhibiting charts, which is now furnished with this series of charts when desired. It works to a charm, and is just the thing for lecturers. It is only necessary to set it on a stand or table, and in two minutes it can be made ready for operation. It can be operated in either direction equally well. Each set of charts is accompanied by a Key and a stenographic report of a lecture from the charts delivered by Dr. Kellogg at the Lake Bluff Temperance Convocation.

**Price of Charts on common rollers, \$12.00; Case extra, \$1.25; Charts with Exhibitor, \$15.00.**

**GOOD HEALTH PUBLISHING COMPANY,**  
Battle Creek, Mich.

ADVERTISEMENTS.

A New  
Book.

# Man, the Masterpiece,

or, Plain Truths Plainly Told about Boyhood, Youth and Manhood.

BY J. H. KELLOGG, M. D.

Know  
Thyself.

620 Octavo Pages.

A Paper Manikin.

30 Full-Page Engravings.

17 Copies Sold in 4 hours.

9 in one day, and

71 in one week,

By ONE AGENT.

*Is sure to become one of the most popular and rapidly selling subscription books, because of INTRINSIC MERIT and PRACTICAL VALUE.*



THIS new work is designed to make man better, physically, mentally and morally, and may be very briefly described as follows, to-wit: A Brief Description of the Human Body and its Functions; The Mystery of a New Life; Boyhood to Manhood—*dangers which threaten the physical, mental and moral welfare*; Physical Culture; Ethics; Social Ethics; Getting a Wife—*if suggestions in this chapter were universally regarded, the divorce courts would close for want of business*; An Evil Heritage; How to Make Life a Success; Stomachs—*points out the methods by which the great army of dyspeptics are recruited*; Invaluable Prescriptions for Disorders of the Stomach; Biliousness—a *sure cure*; Hygiene of the Lungs—*principles and methods of successful ventilation*; Physical Effects of Alcohol; The Tobacco Habit; Germs—of disease—*sources, dangers, and methods of destruction*, etc.; What to Wear for Health; How to Bathe; Sexual Sins and their consequences; Diseases of the Sexual Organs—*description and treatment*; General Hints about Health—*care of Skin, Eyes, Ears, Rules for Dyspeptics*, etc.; Treatment and Prescriptions for Common Ailments, as Chronic Inflammation of the Throat, Nasal Catarrh, Hay Fever, Granular Sore Eyelids, Boils, Corns, Freckles, Dandruff, Tapeworms, Piles, Baldness, Sleeplessness, Heartburn, Acute Sore Throat, Erysipelas, Sunstroke, Ingrowing Toe Nails, Burns, Sprains, Nervous Headache, Sexual Nervous Debility, etc.

## GOOD RELIABLE AGENTS WANTED.

FOR TERMS AND TERRITORY ADDRESS

W. D. CONDIT & CO., Des Moines, Iowa.

GOOD HEALTH PUB. CO., Battle Creek, Mich., *Sole Agents for the Eastern States, Canada, and the British Possessions.*



## THE FIRE EXTINGUISHER MFG. CO.,

325, 327, 329, & 331 South Desplaines St.,

## CHICAGO, ILLS.,

SOLE MANUFACTURERS OF THE

“Babcock” and “Champion”

# HAND FIRE EXTINGUISHERS

Are fast supplying public and charitable institutions with their Extinguisher. Orders recently received by them from over one dozen different institutions and schools in Pennsylvania, others from Ohio, and among the latest orders is one for three (3) 175 gallon capacity Champion Stationary Chemical Tanks, for the Indiana School for Feeble-Minded Youth, at Fort Wayne, Indiana, by the State of Indiana.

These are All Carbonic Acid Gas Machines,

And the above company are owners of this patent. Address for circulars and information as above.

Sizes: 1 Gallon to 500 Gallon Capacity.

ADVERTISEMENTS.



A MARVEL OF COMPLETENESS  
IS THE  
**HOME HANDBOOK.**

A Vast Cyclopaedia of Domestic Hygiene and Rational Treatment.

By J. H. KELLOGG, M. D.

The Home Hand-Book tells in plain, every-day language, how to preserve health, and if lost, how to regain it. It is by far, the most important medical work for domestic use that has yet appeared, and is rapidly making its way into the homes of the United States. It is written in the light of the most recent scientific investigation, by a physician of large experience and acknowledged ability, and contains the most approved methods for the treatment of more than 600 diseases. It contains nearly 1700 PAGES, over 500 ENGRAVINGS, about 30 FULL-PAGE COLORED PLATES, and an ELEGANT PAPER MANIKIN.

**TWENTIETH THOUSAND**

Just from the Press.

**RESPONSIBLE CANVAASERS OF EITHER SEX WANTED, to whom a liberal salary will be paid.**

Address, Good Health Publishing Company, Battle Creek Mich.

*Harvest Excursion Tickets*

TO THE

WEST, SOUTHWEST AND NORTHWEST

WILL BE SOLD BY THE

CHICAGO AND GRAND TRUNK R'y,  
DETROIT, GRAND HAVEN AND MILWAUKEE R'y,  
TOLEDO, SAGINAW AND MUSKOGON R'y,  
DURING AUGUST, SEPTEMBER, AND OCTOBER.

HALF RATES.

*For particulars apply to station agent.*

**Gate City Stone Filter.**

46 MURRAY ST.,  
NEW YORK.



**CHEAPEST, most ORNAMENTAL, and BEST Filter for Family and Office use on the market.**

- ☞ Fine China and Gray Stone-ware jars to hold the water.
  - ☞ A NATURAL STONE for a Filtering Medium.
  - ☞ Fitted with separate Patent Ice Chambers, to cool the water.
  - ☞ As easily cleaned as a Water Pitcher.
  - ☞ No objectionable material used in the construction of this Filter.
- All water is filled with impurities during the rainy season.
- ☞ This Filter will ABSOLUTELY CLEANSE IT.

Open Cut shows Filter Disc used in our Filters, and Separate Patent Ice Chamber.

Address as above for Descriptive Price List.

1832 ESTABLISHED 1832.

**DO YOU WANT**

- Any Book for yourselves ?
  - Any Kindergarten Books or Materials ?
  - Any Sunday School Books ?
  - Any Birthday Stationery ?
  - Any Visiting Cards of Faultless Style ?
  - Any Magazine or other Periodical ?
  - Any Menus, Programmes, or Reports ?
  - To buy books cheaply by buying them in groups of two or more ?
  - To subscribe to two or more magazines or weeklies together ?
  - Write to us FIRST for OUR price or prices. Write clearly for what you want, and if it is attainable on any continent, we can get it for you and forward it to you promptly.
- Any Book for your Children ?
  - Any Piece of Music or Music Book ?
  - Any Book on any Catalogue you may have ?
  - Any Wedding Stationery ?
  - Any Seals, Crests, or Monograms ?
  - Any School Book, American or Imported ?
  - Any Music or Magazines Bound ?

ESTABLISHED  
1832

A. G. WHITTLESEY CO.,  
Booksellers, Publishers, Stationers & Importers.  
835 Broadway, N. Y.

**CUT RATES TO THE WEST.**

Cheap tickets to all points in Kansas, Colorado, Indian Territory, (Oklahoma), Texas, and other States and Territories in the West, will be sold by the Santa Fe Route from Chicago and other points along the line, on August 6 and 20 ; September 10 and 24 and October 8.

For particulars ask your Ticket Agent, or write to John J. Byrne, Assistant General Passenger Agent, Santa Fe Route, Chicago.

# ADVERTISEMENTS.

## MICHIGAN CENTRAL

"The Niagara Falls Route."

STATIONS.	EAST.		*N. Y. Express.		*Atl'ntic Express.		†Night Express.		†Kal. Accom'n		†Local Pass'gr.	
	†Mail.	†Day Express.										
Chicago.....	am 7.55	am 10.35	pm 3.10	pm 10.10	pm 9.10	pm 4.50						
Michigan City	pm 10.08	12.28	4.54	am 12.23	11.27	6.58						
Niles.....	11.40	1.30	5.49	1.50	am 12.55	8.17						
Kalamazoo ....	1.12	2.45	6.58	9.35	2.27	pm { 10.00					pm 5.30	
Battle Creek...	1.55	3.20	7.33	4.25	3.15	7.55					6.25	
Jackson.....	3.35	4.39	8.49	6.15	4.45	9.35					8.20	
Ann Arbor.....	5.04	5.43	9.41	7.50	6.00	10.43						
Detroit.....	6.30	6.50	10.45	9.20	7.30	11.50						
Buffalo.....	8.30	am 4.25	am 7.15	6.55	9.05	pm 8.05						
Rochester.....		6.50	9.15	8.00		11.45						
Syracuse.....		9.30	11.35	10.15		am 2.15						
New York.....		pm 7.00	am 8.50	am 7.20		11.15						
Boston.....		10.00	10.50			pm 2.50						
WEST.												
STATIONS.	†Mail.	†Day Express.	*Chicago Express.	*Pacific Express.	†Evening Express.	†Kal. Accom'n	†Local Pass'gr.					
Boston.....		am 8.30	pm 3.00	pm 9.15								
New York.....		10.03	6.00	11.30								
Syracuse.....		pm 7.40	am 2.10	am 9.05								
Rochester.....		9.55	4.20	11.30								
Buffalo.....	8.30	am 12.15	6.15	pm 1.30								
Detroit.....	am 9.00	8.00	pm 1.20	pm 4.00								
Ann Arbor.....	10.27	9.02	2.24	11.35	pm 4.00	5.22						
Jackson.....	pm 12.05	10.03	3.27	am 12.54	10.55	7.10	am 6.25					
Battle Creek ..	1.55	11.36	4.38	2.15	am 12.27	8.52	7.55					
Kalamazoo....	2.45	pm 12.13	5.15	3.07	1.20	pm { 9.45	8.40					
Niles.....	4.20	1.30	6.27	4.32	3.06	am { 8.00						
Michigan City	5.42	2.35	7.32	5.43	4.31	9.00						
Chicago.....	7.55	4.35	9.30	7.45	7.00	11.20						

\*Daily. †Daily except Sunday. ‡Daily except Saturday.  
**O. W. RUGGLES,** General Pass. & Ticket Agent, Chicago.      **O. E. JONES,** Ticket Agent, Battle Creek.

## THE AMERICAN SENTINEL.

AN EIGHT-PAGE WEEKLY JOURNAL  
 DEVOTED TO  
 The defense of American Institutions, the preservation of the United States Constitution as it is, so far as regards religion or religious tests, and the maintenance of human rights, both civil and religious.

It will ever be uncompromisingly opposed to anything tending toward a union of Church and State, either in name or in fact.

**Single Copy, per year, post-paid - \$1.00.**

In clubs of ten or more copies, per year, each - - - 75c.

To foreign countries; single subscriptions, post-paid, - 5c.

Sample copy free. Address,  
**AMERICAN SENTINEL,**  
 No 43 Bond St., New York City.

## Temperance Charts.

A Series of Ten Chromo-Lithographic Plates  
 Illustrating the effects of alcohol and tobacco upon the body. Size, 24 x 37 inches. On plain rollers, price, \$10.00. Address,  
**GOOD HEALTH PUBLISHING CO.,**  
 BATTLE CREEK, MICH.

## DIXON'S "CARBURET OF IRON." STOVE POLISH IS THE BEST.

## CHICAGO & GRAND TRUNK R. R.

Time Table, in effect June 23, 1889.


GOING WEST.						STATIONS.	GOING EAST.					
Lmd Exp.	Mail.	Day Exp.	Fast Exp.	Fast Exp.	K. Grk. Pass.		Mail.	Lmd Exp.	Active Exp.	Lmd Exp.	Pass.	
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Port Huron	pm 10.20	am 1.15	am 7.35	am 10.50		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. Flint	pm 8.40	am 11.58	am 6.17	am 9.17		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Durand	pm 7.55	am 11.27	am 6.40	am 8.36		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. Lansing	pm 7.15	am 10.58	am 5.03	am 8.00		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Charlotte	pm 6.20	am 10.07	am 4.00	am 8.55		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. Battle Creek	pm 4.42	am 9.37	am 3.25	am 6.02		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Vicksburg	pm 3.45	am 8.55	am 2.35	am 7.45		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. Schoolcraft	pm 3.40	am 8.50	am 2.30	am 7.40		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Cassopolis	pm 2.58	am 8.11	am 1.48	am 6.19		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. South Bend	pm 2.05	am 7.26	am 12.45	am 6.19		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Haskell's	pm 1.25	am 6.50	am 12.00	am 5.45		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Arr. Valparaiso	pm 12.05	am 5.30	am 10.30	am 4.30		
pm 12.45	am 7.15	am 8.45	am 9.05	am 9.05	am 9.05	Dep. Chicago	pm 9.05	am 3.25	am 8.15	am 2.35		

†Stops only on signal. 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.  
 Pacific Limited, Day and Atlantic Expresses, daily.  
 Sunday Passenger, Sunday only.  
**GEO. B. REEVE** Traffic Manager.      **W. J. SPICER,** General Manager.

FINEST LINE  
 EVER PRESENTED

COLUMBIA

BICYCLES  
 TRICYCLES  
 TANDEM  
 SAFETIES



ILLUSTRATED CATALOGUE  
 FREE

POPE MFG. CO.

BOSTON NEW YORK CHICAGO

## If You Are a Mother THE MOTHER'S MAGAZINE,

Now in its 57th year, and unsectarian, should be in your family. Send 15c in stamps for a sample copy.      THE MOTHER'S MAGAZINE, New York.

## The Home Hand-Book OF DOMESTIC HYGIENE AND RATIONAL MEDICINE.

**AGENTS WANTED** to sell a new and revised edition of this fast-selling work. An encyclopedia of reliable medical information for the family. 1624 pages, over 500 cuts, 56 colored plates, besides paper manikin. For agent's outfit, address,  
**GOOD HEALTH PUB. CO.,** Battle Creek, Mich.

# SHARP & SMITH,

MANUFACTURERS AND IMPORTERS OF

## Surgical Instruments.

*Apparatus  
For Weak Ankles,  
Bow Legs, Knock Knees,  
Spinal Curvature,  
Wry Neck.*



*Elastic Stockings  
For Enlarged Veins  
and Weak Joints,  
Batteries, Inhalers,  
Etc.*

*Invalid Chairs, Invalid Cushions, Ear Trumpets, Conversation Tubes,  
Ice Bags, Ice Caps, Hot Water Bags, Syringes of all kinds.*

*Artificial Limbs. Artificial Eyes.*

*Abdominal Supporters.*

*Send for Directions for  
Measurement.*

**73 Randolph St., CHICAGO.**

### PHILLIPS'S Independent Lawn Pleasure Swing.

**HAS  
NO  
EQUAL!**



It is strong and durable, and an ornament to the lawn. The most perfect swing made for private families, parks, summer resorts, gymnasiums, &c., &c., in fact any place where a healthful exercise with pleasure combined is desired, one or more of Phillips's Independent Lawn Swings is indispensable.

Made in following sizes and prices: No. 1 is 8 ft. high, suitable for two children, 8 years old. One of the seats folds down, so it can be used to advantage in the nursery. Price, \$8.00. No. 2 is 12 ft. high, with adjustable back to seats, suitable for two

grown persons or four children. Price, \$16.00. No. 3 is 14 ft. high, with adjustable back to seats; seating capacity same as No. 2, but stronger and gives a nicer motion. Price, \$18.00. No. 4 is 16 ft. high, with adjustable back to the seats. Suitable for four grown persons or six children. Price, \$22.00, delivered free to any station within 500 miles of Chicago, Ill., or Sarnia, Ontario. State and County Rights for Sale. Agents wanted in every city. Address,

W. F. PHILLIPS, Patentee, 40 Throop St., Chicago, Ill., until October the 1st, after that at my home, RIVER VIEW, SARNTIA, ONT.

### Real Estate For Sale or Exchange.

Special Inducements are offered to all persons wishing to purchase either city or farm property in this vicinity. Call or send for catalogue and price list. Address,

Office: 59 West Main St.

H. C. WINSLOW,  
Battle Creek, Mich.

### LADIES' Skirt Suspenders.



The accompanying cut represents the most improved form of Skirt Suspenders for ladies and misses. This Suspenders is so convenient, so comfortable, so simple, so light, and yet so durable, that every lady who appreciates the increased comfort and health to be obtained by the use of such an article becomes a purchaser at sight.

The Suspenders is made of beautiful silk stripe web, and is adjustable for either ladies or misses. Sent by mail, postage paid, on receipt of 50 cents, or three for \$1.00.

SEND FOR CIRCULARS OF HEALTHFUL CLOTHING OF EVERY DESCRIPTION.

Address,

Sanitary Supply Co.,

Battle Creek, Mich.

### EUREKA INCUBATORS & BROODERS.

Send five one-cent stamps for 108-page catalogue. Tells how to make the best brooder in use.

J. L. CAMPBELL,  
West Elizabeth, Pa.

### ALCOHOLIC POISON.

The best compendium of the Temperance Question published. Statements brief, concise, and to the point. 128 pages, 25 cents. Address,

GOOD HEALTH PUB. CO., Battle Creek, Mich.



Medical & Surgical  
**SANITARIUM,**  
 Battle Creek, Mich.

The Oldest and Most Extensive Sanitarium.  
 Conducted on Rational and Scientific  
 Principles, in the United  
 States.

**SPECIAL ADVANTAGES.**

- An elevated and picturesque site. Remarkably salubrious surroundings. "Water of extraordinary purity."—*Prof. A. D. Prescott.*
- Baths of every description.
- Electricity in every form.
- Massage and Swedish movements by trained manipulators.
- Pneumatic and vacuum treatment.
- All sorts of Mechanical Appliances.
- A fine Gymnasium with a trained director.
- Classified dietaries.
- Unequaled ventilation, perfect sewerage.
- Artificial climate created for those needing special conditions.
- Thoroughly aseptic surgical wards and operating rooms.
- All conveniences and comforts of a first-class hotel.
- Incurable and offensive patients not received.
- Not a "pleasure resort," but an excellent place for chronic invalids who need special conditions and treatment not readily obtainable at home.

**RATES REASONABLE.**

For Circulars Address, . . . . } **SANITARIUM,** { . . . . **BATTLE CREEK, MICH.**