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GOOD



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[SEE HAPPY FIRESIDE.]

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NOVEMBER, 1889.

INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

7. — Great Britain.

WHEN the Sultan of Acheen surrendered his camp to the troops of Mynheer Van Behren, the victor captured a map which seemed to have been the personal property of the Sumatra potentate, and on which the American continent was represented by a triangular patch, marked, "Lowland; country of snow and great unbelief."

With a similar rashness of generalization many European nations seem to formulate their ideas of their mutual characteristics. To the average Englishman a Spaniard is an onion-eating bigot, a Frenchman a frog-eating fop; and the Latin races retaliate by describing John Bull as an over-corpulent country-squire, good-natured at heart, but withal rather irascible, and brimful of porter and prejudice.

The latter notion is shared even by many of our own countrymen, though the truth is that Great Britain is inhabited by at least three different nations: South Saxons, North Saxons and Celts, the latter, again, has various sub-divisions that differ from each other as widely as a Yankee shop-keeper differs from a Texas cowboy.

Taking the Saxon nation as a whole, many of their most striking characteristics can be explained by the influence of a hereditary conservatism. For quite a series of centuries the countrymen of the Black Prince encountered no superior nation, and thus acquired that love of home institution and aversion to reforms which, for better or worse, still continues to influence their national habits. Old England was long the paradise of field-sports. Not deer, roes, and quail, only, but bustards, wild swans, wild geese, wild grouse,

and more than half-wild black cattle were found in forests that covered nearly nine-tenths of the archery-loving island, and a passion for out-door recreations has become rooted to a degree which has successfully resisted the effeminating tendencies of wealth and culture. In the jungle of India, as in the frozen swamps of Hudson's Bay Territory, and the bushland of the Australian desert, the enterprising sons of John Bull still cherish the memory of their boyhood sports, and daydream of a time when they shall return to enlarge and beautify the parks of the paternal mansion. The government-clerk, the magistrate, the plodding business man of London and Liverpool, return from their daily drudgery to the peace of a rustic Eden, shrouded in evergreens, and adapted to the ground with all the contrivances that wealth or compensating ingenuity can devise. Some English country homes are often, indeed, perfect in their kind, unequaled models of taste, healthfulness, and all the beauty compatible with the vicissitudes of a not over-genial climate, and suggestive of the Hesperian Garden-homes our own merchant princes might create in the summerlands of the southern Alleghanies. "House," "Hill," or "Lodge" are the unpretentious names of thousands of palatial residences in the leafy hills of Saxon Britain, while every dice-gambling Italian count designates his ancestral rookery as a "castle."

British artisans, too, often invest the savings of years in the purchase of a suburban cottage, where children and pets can enjoy the verdure of a little shrubby-garden, at a safe distance from the hubbub of a great city, and that national love of country-life

is a redeeming factor of incalculable potency in the character-traits of a nation exposed to the thousand temptations of its international traffic. Country air and garden-work are Nature's specifics for restoring the harmony of care-worn minds, and Candide's

its groves and greens; copses of forest-trees nestle about every old mansion, and every *parvenu*, on the establishment of a country-seat of his own, begins by planting his adjoining hill-slopes or moorlands with hundreds of shade-trees. Consumption cannot fail to be prevalent in a country of coal-smoky factory towns, but its ravages have been greatly modified by the influence of arboreal vegetation, with its thickets of oxygen-breaking, and gas-absorbing foliage.

Another redeeming trait of the shop-keeping Saxon is his persistent passion for athletic sports and his worship of physical powers which — almost alone in Europe — has miraculously survived the asceticism of the monastic ages. The yeoman of old England could never be persuaded to sacrifice his physical manhood to the interests of an anti-natural dogma, and the English monks, too, seem to have been rather successful in evading the anti-physical precepts of their creed, and to have combined prayers and penance with a good deal of Nature-worship, *a la* Friar Tuck. "Fox-hunting parsons" are, on the whole, far less objectionable specimens of the genus *homo* than the ghoul-ish, cadaverous world-renouncers of the South-European convents, and the doctrine of muscular Christianity was anticipated hundreds of years ago, in old English college-towns, where litany-chanting pupils were indulged in fre-



DRIVER OF A LONDON ALE-WAGON.

quent trials of strength on the village-green or ball-ground.

Physical education — systematic or otherwise — is almost as general among the upper classes of Great Britain, as in Sparta and Rome, and goes far to explain the hale appearance of English school-children, that has excited the amazement of numerous foreign travelers who expected to find a stunted slum-brood, with eyes bleared by coal-smoke, and muscles shriveled by the want of exercise incident to the overcrowding of European cities in general. Nowhere in the world can a first-class athlete be surer of patronage than in Old England, and an almost intuitive dread of effeminacy has maintained the old standard of gymnastic prowess even among the *jeunesse dorée* of the modern Babylon — among the perfumed dandies who pass their forenoons in bed or at the toilette table, but in the afternoon find time for a two-hours'

motto: "*Enfin, il faut cultiver son jardin,*" has proved a saving article of faith in the life of more than one great man wandering at the brink of pessimism. Xenophon had his Arcadian hunting lodge, Felix Sylla his fruit gardens, Frederick the Great his *Sans Souci*, Voltaire his Ferny orchard-farm, Goethe his Weimar garden-cottage, where they could take refuge to restore their mental health and re-confirm their conviction that life, on certain terms, is after all, worth living.

The old Germanic love of woodlands has accompanied the Saxon race to all its colonies. English colonists have rarely been reckless forest destroyers, and often rather forest-planters, and after sixteen centuries of agricultural progress, Great Britain can still boast a larger area of tree-lands than any European country with the exception of Scandinavia. Every large town has its public parks, every village

visit to the gymnasium or the training-school of Professor Sparrer. In North England there are families of wrestlers who have preserved the records of their victories and defeats for a series of generations, and will forfeit a week's wages rather than miss the yearly meetings at the Shire-ring, like the athletes of ancient Greece, where even troops engaged in the active campaign of a civil war were temporarily furloughed, by mutual agreement, to give them a chance to attend the celebration of the Athenian games.

English conservatism, however, has its shady side in the obstinate adherence to the alcohol-worship of mediæval Britain. Not in Russia, not in Germany,—not even in Munich itself, a native would stand more utterly aghast at the mention of the heresy that alcoholic beverages are detrimental or even dispensable, than in some of the beer-drinking province-towns of old England. Beer and bread for breakfast; pudding, beef, and beer for dinner, and beer, bread, and beef for supper, was the daily bill of fare of an English maid of honor in the century of Queen Bess, and bread, cheese, and a mug of ale, still constitute the daily repast of millions of British workmen who would renounce both their bread and cheese rather than even curtail

of Canada and the United States, as the safest of all possible investments. Judging from the statistics of the British liquor-trade, that dismal assurance would seem almost justified. Temperance has made unquestionable progress, especially among the upper classes and the female population of the United Kingdom, but that gain is offset by the dreadful increase of intemperance among the workingmen of the mining and agricultural districts, as well as of the large factory-towns. Mr. Hoyle, of Manchester, who has devoted a good deal of research to the collection of reliable statistics on the subject, estimates the yearly liquor bill of the United Kingdom at an average (since 1875) of £155,950,000, or nearly eight hundred million dollars, i. e., more than twenty dollars a year for every man, woman, or child, in Great Britain. Half-way measures have palliated, rather than mitigated the evil. "All past legislation," says a correspondent of the *Fortnightly Review*, "has proved ineffectual to restrain the habit of intemperance. Acts of Parliament intended to lessen, have in many respects augmented the evil; and we must seek a remedy in some new direction, if we are not prepared to abandon the contest, and contentedly watch, with folded arms,



HONEY FAIR AT CONWAY, WALES.

their allowance of alcoholic stimulants. The belief in the impossibility of rooting out the alcohol-vice by any legislative or social remedies whatever, is so firmly established among the beer-magnates of Great Britain, that a syndicate of their chief capitalists recently combined to buy up wholesale breweries in almost every large city

the gradual deterioration of the people. Restriction in the forms which it has hitherto assumed of shorter hours, more stringent regulation of licensed houses, and magisterial control of licenses, has been a conspicuous failure. For a short time hopes were entertained of great results from the provisions for early

closing, and many chief constables testified to the improved order of the streets under their charge, but it soon appeared that the limitation, while it lessened the labors of the police and advanced their duties an hour or so in the night, was not sufficient to reduce materially the quantity of liquor consumed, or the consequent amount of drunkenness."

In Scotland, the failure of such compromise-measures has been still aggravated by the inconsistency of Sabbatarians. Says an Edinburgh observer, "One vice, at all events, which Christians of every school, as well as non-Christian moralists are agreed in condemning, is reputed to be a special opprobrium of Scotland; and the strictest observance of the most minute Sabbatarian regulations has been found compatible with consecrating the day of rest to a quiet but unlimited assimilation of the liquid which inebriates but does not cheer."

Luxury, thus far, has proved a far less serious

source of peril in hastening the physical deterioration of the British nation. Comfort, and even a passion for pomp and display, does not necessarily exclude a sincere love of Nature, and in the palace of Lucullus, a man of sanitary principles may preserve his health and vigor more easily than can a brandy-tipping savage in the virgin-woods of western Oregon.

And, moreover, the stamina of the British city-population is constantly re-invigorated by the return of travelers steeled by years of adventures in the wilds of the New World, as well as by the continuous influx of wholesome elements from the Scotch highlands, from the Welsh hill-country, and the frugal farming-districts of the Celtic sister island.

From a sanitary point of view, Great Britain, with all its vices, is, next to Austria, on the whole, the least depraved country of the Caucasian continent.

(To be continued.)

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

BY A DOCTOR.

9. — Hygiene of Digestion.

ERRORS respecting the quantity of food to be eaten, are quite as serious as the dietetic faults to which attention has already been called, in this series of articles. Too much food overburdens the digestive organs, and results in various forms of indigestion, the symptoms of which are sour stomach, flatulency, heaviness at the stomach, heart burn, drowsiness after eating, and a variety of other disturbances. When the stomach receives more food than can be properly digested, the gastric juice is not able to prevent the action of germs upon the food, and as the result fermentation, souring, and the propagation of a variety of poisonous acids, such as acetic, lactic, and butyric, together with other poisonous substances, are produced.

Eating too rapidly, is a very common cause of overeating, the food being crowded into the stomach so fast that nature has not time to call "enough," taking away the appetite for food before too large a quantity has been eaten. Plethora, flatulency, dullness of the intellect, and a gross state of the body, are among the general results of overeating. Fatty degeneration is also a frequent result of excessive food. This change is especially liable to occur in the heart, liver, and viscera. An illustration of the effects of overeating is furnished by the business of fattening geese, which is carried on at a large scale, at Stras-

burg, on the Rhine. The geese are fattened by being shut in a dark room and stuffed with food every two or three hours. In a few weeks they are killed, and their livers are found enormously enlarged, and almost wholly changed to fat. These diseased livers are considered a great delicacy, and are made into a sort of paste called "*pate de foie gras*," which is shipped to all parts of the world, for the gratification of epicures. It is a very indigestible mixture.

Eating too little food is an error really more serious in character than its opposite extreme, though far less frequently committed. When too little food is taken, the blood becomes impoverished, and all the vital powers languish.

How Much Food is Enough? The proper quantity for each person to take, is what he is able to digest and assimilate. This amount varies with each individual, and for the same individual at different times.

A healthy appetite, which is a perfect guide, always demands just the proper quantity of food, according to the wants of the body. The amount needed will vary with the amount of work done, mental or muscular, the weather or season of the year, — more food being required in cold weather, — the age of an individual, — old persons requiring less than young, — and the ability of the system to dispose of new ma-

terial. An unperverted appetite, unstimulated artificially, is a safe guide. Drowsiness, dullness, and heaviness at the stomach are indications of excess in eating, and naturally suggest a lessening of the quantity of food, unless the symptoms are known to arise from some other cause.

The amount of food absolutely necessary to sustain life, is very much smaller than is required to maintain full health and capacity for work. During the siege of Paris, when provisions became exceedingly scarce, the inhabitants lived upon rations of ten ounces of bread and one ounce of meat, daily. Cornaro is said to have regained his health, lost by dissipation, and prolonged his life and strength to a good old age, upon a diet of twelve ounces of solid (dry) food, daily. It is probable, however, that this quantity is considerably less than the average person will require for the maintenance of health, strength, and comfort.

Cookery.—Proper cooking of food is a sort of artificial digestion. Each of the food elements, with the exception of fats, is changed by cooking, in much the same way as by the action of the digestive fluids. Starch, when boiled or baked a long time, is converted into sugar, as when acted upon by the saliva or pancreatic juice. Albumen is, by the prolonged action of heat, converted into peptone, as when digested by the gastric juice. Cane sugar when boiled, is changed into glucose or grape sugar, especially if an acid be present, the same as when acted upon by the intestinal juice. This fact is known to scientific cooks, who, accordingly, do not add sugar to sour fruits while cooking, since the change of cane sugar to grape sugar destroys its sweetness to such a degree that if added while cooking, two and one-half pounds of sugar are required to produce as great a degree of sweetness as one pound added afterward.

Fats, on the contrary, are not only not digested by cooking, but are rendered less digestible, especially when exposed to heat for any considerable length of time, or to a high degree of heat, even for a brief period. It may be for this reason that nature has put into those of our foods which require most prolonged cooking, grains, and vegetables, so small a proportion of fat.

Cooking also breaks up the solid structures of the food, rendering them more soluble in the digestive juices. The most approved methods are boiling, roasting, baking, and broiling. The effects of these several methods upon the food are essentially the same.

Bread Making.—From the earliest ages, bread in some form has constituted an important element in the bill of fare of all nations acquainted with the art

of bread-making. There are essentially three kinds of bread; leavened bread, unleavened bread, and bread raised with some form of baking powder. Leavened bread is made by adding yeast to a mixture of flour and water, and allowing it to raise or ferment, a process in which a portion of the starch and sugar of the grain are decomposed into alcohol and carbonic acid gas. The gas bubbles up through the dough, and being retained by the tenacious gluten, makes the bread light. Unleavened bread is made by working into the flour a considerable quantity of air which expands by the action of the heat, while a portion of the moisture of the loaf is converted into steam. The steam and heated air, in rising through the loaf, make it light.

Baking powders consist of chemical substances which generate carbonic-acid gas when moistened. By mixing them with the flour, the bread is made light in essentially the same way as when fermented. Unleavened bread is by far the most healthful of the three kinds, when well made, though the art of making it, which was well known among the ancients, and is still practiced by many barbarous tribes, seems to have been nearly lost by civilized nations.

Leavened bread is much inferior to unleavened in flavor, and to some degree in nutritive value. The process of fermentation destroys the delicate flavors of the grain, and develops others less agreeable, which become very marked if the process is continued a little too long. Bread raised by soda or baking powders is least desirable of all, on account of the unwholesome character of the chemicals employed, to which we shall refer again.

Bad Cookery.—While good cookery is an important aid to digestion, bad cookery is as great an impediment to the process, and a cause of disease. Frying is a device admirably calculated to ruin stomachs and dispositions. It is scarcely possible for a dyspeptic to be amiable, as fat is not acted upon by either the saliva or the gastric juice. A morsel of food which has been coated with fat in frying, remains undigested in the stomach, and its digestion does not begin until it reaches the small intestines below the stomach, and comes in contact with the pancreatic juice and bile. In the meantime, the digestion of other food has been hindered, and, after the stomach has been many times abused by the use of such food, the digestion becomes so slow, and the gastric juice so deficient in quality, that fermentation is set up and the person suffers with sour stomach, heartburn, headaches, bilious attacks, etc. In frying food, the fat employed is burned or partly decomposed by the heat, in consequence of which various

poisonous acids are formed, which are highly detrimental to the digestive organs, and are certain to produce derangement of digestion, sooner or later.

The use of pastry, rich cake, hot buttered toast, food seasoned with melted butter, etc., is objectionable on the same ground, and these articles ought to be discarded from the dietaries of those who wish to preserve a good digestion intact to a good old age.

Hashes, stews, and sausage, are usually greasy messes, wholly unfit to be eaten. Mince pies, besides

the unwholesome mixture of condiments and various indigestible ingredients, usually contain more or less alcohol, which, as we shall see, has no more business in food than strychnia, or any other poison.

Imperfectly cooked, or raw, food is productive of indigestion when habitually used. The peasantry of Scotland are subject to a disorder of the stomach known as water brash, which has been traced to the use of "Scotch brose," a mixture of oat meal and water, either wholly raw, or imperfectly cooked.

To be continued.)

EXERCISE AND HEALTH.

THE exacting demands of business, and the devotion to such harmful recreation as theater-going in these modern days, leaves little time for such healthful recreations as require the active use of the muscles. We are glad to notice, however, that many prominent educators as well as scientific medical men, are calling attention to this fact. We quote with pleasure from a contemporary the following excellent article on the Influence of Exercise upon Health, by Prof. Richards, of Yale College:—

"Many old theories of education are being mercifully discussed. Many new theories claim the places of the old. The classical scholar still claims for the ancient languages the greatest educational power. The advocate of modern languages says life is too short to study dead things, and that modern languages furnish enough discipline, and are, besides, useful. To the scientist, science is god of all, even of education. To him no man is properly educated unless his mind is stored with scientific ideas and trained by the scientific methods of the nineteenth century. Languages, ancient and modern, mathematics, science, philosophy, all advance their claims to be the best educators of the coming man. Meanwhile the coming man is nothing but a child, and must submit himself to his elders to be experimented upon according to the theories of teachers or parents.

"For men, women, and children alike, I wish to enter a plea for a part of them much neglected in most discussions on education, and too much left out of sight in most theories of education—the body. In fact, for centuries past, many educators have seemed to regard the body as a rival of the brain, if not an enemy of it. They have apparently been filled with the idea that strength and time given to the body are strength and time taken *from* the mind. Unfortunately for the cause of good education, this erroneous idea is not held by teachers alone, but is a very prev-

alent one generally, the current dictum being that, representing by unity a person's force, whatever part of this unit is taken for the body leaves necessarily just that much less for the mind.

"To combat this idea, and to replace it by a much more reasonable idea, I had almost said by the *very opposite idea*, shall be the chief though not the only aim of these pages.

"To all races which have shown power in any direction, the main source of that power has been physical. This is acknowledged to be true with regard to the conquering races of the past. With regard to the present, we are too apt to think that the progress of civilization has changed the conditions of power, so that races physically weak, if they are only wise, can successfully compete with, and finally overcome the strong races.

"Take the Greeks. For a long time they were a conquering race—masters of the world of their time. But their influence has extended far beyond their day and beyond the limits of their little world. It is no disgrace to a nineteenth-century American to go to school to the Greeks. They are still, in their own lines, the leaders of mankind. They are the masters. Attica was about as large as Rhode Island. Rhode Island is a noble little commonwealth. Yet it has enjoyed political liberty longer than the democracy of Athens lasted, and in the midst of the blazing light of this much-lauded century. What now is or will be the influence of Rhode Island on the world's history compared with the unmeasured and imperishable influence of Athens? Whence the difference? The causes of the difference were manifold. One cause was their physical education. Hand in hand with their mental discipline, which was simple but thorough, went gymnastic exercise. Until the time of Alexander, the main subjects of education among the Greeks were music and gymnastics, bodily train-

ing and mental culture. The first duty of the Greek boy was to learn his letters, a feat which was also coincident with learning to swim. By the fourteenth year the Greek boy would have begun to devote himself seriously to athletics. Could such a careful and continuous training of the body fail to have its effects upon the mind? It gave the body power. It gave the brain force. Had this force not been converted all the while into intellect and æsthetic sense, the Greeks would have formed a race of fine animals, only. But their mental discipline saved them. Unfortunately for the permanence of the Greek power, that power was not built upon a moral basis. When, by means of their conquests, wealth and luxury came to them, the Greeks met the usual fate of nations weak in the moral sense. Their discipline was relaxed, and they succumbed to the strong.

"The training of the Romans was largely physical. They were trained for war. But they, too, were overcome by stronger races when they relaxed their own discipline and gave up their martial games and athletic exercises—hiring gladiators for their sports, and mercenaries for their battles.

"What are the conquering races of to-day? Are they not the nations strong in body—strong by inheritance and keeping their strength by exercise? Germany keeps her men strong in the army by compulsory gymnastic drill. Her schools teach gymnastics. Many of her inhabitants in the cities maintain their strength by the exercise which they have in their excellent Turner system.

"England has in the bodies of her children the blood of those old rovers who were the terror of the coasts of Europe in the early centuries of the Christian era, mixed with the blood of that vigorous native stock, to subdue which, even when furnished with only barbarian arms, was no easy task to the Roman legions with all their military skill. In England, too, this physical force is still maintained by vigorous exercise taken by all classes. The higher classes have their out-of-door sports, and some of them are of the roughest kind. The lower classes also have their sports. Wherever the English race goes, it carries with it the love of exercise and the practice of it. Even their women engage in it. Some of them follow the hounds. They pull the bow. They take walks, the length of which would shame many an American man. So the vigor of the stock never decays. The race increases and multiplies. The little island cannot hold it. Away it goes to conquer and colonize the globe, and to infuse its strength into all the races of the earth.

"What keeps us as a nation from deterioration?

The bone and sinew of the land—the cultivators of the soil—the conquerors of our new land—the men who build our cities and the great highways between them, who dig our coal, and labor with hand and body in all our factories. It is true that brain directs all this activity, but muscle is the motive-power. And the muscle of one generation is the source and support of the brain-power of the following generations. What else accounts for the prodigal activity of the descendants of the early settlers of this country, but the fact that obliged, when cast on a land like ours, to battle with the elements and conquer the forests by their own bodily strength, they lived an out-door life in the main, and stored up an immense capital of vitality which they handed down to their posterity? Some of that posterity are not content to use the interest of that capital, but are spending the principal. What is the consequence? Not only enfeeblement of body and mind, but sterility; and thus, many of the old New England families are dying out in the homes of their race, and are giving place to the strong new-comers.

"As to individuals, what kind of men fight their way to the front ranks in all callings, and hold their places there, as men eminent in their day and generation? Men of strong body. Consider the premiers of England—men like Brougham, Palmerston, and Gladstone—working at an age when many a weaker man would either be in his grave or be preparing for it! Some exercise—horseback-riding, or felling trees—keeps up their strength long after threescore and ten. It is only necessary to mention Washington, Jackson, Webster, and Lincoln, to call attention to the fact that among eminent American public men vigor of mind and vigor of body go together. Notice the great pulpit orators of to-day—such as Spurgeon, Beecher, John Hall, and Phillips Brooks. Among moneyed men, did not Commodore Vanderbilt owe something of his vast fortune to his strong body? Could he have endured the strain of building that fortune, and would he have had the vigor to extend it, had it not been for the out-door life of his early manhood? If you find a really successful man, who builds and keeps either a reputation or a fortune by honest hard work, he is generally a man of vigorous body. All professional biography teaches that to win lasting distinctions in sedentary in-door occupations, which task the brain and nervous system, extraordinary toughness of body must accompany extraordinary mental power. Again, to attain success and length of service in any of the learned professions, including that of teaching, a vigorous body is well-nigh essential."



IMBECILES IN STAYS.

BY J. H. KELLOGG, M. D.

THIS is not a tirade against those unwise devotees of fashion who labor under the delusion that narrowness of waist is an element of feminine beauty, for erroneous education and ignorance of physiological laws, as well as the influence of universal example, may be considered as in some degree an excuse for the homage paid to the corset by most women in civilized lands (the heathen are not addicted to this form of idolatry). But what apology can be offered for those shallow-pated male bipeds, who, wearing the image of men, though unworthy of the name, emasculate their manhood, such as it is, and disfigure their bodies by corset squeezing?

According to Dr. Vacher, an English physician, corset-wearing is becoming quite common in England. The doctor bases his assertion to this effect upon information obtained from a price list sent out by the manufacturers of corsets for men.

"The list is issued by a well-known London firm, styling themselves *artistes en corsets*, and in it I find that, in consequence of the increased demand for corsets by gentlemen, 'we have been induced to give this department our special attention, and we feel sure that we shall be able to meet thoroughly and efficiently a want that, up to the present time, has been neglected.' And then follow instructions for self-measurement, the whole being embellished with the picture of a handsome man, with a mustache, wearing stays. Of course, stays are every bit as objectionable for men as for women. Indeed, everything that constricts the abdomen or thorax, it matters little under what name, is injurious. The broad belts, fastening with straps and buckles, commonly worn by artisans, runners, and hunting men, are almost as bad as stays, weakening the abdominal muscles, and assisting in the production of rupture."

But, after all, why may not men wear corsets and stays as well as women? On the whole, it would seem to be a less grave offense against nature in men than in women, and on several accounts. Man's

more vigorous and less plastic frame would be likely to yield less to the harmful molding of the corset than that of woman. From the stand-point of beauty, it would be less objectionable for man, since his hips are less prominent naturally, and hence the effect of accentuating an element naturally not beautiful, because of its exaggeration in the majority of civilized women, would be less pronounced. And then, it may be properly added that in deforming his body by tight-lacing, man would only injure himself, whereas a tight-lacing woman not infrequently does irreparable mischief to another life as well as her own, and sometimes, it must be confessed, sacrifices to her folly a life which her maternal instincts should lead her to foster with the greatest care.

This is perhaps a new way of looking at the matter; but who is prepared to say it is not correct, or that if one sex must be sacrificed to corsets, it should not be the masculine half of the race? Women are acquiring the masculine art of cigarette smoking, as an extension of her rights and privileges, and we see no reason why she should not be allowed to smoke as well as her brother. Why, then, may not our fops and dudes be allowed to take to stays? This may be Nature's beneficent method of exterminating these abnormal and useless members of the *genus homo*. It is reported of Abraham Lincoln that he once said that if he had a son who should part his hair in the middle, he would maul him to death with a squash! If the great emancipator had lived to the present day, we doubt not that he would have suggested, as a more refined method of execution, that the soft-pated individual should be condemned to wear a corset *a la mode française*.

We have no protest to offer against male corset-wearing. We are quite willing that any man who wishes to wear a corset should be allowed to do so; he will injure no one but himself, and the sooner he is exterminated, the better. But we do most solemnly, earnestly protest against the tight-lacing to which wo-

men are addicted so almost universally, and with such dire results to their children and their children's children. If women will abandon corset wearing to those men who are willing to adopt the fashion, and if men will abandon smoking to those women who are willing to indulge the filthy weed, the world will soon be rid of both these pernicious practices. Women who

are willing to smoke are equally willing to wear waists of pipe-stem proportions; and men who are anxious to be put in stays, have already dedicated their mouths and noses to nicotine fumigation, so that we might confidently expect the speedy extermination of both classes of imbeciles. Instead of an exchange, we have only to look for an addition of vices.

A HUMANE VIEW.

"MADAM, I cannot take your case," said a distinguished medical practitioner, the other day, to a fashionable invalid, after a careful diagnosis.

"But why not take *my* case?" the lady asked in some surprise.

"Because I have had my attendant weigh your garments while I was making the examination," was the frank and most unusual response, "and I find that your skirts weigh fifteen pounds. You have brought on the disease from which you suffer by this manner of dressing, and I do not care to risk my reputation as a physician by treating a patient who will, in all probability, continue to carry such loads."

"This is the first time I ever knew a physician to tell a patient what she should wear," said the visitor with heightened color. "How many pounds is it lawful to carry, if you please?"

"You cannot carry over three pounds with safety; and even such a weight should be suspended from the shoulders."

"How long shall I be obliged to limit the weight of my clothes?"

"As long as you live, madam; for you have so outraged every delicate and sensitive internal organ, so stretched the ligaments which would have been faithful had you treated them well, that you can never exceed this weight with safety."

"Do you think you can cure me if I obey you?" was the next question.

"I can prevent the development of a tumor, which is now imminent, but all the medical science in creation cannot make you strong. But I can help you to help yourself to more health and comfort than you have known for many a year."

Now I heard this conversation, and it delighted my heart; and ever since I have been asking, why do not physicians more generally tell the whole truth in such cases? They know the effect of tight lacing, and the dragging of heavy skirts upon hips and spine. They know the cause of the frightful increase of ovarian tumors among American women. Why will they not all come to the rescue, like the grand gentleman above mentioned? There are some time-servers and fortune-hunters, who will not tell the truth, because of the fear of losing moneyed patients; and doubtless there are a few practitioners, in good standing, who delight in lapped ribs and protruding and diseased organs because of filthy lucre. But the majority of our doctors are honest, humane men and women, who love the truth. Sons and daughters of Esculapius, please step to the front, and let us have "the truth, the whole truth, and nothing but the truth, so help you."—*Eleanor Kirk, in Woman's World.*

A GREAT ARGUMENT AGAINST CORSETS.

IN order to ascertain the influence of tight clothing upon the action of the heart during exercise, a dozen young women consented, a short time since, to run 540 yards in their loose gymnasium garments, and then to run the same distance with corsets on. The running time was two minutes and thirty seconds for each person at each trial, and in order that there should be no cardiac excitement or depression following the first test, the second trial was made the following day. Before beginning the running, the average heart impulse was eighty-four beats to the minute; after running the above named distance the heart impulse was 152 beats to the minute; the average natural waist girth being twenty-five inches. The next day corsets

were worn during the exercises, and the average girth of waist was reduced to twenty-four inches. The same distance was run in the same time by all, and immediately afterward the average pulse was found to be 168 beats to the minute. When we state that any physician would feel himself justified in advising an athlete whose heart impulse was 160 beats every minute after a little exercise, *not* to enter a running or rowing race, even though there were not the slightest evidence of disease, one can form some idea of the wear and tear of this important organ, and the physiological loss entailed upon the system, in those women who force it to labor for over half their lives under such a disadvantage as the tight corset imposes.—*Scz.*

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.

THE MILL.

[See Frontispiece.]

With cobwebs and dust on the window spread,
On the walls and the rafters overhead,
Rises the old mill, rusty red.

Grim as the man who calls it his own,
Outside, from the gray foundation stone
To the roof with spongy moss o'ergrown.

Through a loop-hole made in the gable high,
In and out like arrows fly
The slender swallows, swift and shy.

And with bosoms purple, brown, and white,
Along the eaves, in the shimmering light,
Sits a row of doves from morn till night.

— Phoebe Cary.

MARY AND MARTHA.

A THANKSGIVING STORY.

THE two sisters—the old Miss Deans, as people had begun to call them—had always lived together, and what had happened to one seemed to have happened to the other. They often said that what one knew the other knew; and since they had spent their years very quietly, the things that each sister thought best worth saying she had said to her companion many times over. For all this, they were as different as they could be. Mary was Mary-like—a little too easy and loving-hearted; and Martha was Martha-like—a little too impatient with foolish folks, and forgetting to be affectionate while she tried to be what she called just. Sometimes she thought her younger sister visionary and sentimental; for Martha was, before all things, practical and straightforward, and there lurked a little pride in her heart because she did not see how Mary could get on without her own forethought and provision for their needs.

The two sisters were very much respected in the village where they lived. They sewed for their living; they were tailoresses by trade, and though they did not make so many suits of clothes since their neighbors found the ready-made clothing so cheap and convenient, they made little boys' first suits and stray jackets and trousers whenever they could. They mended them, too, for one or two busy neighbors who could afford to pay them. You might hear it said twenty times a year, "How should we ever get along without Mary and Martha Dean!" And more

than once it had been questioned who could take their places if anything happened to the good women. Martha was usually strong and vigorous, short and thick-set in appearance, and a little given to bustling if anything particular were going on. She was an excellent hand to make over a carpet; she was an extremely judicious and sensible person. It was Martha who had been called upon to go and keep house for her townspeople when they went away. But more than one neighbor had seemed to like to have Mary Dean in the sick-room, she was so gentle and quiet, and did not insist upon doing something when there was nothing to do, as her good, anxious, willing sister did once in a while. They were both useful in their way. It must be confessed that Martha made a great deal the best gruel; but sometimes you wanted one and sometimes the other, and meant no disrespect to the slighted sister.

They lived together on a hilltop just outside the village. The faded yellow story-and-a-half house looked as if it had strayed away a little to be by itself. Martha often fretted, and wished that she were in the village. She thought the half a mile a longish walk in bad weather, and was sure they would get more to do if they were right among folks. You would do twenty-five cents' worth yourself many a time, rather than rig all up in a rainstorm to lug it up a long hill! If there had been more land with the little house, Martha was sure they could sell it to advantage; but whenever

she talked about that, as she would sometimes, her sister provoked her a little by not consenting to see the advantage. Mary would only say, "Perhaps you know best," or, "Do you think we could find just the right house?" but she always looked utterly miserable, and brightened up when, after a season of gloomy silence, her more energetic sister would speak about something else. Mary loved every blade of grass on their tenth part of an acre; she loved even the great ledge that took up part of their small domain, and made the rest scorched and dry in midsummer. It seemed to her, if she had to leave the house, that she must give up, not only seeing the sunsets, but the memory of all the sunsets she could remember. They were growing old. Martha was rheumatic in cold weather, and it was Martha who went oftenest to the village, and upon whom most of the inconvenience came. "I expect to live and die here," she said, one day, to a new customer who asked them if they had always lived in the old house; "that is, provided I don't die on the road goin' and comin'."

One day, about the middle of November, the sisters were both at home and sat each by her chosen window, stitching busily. Sometimes Mary would stop for a minute or two and look out across the country, as if she really took pleasure in seeing the leafless trees against the gray sky overhead, and the band of pale yellow in the southwest, the soft pale brown of the fields and pastures, and a bronzed oak here and there against the blackish-green pine woods. Martha thought it a very bleak, miserable sort of a day; her window overlooked the road to the village, and hardly anybody had gone by all the afternoon.

"I believe the only thing that would make it worth while to live 'way out here," she said, energetically, "would be a sewing-machine. I could take regular work then from Forby's shop, as some of the folks are goin' to do, and then we could have something to depend upon. You ain't able to go out all weathers, and never was, and 't was all I could do to get through last winter. One time—do n't you rec'lect?—we was shut up here four days, and couldn't get to the village, to save us, in that big storm. It makes a great difference about the passing since they cut that new cross-road. And I should like to live where I could be reasonably certain of meetin' privileges; it did seem good to go to Friday evenin' meetin' last week when I was to the Ellis's. I can't feel right to go away and leave you alone, and folks ain't likely to want us both to once, as they used to a good deal."

Mary sighed a little. She knew all these arguments well; she knew that what they wanted was steady work at home in winter. They had only a little

money in the bank, for, thrifty as they were, they were unfortunate too, and had lost by a railroad failure a few years ago almost all their lifetime's savings. They could not go out to work much longer, Mary knew it well. Martha need not say it over so many times; and she looked up at Martha, and was surprised, as if it were the first time she had ever noticed it, to see that she was almost an old woman. Never quite that! The brisk, red-cheeked girl who had been her childish pride and admiration could never be anything else, in spite of the disguises and changes with which time had masked her faded countenance.

There was a silence in this November afternoon, and Mary, as usual, humbly wondered if her sister were lonely and troubled, and if she herself were half so good and tender as she ought to be to one so dear and kind. At last Martha said, in a business-like way: "Next week we shall be getting ready for Thanksgiving. I do n't expect we shall do so much as usual; I do n't see where the money's coming from."

"I'm thankful as I can be every day," said Mary, softly. "Then I do n't know what I should do without you, sister. I hope the Lord won't part us;" and her lip quivered as she spoke. "You thought we never should pull through this year," she resumed, in a more commonplace tone; "but here we are, after all, and we've done well, and been fed, and kept warm."

"The next year we ought to shingle the house and set the fences into some kind of shape. I wish we could sew up things outdoors well's we can in;" and Martha smiled grimly.

"We do, do n't we?" and the younger sister laughed outright. "I wish we did have a sewing-machine. I dare say by-and-by they'll get cheaper. I declare it does n't seem five years since the war was over."

"There's John Whitefield," said Martha, and Mary looked frightened. She was always so sorry when this topic was started. "He never gives a thought to what our folks did for him. I should n't know him if I was to see him, and we are all the own cousins he's got on his father's side. It does seem as if he might take some interest in us now we're all growing old together. He must have read our names in the list of those who lost in the railroad, and have known 't was all we'd got."

"Perhaps he thinks we do n't take any interest in him," ventured Mary, timidly. "I have sometimes thought about him, and wondered if he supposed we were set against him. There was so much hard feelin' between the families when we were all young, and we would n't speak to him when we were girls. A young man would be cut by that as much as anything—"

"I would n't speak to him now, either," and Martha's voice and her linen thread snapped together. "Everybody said they treated our folks outrageously. You needn't expect me to go meachin' after such thankless and unprincipled creatur's."

Mary hardly knew what gave her such courage. "I do n't want to vex you, I'm sure," she said, simply. "If he did n't answer or did n't treat us well anyway, I should think as you do; but I should like to ask him to come and spend Thanksgiving Day with us, and show him a forgivin' spirit. He ain't so well off that he need think we've got low motives; and"—taking courage—"you know this'll be the first Thanksgiving since his wife died—if 'twas his wife we saw mentioned in the paper."

"I must say you are consistent with our havin' nothin' for dinner," smiled Miss Martha, grimly, clicketing together her big needle and her steel thimble without any top. "I won't lend myself to any such notions, and there's an end to it."

She rose and disappeared angrily into the pantry, and began to assail the pots and pans as if she had to begin the preparations for Thanksgiving at that very moment. But Miss Mary Dean, whom everybody thought a little flighty and unpractical, went on sewing as long as the pale daylight lasted. She did not know why she was so disappointed about not inviting their unknown cousin. She had not thought of him very often; but she had always been a little ashamed and sorry about the family quarrel that had made everybody so bitter and unforgiving when she was a girl. Her father thought that this cousin's father had cheated him of his rights in the old home farm.

At least three days afterward Sister Martha was discovered to be very silent, and unreasonable; and, in spite of previous experiences, Miss Mary was entirely surprised to be told late in the evening, just as they were going to bed, that a letter had been sent that day to Cousin John, asking him to come and spend Thanksgiving with them on the hilltop. "You'd never have been satisfied without it, I suppose," the good woman said, grudgingly, as she went hurrying about the room; and gentle Mary was filled with fear. She knew that it would be a trouble to her sister, and an unwelcome one; but at last she felt very glad, and was aggravatingly grateful as she thanked the head of the family for this generous deed. "I do n't know why my heart was so set on it," she announced later, with great humility, and Martha sniffed unmistakably from under the patchwork counterpane. "I hope he won't stop long," she observed, quite cheerfully. And so peace was restored, and

Miss Martha Dean thought about the dinner and talked over her frugal plans, while Mary listened with pleased content, and looked out through the little bedroom from her pillow to see the white, twinkling, winter-like stars.

"Goodness me!" exclaimed Martha on Thanksgiving morning; "there he comes, and he looks as old as Methuselah!" The sisters stood together and watched their guest climbing the long hill, and made characteristic comments. "He does look real lonesome," said Mary, but Martha bustled away to look after the dinner. Mary could attend to the company; but, after all, it was good to have company, especially some one who seemed glad to be with them. He had grown to look like her own dear, honest-hearted father in these latter years; he could not be a bad man, and it seemed a great while since they had seen one of their own folks at the table.

So Martha put her whole heart into making her little dinner just as good as it could be. She sat down in the front room once or twice and tried to talk over old times, but she was not very successful; they were constantly running against unpleasant subjects; it seemed as if the mistaken household that had been divided against itself had no traditions of anything but warfare.

But the guest was pathetically glad to come; he could talk to his cousin Mary about the pleasure Martha's note had given him. He did not say that it was not very affectionate, but he told the truth about having often wished since he had grown older that they could talk over the old times and have a kinder feeling toward each other. "And I was so broken up this year," he added, plaintively. "I miss my wife worse and worse. She was some years younger than I, and always seemed so pleasant and sprightly—well, if one of you girls is left without the other, you'll know something about it, that's all I can say," and a sudden pang shot through the listener's heart. And Mary Dean looked so sorry and so kind that she had to listen to a great many things about the wife who had died. Cousin John Whitefield moved her sympathy more and more, and by the time dinner was ready, they were warm friends. Then there was the dinner, and the two elderly women and their guest enjoyed it very much. Miss Martha had put on the best table-cloth and the best dishes. She had done all she could to make the little festival a success, and presently even she was filled with the spirit of the day, and did not let the least shadow of disapproval show itself in her face when Mary said: "Sister, I'm sure we ought to be very thankful to-day for all these good things and for Cousin John's com-

pany. I do n't feel as if we ever should make out to be enemies again;" and the cousin shook his head more than once, while something like a tear glistened in the eyes that were turned toward Mary Dean. They talked of old times; they said to each other that they would let bygones be bygones. Some of the sisters' friends had been very kind; one had given them a present of cranberries, which Martha liked very much, but had denied herself, since they were so dear that year.

Cousin John had evidently dressed himself with great care, but he looked untended, and the sisters' shrewd eyes saw where a stitch or two was needed, and a button had been lost. It seemed more friendly than ever when he stood before Martha to have his coat mended; it only took a minute. And her eyes were the best, Mary said, proudly.

"Girls," said the old man, suddenly; "girls, I want to know if, with all your sewing trade, you have n't got any sewing-machine?" And the girls looked at each other wistfully, and answered, No.

"Now, I know what I'll do for you," and the withered face brightened. "I'm going to send you over Maria's. She set everything by it; 't was one her brother gave her — Josiah, that's so well off in New York. She said 't was one of the best; and there it has stood. I've been thinking I should have to sell it. I'll send it over right away." And he looked from one delighted face to the other. "You won't refuse, now?" he asked; as if there had been any danger of that! And the sisters confessed how puzzled they had been about their winter's work; they

had not acknowledged even to each other before that some of their old customers had died, that it hardly paid to do hand sewing, and hardly anybody needed tailors' work, somehow; and they were not able to be out in all weather, or to be of as much service to their neighbors as they used. But they were sure to do well now if they had a machine. Mr. Forby, at the shop, paid excellent prices for the best work.

Cousin John stayed until the next day, and they watched him go down the hill with many feelings of gratitude and respect. "It takes two to make a quarrel, but only one to end it," said Martha, turning suddenly to Mary. They both felt younger than they had for a great while, and they pitied their cousin's aged looks and slow steps. "'T was all owing to you," she went on, in a tone that was not usual with her. "Mary, I believe you've chosen the better part, and you've listened to the Lord's words while I've been cumbered with much serving." But Mary would have it that only Martha could have made Cousin John so comfortable, and got him the good Thanksgiving dinner.

"The dinner's the least part of it," said Martha, this time in her short, every-day fashion of speech.

"There, it's beginning to snow. I wish, if there's a good fall of it, we could just put this house on runners and slide down hill!" But she looked very good-natured, and Mary laughed softly.

"You say that every year, do n't you, Martha?" said she. "Just think how long we've been wishing for a sewing-machine, and how easy, after all, it has come!" — *Sarah Orne Jewett, in Christian Union.*

ICELAND.

BY E. L. SHAW.

WHILE feeling, perhaps, how little he knew of it, the ordinary reader must yet always have had a curiosity concerning Iceland. The grand I-want-to-know principle of the twentieth century — the infinite longing of the highest civilization — ever reaches out and enfolds these far-off regions in a mental grasp which will not let them go until there is wrested from them, a portion, at least, of their personal human history. Students and scholars will inquire concerning the history of their nation, and the topography and geology of their country, but the bulk of the people must always be most deeply interested in the inhabitants themselves, and in what makes all tongues and peoples kin — their home life with its interests, and its details of dress, and habits, and daily work. So, remembering but dimly the achievements of Iceland's olden

heroes, the Eddas and Sagas of its olden poets, and with but the merest echoes of its olden greatness, and its "elder civilization" lingering in our ears, we sit down in spirit at the fireside of these simple, honest, steadfast folk, and inquire concerning the humble happenings of their humble daily lives.

This rude, volcanic island, with its ice-hooded mountains, "its past of fire and flame," its immense areas of "magnificent desolation," appeals less to our artistic sense than to our humanity. The mysterious, old, Norse legends of this vast, central lava-desert, with its peaks of smouldering fire, and its confines touching the Arctic Circle, hold not one-half the interest which is centered in the practical question of how, on the narrow fringe of habitable coast-land remaining, a concourse of seventy or eighty

thousand human souls find sustenance and support.

But Nature is always kindly, and even in this sterile region she has her compensations. The soil, though yielding little in return for the husbandman's labor, is rich in stores of minerals. Sulphur, coal, iron, aluminum, limestone, and the double refracting spar, used in polarizing optical instruments, all lie hidden in earth, or rock, or glacier, awaiting the magical touch of toil. The country is rich, too, in rivers and streams that furnish immense water power, and

the many peculiar circumstances present in the condition of Iceland, the absence of towns, the difficulty of communicating across country, and the intense conservatism and dislike of change which must necessarily characterize a community so long isolated — even this in relation to a race of people who read and study, and who must therefore *think*, scarcely supplies an explanation. We still must wonder why they have not been led, in some degree, at least, to readjust their unfortunate conditions, and in the light turned



CITY OF REYKJAVIK, ICELAND.

the sea around its coast teems with fish and waterfowl, such as possess great commercial value.

Breathing our American atmosphere of restless brain and hand activity, it is difficult to understand why the people of Iceland, with rare intellectual faculties, and of wide-spread education, should be content to settle down and spend their lives in pinching, grinding poverty, generation after generation, when Mother Nature is, as it were, waiting to empty her wealth of earth and sea at their feet, — while these immense resources of their native country lie comparatively, if not entirely, undeveloped. Travelers tell us that this land, at the glance, so barren, so desolate, so forbidding, might easily be made to furnish homes, filled with all the comforts of civilization, for *eight times* its present population.

It is difficult for us to give sufficient weight to the reasons for this state of things. Taking into account

on them by other civilized nations, see their way to pull themselves up, ever so little, out of their traditional ruts and sloughs.

But they are a most generous, kindly, and hospitable race, giving liberally, despite the general poverty, to the support of their poor; taking into their own families the orphaned, and tendering to the stranger a royally open-handed welcome. He is bidden to partake freely of all the house affords, and even among the well-to-do families of the nation's capital and chief city, the daughters of the house themselves attend upon him. In reference to this, a late traveler gives a bit of his own experience, — "A rap on my door at 7 A. M., and the elder of the foster-daughters appeared with coffee and wafers, and removed my outer garments and shoes to brush them. This serving of the guests, by daughters of the house, a custom recalling heroic days, is quite universal in Iceland."

TEMPERANCE NOTES.

FINE drinking fountains are being erected in the streets of Astoria, Oregon, the work of the local W. C. T. U.

By municipal law the retail liquor traffic has been prohibited in seventy-nine of the cities and villages of Manitoba.

It is interesting to notice that among the delegates to the late National Convention of the Society of Christian Endeavor, held at Philadelphia, there were *no smokers*. One train, carrying nearly a thousand delegates, had no smoking car attached.

In Atlanta, Ga., the municipal authorities prohibit liquor selling to minors, and even forbid their presence in any place where liquor is sold. All bar-rooms and saloons in that city are closed at ten o'clock in the evening. The State legislature is considering a bill to prohibit all saloons outside of incorporated towns and cities.

It is estimated to cost the people of Ohio \$ 70,000,000 annually, for their liquor traffic.

£1,900 a year has been appropriated by the Swedish government for the promotion of temperance.

A NEW temperance hotel has just been established in Washington, D. C., by Mrs. La Fetra, of that city. It contains a hundred rooms.

It is said that the use of opium, by fashionable women, in Washington, D. C., is being carried to frightful excess. Seeking relief from the endless strain which the round of dissipation, balls, receptions, etc., imposes, they grow to use this harmful drug. Many of them have, step by step, already arrived at the point where they purchase and eat the crude gum regularly, every day, or drink laudanum, in quarter ounce, half ounce, or even ounce potions.

POPULAR SCIENCE.

SCOTCH engineering enterprise proposes to build a railway to the top of Ben Nevis.

THERE has lately been perfected a process, by a German chemist, whereby any soft or porous wood can be made as hard as lignum vitæ, and serve the same purposes. It is done by forcing oil into the pores of the soft wood, and then subjecting it to intense pressure.

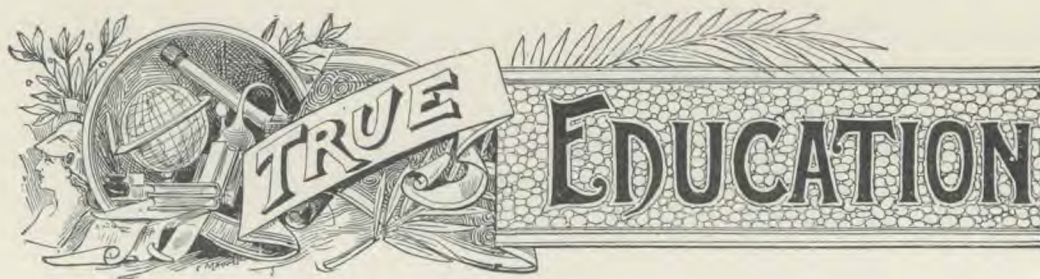
A FIRM of English chemists claim to have discovered a process of manufacturing India ink. This secret, safe in Chinese hands for centuries, will now be made known to the world. It consists in a certain method of treating camphor with sulphuric acid, whereby the pigment is produced.

A NEW textile material, called vegetable flannel, is now being manufactured in Germany, out of pine leaves. The fiber, somewhat resembling hemp, is spun, knitted and woven into under garments, blankets, and clothing of various kinds. This fabric is said to keep the body warm without heating, and is exceedingly cheap, and durable.

A FRENCH scientist has discovered a new method of predicting the weather. It is based upon the scintillations of the stars, which, he has observed, increase greatly before storms, thus giving token of disturbances in the upper atmosphere, long before meteorological instruments have registered any change.

A WONDERFUL mirage is said to exist in Alaska, which is reflected from the glassy surface of a glacier overhanging an arm of the sea. Just after the change of the moon in June, soon after sunset, a city appears, mirrored in the sky above the glacier. It is so perfect, and so distinct, that a photograph has been made of it this season.

AN isthmus canal, which has been in progress even longer than the Panama Canal, is now being completed. The canal across the Isthmus of Corinth, begun by the Romans, in the Emperor Nero's time, — over 1,700 years ago — when completed, will be four miles in length, and twenty-six feet deep, allowing the passage of the largest vessels employed in Greek commerce.



THE WORLD'S EDUCATIONAL EXHIBIT.

BY E. L. SHAW.

ALL those who are interested in systems and methods of public instruction—as who is not?—turn naturally to the Paris Exposition to inquire what this vast expenditure of time and money has brought us in the way of information regarding the progress of popular education in the several countries of Europe and America, and the advance of such movements as those of manual training, physical culture, technical education, etc., in different parts of the civilized world.

Unfortunately many nations have failed to appreciate the intent and ever-widening scope of an international exposition, and in neglecting to prepare an elaborate and representative exhibit of their methods of education, have lost grand opportunities of teaching, as well as of being taught. This is to be deeply regretted. Great Britain, Germany, and Sweden, of whom we have been led to expect great things, are practically, if not wholly, unrepresented, while our own country has placed herself, perhaps, in a worse position than any, by a scanty, unfair, and totally unworthy representation.

But to France, Switzerland, and Japan, we are indebted for much that is most helpful, and full of value and suggestion. The last-named nation, recognizing in the Kindergarten method of Frœbel, the basis of all primary education, and the true value of objective teaching and manual training, is able to show the world a school system of the most approved character. The best drawing and color work, for the grade of school known as *ecole primaire superieure*,—our grammar grade,—to be seen in the whole Exposition, was done by the Swiss. Indeed, their remarkable exhibits of manual training, and the industrial arts, attracted the attention of teachers from all parts of Europe.

In reference to the incomparable French educational exhibit, we quote from a late article by Professor Nicholas Murray Butler, in the *Christian Union*, as follows:—“It was France, however, and especially the city of Paris, which furnished the greater

portion of what was shown under the head of education and instruction, and of this portion of the Exhibition, too much cannot be said. Almost the whole of one immense gallery in the Palace of Liberal Arts was occupied by the exhibit of the schools of France, (excluding Paris), arranged in order from the Kindergartens, or *ecoles maternelles*, to the *lycees* and professional schools. It is quite safe to say that no such exhibit of educational buildings, apparatus, furniture, methods of teaching, and work accomplished by scholars, has ever been seen before. The great amount of material presented would have been very confusing, were it not so excellently arranged. It was a great object lesson in French progressiveness, persistence, and pluck.”

A striking feature was the excellence of the models adopted for their new school buildings, which gave careful attention to the details of proper light, heat, and ventilation. Not inferior to this was the display, in its allotted space, of all the methods of physical training, together with a complete collection of all the apparatus used in this system. Manual training, as in operation in the several grades, was given full, and most interesting prominence. In the various model class rooms of the different grades, the quantity and variety of the illustrative material with which they were filled, seemed well nigh inexhaustible.

In addition to the elaborate school system of the city of Paris, which alone occupied eleven rooms, besides a large amount of corridor-space, there were represented an immense number of the technical, industrial, and commercial schools, of the city and nation. One of these in which the course of study is four years in length, includes theoretical and practical instruction in all the industries bearing upon the production of furniture. Another, gives young women a course of advanced instruction, at the same time fitting them for commercial or industrial positions, or for railway, postal, or telegraph service. Still another branch, which has many divisions and sub-divisions, makes its grand specialty the training of intelligent work-

men, fitting them to become foremen or chiefs of shops, and giving them a thorough grounding in the practice of the mechanic arts. There are schools of weaving, dyeing, plumbing, carpenter work, carriage building, iron and steel working, and others in manifold variety; and these, if records tell truly, turn out an endless procession of skilled laborers.

As to the probable influence of this exhibit upon the world's future education, we quote once more from Professor Butler:—"It may be said that the Paris Exposition of 1889 opens a new era in education. It

points to the supplanting of the useless by the useful, of the ornamental by the practical. It signifies, too, the advent in the school room of a higher ideal of manhood than has hitherto prevailed. Men are hereafter to be trained, not for themselves alone, but also for the society of which they form a part. This education may be called new, or practical, or utilitarian, or some other adjective meant to imply scorn, but it will produce a higher average of intelligence, and a more unselfish type of character, than that which is passing away before it."

GOOD MANNERS IN SCHOOLS.

As the object of school education is to fit boys and girls to be useful and successful men and women, certainly, one most important branch of that education should not be ignored; too much emphasis can hardly be laid upon their being taught correct deportment. This really should be made an integral part of the school education, not to be left out, or on any account to be set aside. Other things being equal, it is the well-mannered person who invariably succeeds in life. In this age of the world's progress, when the amenities of life are so widely recognized and cultivated, society has little use for the surly, uncouth boy or girl, or the gruff, churlish man or woman. They find themselves entirely out of place in this refined modern atmosphere; they were born several hundred years too late. There is, practically, no place in the world for them.

But gentle manners are an "open sesame" to human confidence, and always prove a sort of general letter of introduction to the world at large. Polite people will always be wanted for positions of influence, and we need not fear that the supply will ever exceed the demand. Polite messenger boys are always selected; polite clerks and waiters invite custom. Polite boys and girls are always in demand; it is they who are always taken quiet note of by older people, and encouraged, and helped on, and up. Polite salesmen call crowds to their counters; polite persons make their way in business, in the professions, and in general society, as others, however well meaning, cannot do.

Good manners should certainly be taught at home, but as certainly should they be taught at school, for

in many cases the public school is the only opportunity the child has in which to learn them. With our boasted civilization the child of boorish parents and a slatternly, unworthy home ought to be made a vast improvement upon his surroundings. He will readily settle into the mire of those surroundings, unless a grand effort is made to rescue him. Will it not pay to do this? Are there not already roughs enough abroad in the land? Then let the inculcation of good manners be made a special branch of education in the schools, that it may include this benighted class of pupils.

By that law of moral gravitation which always renders the downward tendency the easier one, even the children of soft-voiced parents and cultivated homes readily drop into the ways and habits of rougher children, and many parents who have been careful to teach their little ones good manners at home, have found their efforts largely neutralized, for the reason that no special stress was laid upon this subject in the schools.

Every child has a right to expect at the hands of its parents—or if they are incompetent—at the hands of the public, just that training which will in every way constitute him the most worthy individual and the best citizen. The commonwealth hardly realizes how she sins against herself when she fails in this duty. We must feel, therefore, that the child who is not taught at school to be polite and courteous, is cruelly robbed, as it were, of his birth-right, and the teacher who fails to inculcate it in him as a dominant principle, is little short of criminal in his negligence.

E. L. S.

AT THE GEOGRAPHY EXAMINATION.—*Professor*: "Describe the route you would have to follow to get to the Martinique Islands."

Candidate: "I first proceed to Marseilles—"

Professor: "Well, and then?"

Candidate: "Then I would go on board a steamer and leave the rest to the captain, who knows the way much better than I do."—*Le Figaro*.

SOCIAL PURITY.

THE MOTHER'S RIGHT.

AMONG the many rights of which women are in the exercise, or the pursuit of, nowadays, there is one, which, though of more importance than all the rest—in fact, the very corner stone upon which all the others rest—is quite apt to be entirely overlooked. This right—the proper training of her children,—is surely “inalienable,” and it seems strange that woman does not oftener see that in the nursery, lies the grand corrective for all the evils from which her sex has suffered. Try as she may, she may not be able to influence one man in all this generation, for good; but in her arms, or on her knee, is the little coming man, whom she can make whatever she elects. A few short years and he will stand forth a knight, *sans peur et sans reproche*, the champion and defender of all that is smaller and weaker, or a careless, selfish being, ready to sacrifice everything and everybody to his own selfish gratification, according as the influence of his training has been. In reference to forestalling reform, and making criminal legislation unnecessary, a late writer in the *Century*, remarks:—

“Our public-spirited women are doing, in many directions, good and noble work for fallen man; but it is a serious question with the thoughtful observer whether the average mother is not guilty of more corruption in the nursery than can be reformed by her sisters from the public platform.

“That the smallest infant has hereditary tendencies from ancestors near and remote, whose influence precedes all exercise of a mother’s power, none will deny. A father’s strong influence, for good or evil, all will acknowledge. The subsequent benumbing atmosphere of ‘society’ cannot be forgotten. But closer than all these has throbbed the mother’s heart, and in those earliest and only years in which man entertains absolutely unquestioning faith in human teaching, it is his mother who represents to him the law of life.

“It would probably startle the great mass of well-meaning mothers to have the adult errors of their sons explained as were those of the Hebrew king, ‘For his mother was his counselor to do wickedly;’ and yet, let us see what close observation of the home rule of a large proportion of even so-called ‘Christian women’ reveals.

“On a railway train, the writer noticed the entrance of a mother and little son, who were unexpectedly greeted by a friend of the mother’s. The friend was only going from one way-station to the next, while the others were on a long journey. There happened to be but one vacant double-seat in the car; and into this the boy slipped, taking the seat next the window. His mother, eager to improve the ten minutes with her friend, asked her son to give up his seat and take another for that little time, so that she could sit with her friend. “‘No, I wo n’t; because I want to sit by the window, and all the other seats have people already at the windows.’

“‘But, darling, only for ten minutes, and then you can sit by the window all day.’

“‘No, I wo n’t go. I want to sit by the window, now.’

“‘But, dear, not to give mamma pleasure?’

“‘No.’

“‘Not for just ten little minutes, when mamma wants so much to talk to her friend, and you can sit by the window the whole day long?’

“‘No!’ with an impatient emphasis. And in spite of humble entreaty from the mother, and good natured urging from the friend, that home-nurtured bit of selfishness kept his place, the mother never dreaming of insisting on the right and courteous thing, but murmuring gently that ‘Robby did so enjoy looking out of the window.’ When seven-year-old Robby becomes Robert the husband, the father, the citizen, will he be more apt than now to think of anybody’s rights or comfort save his own?

“Not for a moment would one seem to forget that there are wise and noble women, whose children rise up and call them blessed, and whose influence makes for that righteousness whose fruit is integrity. But such mothers shine against a dark background of women, who, without any distinct consciousness of the evil they are doing, are nevertheless training from the very nursery great numbers of men, who, while keeping within the limits of respectability, are not only the mere shadows of true manhood, but also the tricky politician, the unscrupulous merchant, the shameless sensualist, and the elegant embezzler.”

PURE MEN FOR PUBLIC OFFICE.

In discussing the above most important subject, the Wisconsin *Prohibitionist* pertinently remarks:—

“One special point that comes forcibly to our notice, is the apparent sanction the public gives to social impurity in public men. Not a man or boy in the Wisconsin State capital but can mention without a moment's thought, a list of highly honored men whose social vice is common talk. These men are nominated year after year for positions of trust and honor. They are voted for by good, clean Christian men, who have sons they hope to train to live pure lives. If those Christian men are ignorant of the wickedness of these public men, they may rest assured that their boys, if over eight years old, know all about it.

“How are these boys to be taught to execrate social vice when they see good men condoning this wickedness by the sanction of their voices and votes? The boys will argue that if the vicious man is good enough for the best offices the city and State can give, his vice cannot be very bad.

“The moment your boy is taught to look with the least degree of allowance upon the social sin, he is lost, and you have laid the foundation for an early death, or an unhappy home.

“There is but one remedy for this fertile cause of vice, and that is for every clean, decent man, to rigidly require cleanness and decency in the man for whom he votes. Nothing short of this will ever suffice.”

CULTIVATE PURE THOUGHTS.

WE cannot live pure lives and think impure thoughts. If we harbor impure thoughts, they will very soon lead us to commit impure acts; for, in the words of the old couplet:—

"Bad thought's a thief;
He acts a part,
Creeps through the windows of the heart,
And if he once his way can win,
He lets a hundred robbers in."

We are apt to think that only in our conduct, those outward acts by which other people can see and judge us, is there need to guard against impurity. We forget that our thoughts are the source of all our actions; and that if the fountain is impure, the stream that flows from it will be impure also. The Bible, that guide by which we should all measure our lives, presents this fact very forcibly in Prov. 23: 7: “For, as he thinketh in his heart, so is he.”

A thought is generally considered a very trifling thing; and we are prone to say that *thinking* does no harm, that one may *think* anything so long as he acts rightly. This is a great mistake. “Thoughts are the eggs of words and actions,” and within them lies all the sinfulness of actual transgression. They are the very root of all evil acts. Our Saviour, in Matt. 15: 19, puts evil thoughts first in the catalogue of all evil things: “For out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies.” Here we have enumerated nearly every sin of which the human heart is capable, but evil thoughts come first. They are the first step which leads to all the others.

It is not safe for the young woman who desires to

remain pure in action, to think impure thoughts. We cannot indulge in evil imaginations without weakening the power of the will and the conscience. Each time we consent to an evil deed in thought, or dwell upon an impure theme, it loses some of its hideousness, and conscience is partly won over. A mind accustomed to dwell upon sin, soon ceases to look upon it with aversion. With the barriers against sin thus weakened, the work of ruin is only a question of time and circumstances.

It is well for us to remember that the change from virtue to vice is never a sudden one. The way to ruin is a gradual descent, having its beginning in the harboring of impure thoughts, the feeding of the imagination upon forbidden pleasures, the dallying with evil, until, when the hour of sudden and unusual temptation comes, the “smoldering fire flashes into open sin.”

None of us can tell when sudden temptation may overtake us. How important, then, that we cultivate a habit of pure thinking at all times! One of the most helpful aids to the cultivation of such a habit of thought, is the pursuit of some useful employment or study. The cup that is full can contain no more, just so one whose mind is filled with useful thoughts of work or study, will have little room for sinful imaginations.

If we learn to command our thoughts and keep them in a pure channel, we shall obey the law of purity in *act*. “Figs do not grow on thistles;” neither are corrupt deeds a harvest which is gathered from pure thoughts.

E. E. K.

GOOD HEALTH

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

BATTLE CREEK, MICHIGAN.

EXHAUSTION OF VITAL CAPITAL.

Abstract of a lecture by J. H. KELLOGG, M. D., Aug. 15, 1889.

THIS question is often asked by the health seeker: "Why don't I get well faster?" He forgets that he has been years and years in breaking down, and that he has been drawing upon his vital capital until he is nearly bankrupt. It may be asked, what is meant by vital capital? Every organ of the body is endowed with a certain amount of reserve force, by which means preparation is made for various emergencies which are sure to arise in life. The capacity of the lungs is 320 cubic inches of air, yet ordinarily only twenty cubic inches are inhaled and exhaled. This generally unused capacity is brought into play in running or in other severe bodily exercise, or when a portion of the lungs is injured by disease, or in case the regular supply of air is cut off by suffocation. If the whole capacity of the lungs was only twenty cubic inches, one would die instantly on being submerged in water. The same is true of the heart. While its normal beat is only seventy times per minute, yet when required by some emergency, it is able to beat one hundred and forty-five times per minute. Without this reserve capacity, very slight causes of agitation or exertion would disturb its equilibrium to the extent of producing death from heart failure. So with the stomach, liver, and various other organs of the body—each is made capable of doing an amount of work much greater than the ordinary requirements. A Christmas dinner may give the digestive organs quite heavy gymnastics, but if it comes only once a year, the extra strain may be endured without serious injury. But suppose a man has Christmas dinners every day? For a while he sees no serious ill effects; the reserve equals the demand, and he thinks he is able to continue as he will. By and by, when he has eaten no larger or richer dinner than usual, it is followed by an attack of indigestion from which he does not recover. He has

had such attacks before, and has always rallied from them in a few days, and he does not understand why such is not the case now. The fact is, he has overdrawn his stock of vital capital, and he must take the consequences. Nature allows us considerable latitude; we are not compelled to walk in a line as narrow or as straight as the top of a board fence; but for all that, the nearer straight we walk, the further we can go and the better it will be for us.

To illustrate more clearly what we mean by vital capital, we will suppose that a young man has a very large fortune left him by his father, the extent of which he does not know. It is on deposit in a bank. He makes drafts upon it at pleasure, and they are all honored, whether for one thousand dollars or for ten. He gambles, and indulges in other expensive dissipations. Some years pass. He makes a check one day for a thousand dollars, and it is cashed as usual. The next day he endeavors to draw out one hundred dollars, and his draft is not honored. He is angry, and rushes down and demands a reason from the cashier why this small check is not cashed when he made one the day before for a thousand dollars which was received, and he had frequently made checks for ten thousand dollars without a word. The cashier explains to him that his capital has all been drawn out but fifty dollars; he can have that amount if he desires, but no more.

In the same manner the draft made by bad habits upon Nature's reserve force often is not felt in early life, but tells most seriously near its close; and this explains why a break-down is often attributed to some trivial cause, losing sight of the real one. The man with the fortune could just as well say that it was his last draft for a hundred dollars which reduced him to poverty, as the man who had eaten Christmas dinners every day of his life, or had smoked ten

cigars a day all his life, could say that it was the last big meal he ate, or the last ten cigars he smoked, which caused all his subsequent pain and discomfort. His vital capital is gone, and if he would build it up again, it must be by slow degrees, the same as the man who had only fifty dollars remaining, would have to retrieve his fortune, if it could be done at all, by a series of slow and careful savings and investments.

The miller who has a large and deep pond of water can run his mill the year round, and a drought would make little difference to him; neither is he afraid to undertake an extra grist now and then. But suppose his pond is dried down so that only a little stream flows through the middle of it, with what certainty could he take contracts and continue business? So with many a chronic invalid; his pond is dry, and yet he is all the time grumbling and complaining that his mill will not grind the grists which he has been in the habit of grinding all his life.

Another question oft-repeated to the physician is,

"Why do n't I feel better?" Suppose a man is at the bottom of a lake one hundred feet deep, with a large weight attached to his feet. Another man dives down and fastens a rope under his arms, and others above begin to haul him up. He is within three inches of the top, but he does not feel any better than he did when he was at the bottom. He is oppressed with the same deadly suffocation, and he wonders if there is really anything being done for him, and if so, why he does not feel better. A moment more, and his head is above water and he breathes freely. So the chronic invalid just ready to emerge from the sea of ills in which he has felt himself drowning, often feels no better than he did when in the depths. But have courage; a few more pulls may bring you into the free air of comparative health again. Any minute your head may emerge into the free air and sunshine, which still shines as brightly as ever above the foul waters of the stagnant pool of disease in which you have so long been sunken.

THE POISON OF THE BREATH.

DR. PARKES, an eminent English sanitarian, proved, years ago, that the breathing of breath-poisoned air was one of the most potent causes of consumption. The faces of persons who have for some time lived in badly ventilated quarters, with little out-of-door exercise, indicate a weakened condition of body, and a constitutional feebleness which renders them unable to resist the encroachments of serious disease of any type.

Recently, Dr. Brown-Sequard, the well-known French physiologist, has made further researches in this subject, the results of which are of great interest. We quote a paragraph from an article in the *London Lancet* referring to these interesting experiments:—

"Dr. Brown-Sequard has devised an apparatus for condensing the vaporous part of the breath of animals, and he finds the liquid so obtained to be powerfully poisonous, even when obtained from animals in a state of health. The liquid injected into the veins of sound animals produces much distress, from the action of the poison on the nerves and the brain. Moreover, the nervous apparatus of breathing is disturbed in its rhythm, the animal generally taking many fewer respirations than usual; the surface of the body grows cold, and the pulse-rate is quickened. Micro-organisms do not exist in expired breath, and, besides, the liquid remains after boiling, as poisonous as before. It is quite probable that a man excretes from his lungs and skin in twenty-four hours, more poison, though in

a more diluted form, than a snake manufactures in the same time. Dr. Brown-Sequard also proves that this vitiated air is specially harmful to consumptive patients. Rabbits, which are notoriously prone to become consumptive, can throw off consumption or tuberculosis if the general health is maintained by proper food and fresh air, whilst their fellows succumb if placed in unhealthy surroundings."

It has long been known that carbonic acid gas is not the most deadly element of the air, and that the deleterious properties of breath-poisoned air are due to an organic poison. Dr. Brown-Sequard has added important evidence respecting the deadly character of this poison. It is this which gives to the air of an unventilated sleeping-room the close, fusty odor which one observes in entering such a room after a night's occupancy. It is important that every one should know that of the two breaths,—the one which we breathe in, and the one which we breathe out,—the one is life-giving, the other death-dealing. A candle will not burn in expired air, and animals quickly die in such air. Each breath sent out from the lungs is laden with a deadly poison, which vitiates the surrounding air, and unless removed by ventilation, will soon render it so poisonous as to engender disease. Every breath poisons not less than two cubic feet of air, and renders it unfit to breathe again. This creates a necessity for the supply of an equal amount of fresh air, to replace the contami-

nated air, or rather, to dilute it to such a degree that its virulency will be lost. This can only be accomplished in human dwellings by means of some systematic scheme for ventilation.

The principles of proper ventilation are few and simple. The following suggestions will suffice for those who really desire to secure a sufficient supply of that most essential of all the necessities of life:—

1. Provide two openings for every room (in addition to doors and windows),—an inlet and an outlet.

2. The size of these openings for each room must depend on the number of persons to occupy the room. Allow forty square inches of grate surface for one person, and thirty more for each additional person.

3. Place both openings at the floor; the inlet, where convenient; the outlet beneath a window, or at the part of the room which requires the most heat.

4. Connect the outlet by a duct of equal capacity, with an upright ventilating shaft. If in an outside wall, this shaft must be heated; if in an inside wall, no heat is needed, except in case it is of smaller area than required, so that an extra strong draft is needed. The area of a cross-section of the shaft must be equal to the combined areas of all the outlets which are connected with it.

5. The air-supply must be heated, either before it enters the room, or by means of some form of heating so placed as to warm the air as soon as it enters the room.

6. The ventilating shaft must be constructed exactly like a chimney, in order to secure a good draft. It must extend well above the roof, must be smooth inside, and protected at the top from down currents.

7. When all the rooms of a house communicate with a common hall, the fresh air-supply of all may be introduced into the hall, provided that a register opening is made in or over each door leading from the hall to adjoining rooms. It is best, however, that each room should have a separate outlet and a separate duct leading upward from it. For an ordinary dwelling, the ducts of rooms on the same side of the building may be joined to a common upright shaft, but only as regards rooms on the same floor. Rooms on different stories must not communicate with the same upright shaft. This is an error very often committed, and is one which is capable of doing great mischief, on account of the imminent danger that at least one of two or more rooms thus related will obtain its air-supply through the foul air outlet of another.

DR. CHENERY gives an account of a man whose breath caught fire from a lamp after he had taken a quantity of cherry brandy. In cases of this sort, which are not infrequently reported, the breath is not made inflammable by alcohol, but by the eructation of gases formed in the stomach as the result of a disease often caused by the use of alcoholic liquors.

BRAIN LABOR.—The brain wears rapidly, and requires abundant time for rest and repair in sleep; when this is supplied, almost any amount of work may be performed, which is possible to the individual. The student or professional man, who goads his brain into activity when it is exhausted by want of sleep, or long and severe labor, commits a crime against himself.

WOMEN SMOKERS.—We have received the following communication from Rev. F. W. Gorkin, Romeo, Michigan:—

“Dear Sir,—I have just read an article in the *Christian Herald*, published in Detroit, in which you are quoted as saying: ‘We must believe that in the United States indulgence in the filthy weed (tobacco) by women is confined to those social circles called

“fast.”’ But it is a mistake to suppose that tobacco smoking among women is confined to ‘fast’ circles of society. One of the women in a church in New Hampshire in which I once preached, occasionally smoked. When pastor of a church in Vermont, I noticed that some of the male members did not smoke, so I said to a brother, ‘How many of the men in this church are in the habit of smoking?’ He laughed and said, ‘More women than men smoke in our church.’ And sure enough, two or three of the sisters in that church were in the habit of smoking.

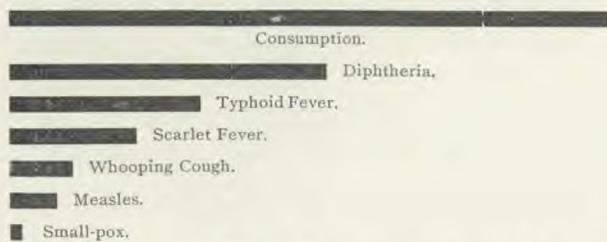
“Most respectfully yours,

“F. W. GORKIN.”

We are much obliged to Mr. Gorkin for calling our attention to the above fact. We have met occasional instances of this sort, yet we are of the opinion that smoking is growing less and less frequent in respectable social circles. Tea is woman’s favorite tittle, and we are not certain but that the effects of extensive tea drinking are almost as serious among women as the use of tobacco among men. Certainly, it is by no means so filthy and disgusting a habit, and yet the effects upon the nervous system are hardly less baneful.

THE GREAT WHITE PLAGUE.

AN outbreak of cholera, or yellow fever, is always regarded with alarm and even consternation by those whose lives are thereby endangered even to the remotest extent. Until the precaution of modern methods of quarantine, the appearance of an epidemic of cholera of unusual proportions in the heart of India was looked upon as a most portentous event by civilized nations on the most remote portions of the globe, and the appearance of yellow fever in Florida or Louisiana was the signal for the exodus of thousands of persons from contiguous States, even though hundreds of miles from the dreaded destroyer. The purpose of this article is to call attention to the fact that we have always with us, in every city, in every town and village, in every community however small, an ever present enemy to human life, whose annual harvest of victims is vastly greater than that of the yellow fever, cholera, plague, famine, and pestilence combined. How many of our readers are prepared for the statement that about one-seventh of all the people who die in this great country of ours, die from the single disease, consumption? Two years ago the whole country was shedding tears of sympathy for Florida, some of whose fairest cities were desolated by yellow fever. Thousands upon thousands of dollars were contributed for the relief of the stricken State, and yet the number of persons who annually die of consumption in a single one of our older States, as Michigan for example, is considerably greater than the number of those who died of yellow fever during the epidemic referred to. Scarlet fever, diphtheria, and typhoid fever are justly regarded as scourges of the worst type, and yet their destructive influence upon human life and health is far less than that of consumption. The accompanying diagram prepared by Mr. Clark, of the Michigan State Board of Health office, represents graphically the relative number of deaths from various contagious diseases in Michigan, as compared with the deaths from consumption.



It will be noticed that about as many people die of consumption as of diphtheria, typhoid fever, and scarlet fever combined, while the number of deaths

from whooping cough, measles, and small-pox sink into insignificance, in comparison. It is important then to inquire carefully into the causes of this great fatality from a single disease. In the present article we will notice a single one only of the several factors which enter into this matter as causes, and one which is, in our opinion, one of the most important; namely, the consumption of the flesh of consumptive animals. The cattle of New England are especially subject to this disease. Several years ago I heard Prof. Brewer, who is at the head of the agricultural department, of Yale College, speak of the increasing prevalence of consumption of the blooded stock there. Recently, in Ohio, a certain herd of cattle was reported to be dying of pleuro-pneumonia. Anatomical examinations showed that they were really dying of tuberculosis, or consumption, instead.

It is a well-known fact that consumption is a disease which can be communicated through the breath, and also through the stomach, by eating flesh or milk which is diseased. About ten years ago, A. N. Bell made some experiments upon a herd of cows in New York, kept for dairy purposes, and fed upon distillery slops. He found they were largely affected with consumption. Every few days some cow would become so emaciated through coughing and expectorating, that the owner would send her off to the butcher's. A new cow would be purchased in her stead. In a short time she, too, would begin to show symptoms of the disease, and in a few months would have to be sent to the butcher. Calves, fed upon the milk of these cows, died of consumption. There is no doubt but consumption is communicated to human beings very largely through the milk and flesh of diseased animals, but particularly through the flesh.

Some thirteen or fourteen years ago, I purchased a sheep out of a flock which were being fattened for market, and which appeared as well as the rest. I wanted it for anatomical illustrations for a class of medical students. Upon examination, it appeared that scarcely an organ of its body was free from tuberculosis. A few weeks later the flesh of this animal would have been served up for food, and, if not very thoroughly cooked, these tubercles might have affected whoever partook of the flesh.

An eminent English sanitarian says that the stomachs of the English people serve as catacombs for more than 20,000 diseased animals every year. Yet, compared with this country, their regulations as to inspection are very strict. The work of the cattle inspector in this country is scarcely more than a farce.

He does not count the pulse, nor take the temperature of the animal, nor make microscopical examination of its flesh. A friend of mine who has looked into the matter in Chicago, wrote with regard to the inspection of hogs, that if a hog is able to walk up the gangway to be slaughtered, it is a healthy hog. If it falls down within a few feet of the top, its carcass is sent across the city to a rendering establishment, and made into steam-refined lard, or oleomargarine butter.

The Jews do not eat the flesh of animals which have not been carefully inspected by their "bodek" before slaughtering; and, afterward, this officer minutely examines its internal organs. One of these officers told me a dozen years ago, that he was obliged to reject about nineteen out of every twenty animals.

A hog's liver is more nearly like the human liver than that of any other animal. Some years ago I went to a butcher in Battle Creek to purchase one for the use of my students. To my surprise I found he had none for sale, and he gave as a reason that "there wasn't one hog in a hundred but what had an abscess in its liver." Hogs are generally slaughtered so as to anticipate a natural death, by a few weeks at least. Then they are served up and buried in human stomachs, instead of being buried in the ground.

Doubtless meat-eaters have a great many narrow escapes, as I did twenty-five years ago when I ate my last beefsteak. My father had purchased a nice piece of tenderloin, and the cook served some slices of it for breakfast one morning; the next morning, in preparing to cook some more, she cut directly into a large abscess! Probably all that saved us from severe blood poisoning, was that we ate our beefsteak fried hard, and well-cooked germs are not so very dangerous, although without doubt, there is better food!

Not only cows and calves have consumption, but sheep, chickens, and sometimes hogs have it, though the hog, being a scavenger, is prepared by nature with extra means of carrying off impurities, and is not so liable to have it as herbivorous animals. One way in which cows get consumption, is by being shut up in close, unventilated stables, and obliged to breathe air laden with impurities. Another way is through feeding them garbage, as many do. The garbage may contain scraps of uncooked meat, infected with tubercles, or something of the sort.

I have known milkmen to carry milk in the front end of their cart, and, on their route, collect garbage from their customers, which they took away in the back end. Next morning they would serve their customers from the front end of the cart, with what they had previously carried away in the back end! In that way, consumption contracted by the cows, could be readily transmitted through the milk, to whoever partook of it. Water and food for cows should be as carefully selected as for human beings. There is no way to secure good milk except to give good care to a healthy cow.

In a Chicago live-stock journal, not long ago, I was reading among the queries, one describing a calf in a certain condition, and asking what was the matter, and what the remedy. The reply was, that the calf was evidently suffering from tuberculosis, that it was incurable, and that the only thing to be done was to send it to the butcher! And where did it go from the butcher's? To be served as veal cutlets, on many tables! It is the common practice, when a farmer has a cow or a calf running down, to hurry it off to the butcher, that it may not die on his hands! If you hear of hog cholera, or some prevailing cattle disease, in certain sections of the country, just turn to the stock reports, and you will see that cattle or hogs from that particular locality are being rushed upon the market. This was true not long since of a point in the west where the cattle were lying dead thickly in the fields, while those still able to move were being shipped directly to eastern markets, and if they lived to reach their destination, they were slaughtered and served out to the public.

The only protection the people have from such vicious practices, is, either to give up the use of flesh food, or else to insist upon a rigid law of inspection of every creature offered from the markets. It is becoming dangerous to eat an animal, unless we know its pedigree, and how it was cared for. Certainly, it is absolutely unsafe to eat meat, unless it is thoroughly cooked. Milk should also be cooked, as a measure of safety.

Doubtless the world would be better off, and the people healthier, if meat eating were entirely abandoned. Some of the finest races of the human species, as well as the finest races of animals, make no use of flesh food.

VACCINATION FOR CHOLERA.—M. Pasteur, the discoverer of a method of preventing hydrophobia by vaccination, recently announced the discovery, by one

of his pupils, of a method of preventing cholera by vaccination. The discoverer of the cholera vaccine is a Russian physician residing at Odessa.

THE EFFECTS OF BEER DRINKING. — The *Scientific American* has put itself on record against beer drinking, in the following impressive words, which we are glad to quote from so scientific a source :—

“In appearance the beer drinker may be the picture of health, but in reality he is most incapable of resisting disease. A slight injury, a severe cold, or a shock to the body or mind will commonly provoke acute disease, ending fatally. Compared with other inebriates who use different kinds of alcohol, he is more incurable and more generally diseased. It is our observation that beer drinking in this country produces the very lowest kind of inebriety, closely allied to criminal insanity. The most dangerous class of ruffians in our large cities are beer drinkers. Intellectually, a stupor amounting almost to paralysis arrests the reason, changing all the higher faculties into a mere animalism, sensual, selfish, sluggish, varied only with paroxysms of anger, senseless and brutal.”

ESTHETIC CANNIBALS. — A very refined and cultured young lady was quite horrified the other day, when told by the writer that her British ancestors, who were conquered and civilized by the Romans, were “cannibals.” Her horror was intensified when the remark was made that the cannibalistic instincts of the Anglo-Saxon race still survive. Proof of the statement being called for, the fact was cited that the fair speaker herself might furnish an example of this ferocious instinct. All the proof necessary was the fact that she had just been confessing to a great liking for raw oysters taken fresh from the shell and eaten with a little vinegar and pepper. “But,” she exclaimed in defense, “the oyster is not an animal.” “Certainly the oyster is an animal,” we replied, “as every school girl ought to know in our days, and an animal that is well supplied with organs not so very much unlike those of our own bodies; nerves, muscles, stomach, and an enormous liver, which constitutes a large part of the entire animal. If an oyster possessed the power of speech, we dare say some heart-rending shrieks would be uttered as the poor creature is torn from his shell. And if it were not paralyzed by the rude treatment to which it is subjected, no doubt that lively squirming would be witnessed when the biting vinegar and the blistering pepper are applied to the poor creature’s tender flesh. Just think, imagine, if you can, how it must feel on its way down to the stomach, and what its sensations must be as it feels itself devoured piecemeal by the gastric juice. Thackeray once said at a dinner table,

after he had swallowed an unusually large oyster, that he felt as though he had swallowed a baby. We have known young ladies whose nerves were so delicate that they could not see a mouse or a spider without going into hysterics, and declaring that they were nearly killed with fright, and we have known these very sensitive young women to swallow half a dozen live oysters without a single shiver or compunction of conscience. Eating oysters well disinfected by boiling is bad enough, but to swallow an oyster fresh from the sea, swarming with germs, and alive and wriggling, is to our taste inexpressibly repulsive.

BRAIN WORK. — Much mischief is charged to brain work for which it is not responsible. Brain work is healthful, and seldom injures, but brain and nerve worry exhaust vitality more rapidly than any other means. The average business man of the present day is injured far more by worry than by work. The constant nerve strain to which most business men and brain workers are subjected, demands frequent opportunities for the complete relaxation of the nervous system. The demand for nerve and brain work must be met in a proper manner, or nervous bankruptcy, in some form of neurasthenia or nervous exhaustion, will certainly follow. We heartily endorse the following remarks from James Muir Howie, in the *Nineteenth Century* :—

“There is no better preventive of nervous exhaustion than regular, unhurried, muscular exercise. If we could moderate our hurry, lessen our worry, and increase our open-air exercise, a large portion of nervous diseases would be abolished.

“Many nervous sufferers return home worse than when they left. They climb mountains in Switzerland when they ought to be loitering on the seashore, or lounging on the deck of an ocean steamer. They rise early, ‘to make the best of to-day’, when they had better lie several hours longer to fix the benefits of yesterday. Like the unskilled rider, who dismounts for relief, they are frequently driven to bed to recover from their holiday exertions.

“The amount of exercise must be regulated by its effects on head or spine. Mere muscular fatigue may be overcome by regular walking, but nervous fatigue must be entirely avoided. If the patient cannot take sufficient exercise to sustain his appetite and digestion, he had better undergo an hour’s massage daily. And when he has once gained the power of walking from five to ten miles a day without fatigue of head or spine, he ought, by constant practice, to endeavor to retain it.”

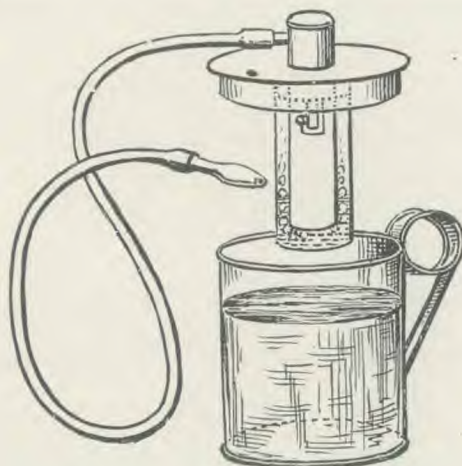
DOMESTIC MEDICINE



THE TREATMENT OF DIPHTHERIA.

As this grave disease is at the present time prevailing somewhat more extensively than usual, a few hints respecting the proper management of cases of this sort will be seasonable.

1. It must be remembered that diphtheria is a germ disease, i. e., it is due to the reception into the system of germs of a specific character. The gravity of the disease, in any particular case, depends upon the condition of the system of the patient when the germs are received, and upon the number and activity of the germs introduced into the system. The disease seems to be closely allied to ordinary tonsillitis. Indeed, it seems hardly possible to distinguish between a case of mild diphtheria, and a case of tonsillitis. The theory is held by some eminent authors that there is really no difference between these two maladies, but that diphtheria, which, in its most characteristic form, presents as one of its features a peculiar membrane upon the diseased surface, is only a sore throat of unusual malignancy. There seems to be a close relation be-



tween this disease and erysipelas. Recent researches also seem to show that diphtheria and croup are really one and the same disease.

2. It is evident that in the treatment of this disease, agents capable of destroying germs, or delaying their

development, must be of service. The difficulty in the use of these agents, is, that if employed in sufficient strength to destroy germs, they are injurious to the tissues. Spirits of turpentine is about the only exception to this rule, and on this account is an excellent agent in cases of this kind. It is best taken by means of the steam inhaler, and should be used regularly, several times a day, for at least five minutes, from the time the child is exposed to the disease. Use one-half teaspoonful of turpentine in the outer cup of the steam inhaler, placing only water in the inner cup. The construction of the steam inhaler is shown in the accompanying cut. It can be obtained from the Sanitary Supply Co., Battle Creek, Mich., or can be made by any tinsmith. It will be well, also, to keep constantly evaporating upon the stove, or over a lamp in the sick room, a half ounce of turpentine in a basin of water. As soon as the throat assumes a red, swollen appearance, and there is a decided rise of temperature, cold applications should be made to the throat and tonsils by means of an ice bag, or cloths wrung out of iced water, every hour. Once in two hours, fomentations should be applied to the throat, for fifteen minutes. If there is much pain, fomentations may be applied for ten minutes, hourly.

If the inhalation of turpentine causes much coughing, and irritates the throat, the steam inhalation may be taken without it a part of the time. It should be used for five or ten minutes, every hour. When a different membrane makes its appearance, the same measures should be continued assiduously, and the membrane should be painted, every half hour, with a solution of papayotin, or vegetable pepsin. The following is a good formula: Papayotin, 75 grains; distilled water, 1½ drams; glycerine, 4 drams. Apply to the membranous patch with a camel's-hair brush. It is also well to apply to the throat hourly, in the form of a spray, a solution of boracic acid, or chlorate of potash. In adults, a saturated solution of chlorate of potash may be used; for young children the solution should be one-fourth saturated. Boracic

acid may be used, for both adults and children, in the saturated solution. It should be applied with an air atomizer.

3. In favorable cases, the membrane disappears in two or three days, and sometimes in twelve or twenty-four hours. The separation of the membrane is favored by the inhalation of steam. The use of the steam atomizer is exceedingly valuable for this purpose.

4. The general treatment of these cases is of even greater service than local treatment. The thing of first importance is the administration of water in large quantities. A child should be made to swallow a half-glass of water every hour. Older persons may take a glass of water, hourly. It will be better to induce the patient to take the water hot, if possible, or at least warm, as this favors perspiration, which is important in this disease. If the child cannot drink a sufficient quantity of water, which should be not less than two quarts in the twenty-four hours, water must be administered by enema. In all cases, a large enema should be administered daily, to move the bowels, and in cases in which it is necessary, warm water may be introduced into the rectum several times a day, and allowed to remain. Perspiration should also be encouraged, by a blanket pack which should be administered twice a day, during the first few days of the disease. This consists of wrapping the patient in a blanket wrung out of warm water. The patient should be kept in the pack from twenty to forty minutes, or until profuse perspiration is induced. After the pack, he should be wrapped in a warm blanket to avoid taking cold, and to favor the continuance of perspiration to a moderate degree. The blanket pack relieves restlessness, lessens fever, and improves all the

symptoms, besides aiding the separation of the membrane. The writer has seen a child sick with this disease, with a temperature up to nearly $104\frac{1}{2}$, and in a state of almost complete collapse, brought back to consciousness, and so greatly improved in every particular, within the short space of two hours, by the aid of the blanket pack, that the change seemed to be scarcely less than miraculous. In the case described, the temperature was brought down $2\frac{1}{2}$ degrees in two hours, and the little one was apparently snatched from the very jaws of death. In twenty-four hours the patient was convalescent, making an excellent recovery.

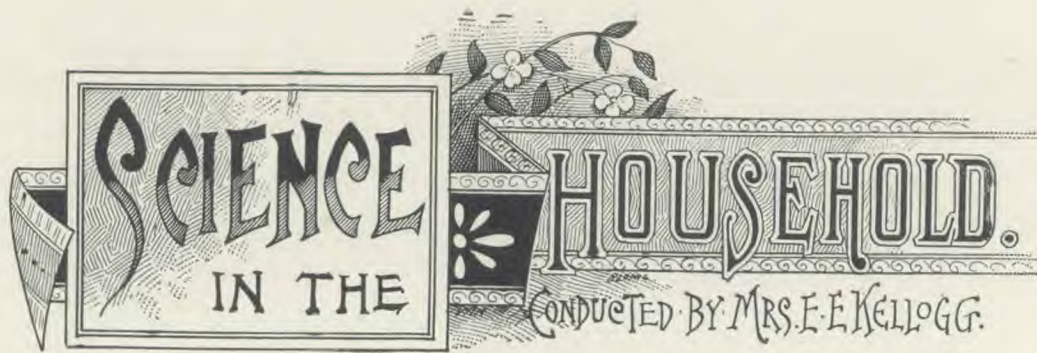
5. It is most important that food should be administered in sufficient quantities to maintain strength. The food should be light, consisting of fruit juices, gruels, milk, milk toast, boiled rice, and similar foods, excluding meats of all kinds, pastry, and everything difficult of digestion. If the child is unable to swallow, nutritive enemata of peptonized beef may be used advantageously.

Of course it is understood that cases of this disease are so grave that no person not medically educated should undertake the management of a case without the advice of a physician, but we feel sure that no intelligent physician would object to the measures which we have outlined, and our success in the treatment of the disease in the manner named has been so great, that we feel justified in making it public in this manner, and urging its adoption. Copious water drinking, and the use of the blanket pack, we consider among the most important remedies. If to these be added the application of heat and cold to the throat, we believe this short category will include the most valuable remedies for use in this disease.

HOW TO KEEP ICE. — Ice is often of very great use in sickness, especially in febrile diseases, and the following directions for keeping it will be found serviceable: —

“Ice keeps best in a big lump of ten to twelve pounds or more, rolled in a thick blanket with sawdust, and put into the coolest place in the house. From this big piece a pound or two should be broken off (this is best done with an awl and hammer); wash it well to get off any bits or dirt. Have ready a white pudding basin, with a rim round the edge. It should be a two-quart basin. Take a square of thick flannel, — washed flannel is the best, as there are fewer hairs on it, — put the flannel over the basin, allowing the center of it to sink half-way into the basin, but the flannel must not touch the bottom; it must *hang* inside. Now tie it firmly with a piece of string out-

side the rim of the basin. Put in your washed ice, and cover it well over with the flannel that is outside the basin; the square of flannel must be big enough to allow for this. If this is carefully done, the ice can be kept this way in a warm room for many hours. The great point to remember is that the flannel holding the ice must hang in the basin, but on no account touch the bottom of the basin. As the ice melts and water gets under, it should be poured off when it touches the flannel. The ice in the pudding basin has to be broken for the patient's use. For this purpose have a good cork, into one end of it insert the head of a good fairly strong needle; see that the needle is quite firm; now take your thimble and push the point of the needle into the ice, pressing the top of the cork with the thimble. Small bits of ice may in this way be easily and noiselessly broken off.



THE THANKSGIVING DINNER.

THE popular idea of a Thanksgiving dinner, — an elaborate *menu* of costly indigestibles, flanked by a huge roast turkey as *piece de resistance*, — seems but illy to accord with the original intent of the day set apart by the nation “especially to acknowledge the goodness of God in the dispensation of his mercies and his bounties.” The occasion seems to us rather one to be invested with a peaceful, grateful, Sabbath atmosphere, wherein feasting, the relic of barbarous ages, has little place. The oft-repeated arguments in favor of simple dinners every day in the year, surely hold good for Thanksgiving day also; in their easy digestion they leave us with clear brains for the morrow’s work and cares, and likewise easy consciences; we have not spent more money upon them than we could afford, and none have been overworked or over-fatigued in their preparation.

Moreover, in the sweetly serious frame which the Thanksgiving season should ever bring, when our hearts overflow with tender remembrances of the watch care of the All Father, which has followed us and our loved ones throughout the year, it seems scarcely in keeping that we should desire, merely in pursuance of our own selfish gratification, to involve the slaughter of any of his helpless creatures. Surely, it were far better for heart and brain, that on this particular day of thanksgiving, the dinner should be of a kind more in harmony with this gentler mood — a repast which we take, as it were, from the outstretched hand of the Lord of the harvest — his own delicious and nutritious fruits, vegetables, and grains.

And, while we, ourselves, take time to meditate on mercies past, may we, in Christian courtesy, be mindful that the simpler the meal the more time will there be placed at the disposal of the cook of the household, who, whether she be one of the family circle, or one who comes in from the wage-earning world outside, ought, as far as possible, to have an equal

opportunity for relaxation, and for attending the religious services of the day. In the interest, therefore, of good digestion, and economy of muscle and purse, we append a bill of fare especially designed for the occasion: —

- | | |
|------------------------|----------------------|
| Canned Green Pea Soup. | |
| Baked Sweet Potato. | Mashed Irish Potato. |
| Escalloped Tomato. | Celery. |
| | Baked Omelet. |
| Rice with Fig Sauce. | Pearl Wheat. |
| | Whole Wheat Puffs. |
| Raisin Bread. | Cream Rolls. |
| Grape Jelly Tarts. | Apple Meringue. |
| Fruits. | |

That the process of dinner getting and serving may be quickly and easily accomplished, as much of the work of preparation as is practicable, should be performed the previous day. Of this, the canned green peas and the tomatoes may be rubbed through the colander over night; thus the soup-making and the further cooking of the tomato will consume but a few minutes. The potatoes can be prepared, and the celery gotten ready for the table. The rice, and the pearl wheat can be cooked, the bread and the rolls baked, as also the tarts and the meringue. The various recipes needed in the preparation of this dinner, if not all included in this number of the journal, will be found a few numbers back.

CANNED GREEN PEA SOUP. — Rub the contents of two cans of green peas through a colander; add thin cream or rich milk to make the soup of the right consistency. Heat to boiling, and serve.

ESCALLOPED TOMATOES. — Into a pint of strained, well-cooked tomatoes, scatter one and one-fourth cups of whole-wheat bread crumbs; add salt, if desired, and a half cup of sweet cream. Mix thoroughly, and bake in the oven until well browned.

BAKED OMELET.—Into one quart of milk, stir six well beaten eggs, and salt to taste. Bake until well set, in a china dish placed within a pan of hot water, in a moderate oven.

PASTE FOR TART SHELLS.—Take one-half cup of rather thin, sweet cream, which has been placed on ice until very cold; add to it the stiffly beaten whites of two eggs, and whip all together, briskly, for ten minutes. Add sufficient white flour to roll. Cut into the required shape, bake quickly, but do not brown. Fill after baking. This paste rolled thin and cut into shapes with a cookie cutter, one-half of them baked plain for the under crusts, the other half ornamented for tops, by cutting small holes with a thimble or some fancy mold; put together, with a layer of some simple fruit-jelly between them, makes a most attractive looking dessert. It is likewise very nice baked in little patty-pans, and afterward filled with apple or peach butter, prepared tapioca, lemon jelly, prepared prunes or the following:—

PUT a small quantity of borax into the water when washing red-bordered napkins and towels, and it will prevent them from fading.

DIP ink spots into pure melted tallow, then wash out the tallow, and the ink comes out also. This is best for white goods.

RUB your tin tea kettles with kerosene; it will make them as bright as new. Use a soft, woolen rag. Kerosene will also remove furniture stains.

TRY cleaning lamp chimneys by holding them over steam, and then rubbing with a soft rag. If they are rubbed with dry salt immediately after cleaning, it is said to add greatly to the brilliancy of their light.

WASH pantry shelves in lime water. This is made by pouring water over a small piece of lime, and allowing the sediment to settle. This is also an excellent cleansing disinfectant for the cellar shelves, walls, etc.

THE following is said to be an excellent method of cleaning carpets: Dissolve your soap in hot water, and after it has cooled, add one ounce each of alcohol, glycerine, and sulphuric ether. Scrub the carpet with a brush dipped in this mixture; washing off in clear water.

GRAPE TART.—Into one pint of canned or fresh grape juice, when boiling, stir two tablespoonfuls of corn starch, braided with a little water, and cook for five minutes. Sweeten to taste, and fill a baked crust.

APPLE MERINGUE DESSERT.—Pare, and core, enough tart, easy cooking apples to make a quart, when cooked. Put them into a shallow, and broad-bottomed saucepan, so that they shall not be piled deep upon each other; just cover the bottom of the saucepan with water; cover closely, and place where the apples will simmer and steam till perfectly tender. They should be quite dry, when done. Turn into a colander, and mash through. Add a little sugar to sweeten them, and a little grated pineapple, or lemon peel, for flavoring. Beat light with a silver fork, turn into a pudding dish, and put in the oven ten or fifteen minutes, to moderately brown. Draw to the oven door, cover, with a meringue made with four tablespoonfuls of sugar, and the beaten whites of two eggs. Return for a moment to brown, and then remove from the oven. Serve cold.

HOLD a hot shovel over the white spots in your furniture, and they will soon disappear.

IN cleaning willow furniture, apply salt and water, vigorously, with a brush, and dry thoroughly.

TO preserve the color of prints, soak before first washing, in a strong solution of either salt or alum.

INK stains may be extracted from wood by using a solution of oxalic acid, or scouring with sand, dampened with ammonia.

THE "cupful" generally called for in recipes, means precisely one-half a pint. A cupful of granulated sugar weighs just one-half a pound.

A GOOD glue, which resists the action of water, is made by boiling one pound of glue in a sufficient quantity of skimmed milk. To render it still better, and stronger, add one-half gill strong vinegar, and one-half ounce isinglass.

TO take off old paint quickly, use equal proportions of soda and quick lime, dissolving the soda in water, and then adding the lime. Apply with a brush, and the old paint can be removed in a few minutes.

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.]

WEeping EYES.—Mrs. E. A. P., Penn., asks, "What is the remedy for eyes that 'weep' or look red and watery, the redness extending out upon the cheek?"

Ans.—You should consult an oculist at once.

OVARIAN NEURALGIA.—Mrs. L. C. V., Iowa, wishes the best method of home treatment for ovarian neuralgia, where the patient has but little use of the lower limbs.

Ans.—We should not expect that such a patient would be cured by home treatment. Cases of this kind test the skill of the most experienced physicians. We have found electricity skillfully applied of very great service, but it must be applied in a skillful manner. Such a patient should visit a sanitarium.

MANNER OF BREATHING.—Mrs. L. M. J., Kans., asks, "Is it true of women who have not been deformed by corset-wearing, that they breathe 'up and down,' while a man breathes 'out and in?'"

Ans.—In an early number of the present volume, in the Dress department of GOOD HEALTH you will find an answer to this question. We have made extensive investigations of this matter, and find that among savages, men and women breathe alike. The same is true of all women who have not worn corsets, or been subjected to conditions calculated to pervert their breathing functions. If you desire, we will send you on receipt of two cents for postage, a pamphlet detailing the result of our investigations of this matter, which will be sufficient to convince the most skeptical on the question.

CATARRH OF STOMACH.—ELECTRIC BELTS.—HORSFORD'S ACID PHOSPHATES.—NEURALGIA.—PURE GLYCERINE.—E. H. N., Oregon, asks the following questions:—

"Is the mullen plant steeped in milk, beneficial in catarrh of the stomach? 2. Are all electric belts and appliances frauds? 3. Would you recommend Horsford's Acid Phosphates for invalids? 4. Is neuralgia of the head and face curable? 5. Where can pure glycerine be obtained?"

Ans.—We have had no experience with the remedy named. Do not have any confidence in it. 2. We know of no electrical belt or appliances of that sort which are what they claim to be. 3. There are sold in the market a great number of remedies which

are sometimes called "nerve foolers," for the reason that they make the patient feel better without making him really any better. We are not sure that the remedy known as Horsford's Acid Phosphates is materially better than the rest. The idea that this remedy contains food for the nerves is, in our opinion, a mistaken one. 4. Yes, in the majority of cases. 5. Of almost any druggist.

TAPE-WORM.—E. S., N. J., wishes a remedy for tape-worm. "Can it be expelled by means of any special diet or medicine?"

Ans.—The proper remedy for tape-worm is a medicine which will destroy the worm and cause its expulsion from the body. It cannot be cured by means of any mode of dieting. Persons suffering from a parasite of this sort should consult a competent physician, as the same remedy is not applicable to all cases. The best remedy with which we are acquainted is *Pelleterile de Tanret*.

A RELIABLE THERMOMETER.—Mrs. W. H., Cal., asks to be given the name of some reliable thermometer.

Ans.—We cannot reply to this question directly, without knowing the purpose for which the thermometer is desired. If for taking the temperature of living rooms, thermometers which are sufficiently precise can be obtained from any druggist. Thermometers for testing the temperature of the body, are also sold by druggists. We consider the English lense thermometer the best sold for this purpose.

PALPITATION OF THE HEART.—E. S., Iowa, asks the following questions:—

"Will you kindly give advice concerning the treatment of palpitation of the heart, accompanied by numbness, unpleasant forebodings, loss of appetite, acidity of stomach, and great weakness?"

Ans.—Such a patient should be placed under the care of an experienced physician. It is probable that he needs to leave home and place himself under treatment in some well conducted sanitarium. There must be a proper regulation of diet, regimen, exercise, and all the habits of life, along with the administration of proper treatment. The management of such a case is too complicated to be carried out successfully at home, or otherwise than under the immediate supervision of an experienced physician.

LITERARY NOTICES.

THE *Sanitary News* is an ably conducted weekly journal devoted to hygienic science. Price, \$2.00 per year. Address, the *Sanitary News*, 90 LaSalle St., Chicago, Ill.

THE *Home Magazine* for October, conducted by Mrs. John A Logan, is filled with fresh material, timely and pertinent to home and social interests. Brodix Pub. Co., Washington, D. C.

CATS AND DOGS. No. 2, Graded Series for Children. Lithograph covers. Illustrated. Price, seventy-five cents. Review & Herald Pub. Co., Battle Creek, Mich. Fresh, pure, healthful, and delightfully funny.

THE *National Temperance Advocate* abounds in matter of great import to all who are interested in the overthrow of the liquor traffic. \$1.00 per year. J. N. Stearns, Publishing Agent, 58 Reade St., New York City.

THE various home departments of *Arthur's Magazine* are especially good, this month. The wholesome and healthful story, "The Mission of an Old Diary," is worthy of being deeply pondered by parents. T. S. Arthur & Son, Philadelphia.

EVERY-DAY BIOGRAPHY: A Collection of Brief Biographies, arranged for every day in the year. Designed as a book of reference for the Teacher, Student, Chautauquan and Home Circle; by Amelia J. Calver. 12mo, 378 pp., cloth, price \$1.50. Fowler & Wells Co., New York. This compilation makes a helpful book for the student, and a good addition to any book shelf.

THE November *Atlantic* contains some valuable political papers. One, "The Character of Democracy in the United States," is by Mr. Woodrow Wilson; another, "The French in Canada," is by Eben Greenough Scott, whose paper on *La Nouvelle France* will be remembered. Artists and amateurs will be interested in "Allston and his Unfinished Picture," a charming series of extracts contributed by Charles Francis Adams. "Materials for Landscape Art in America," by Charles H. Moore, of Harvard University, will also interest the same class of readers. The remaining matter is composed of half-literary, half-historical articles, fiction, poems, etc. Houghton, Mifflin & Co., Boston.

DURING the coming volume the *Century* is to have an illustrated series of articles on the French Salons of the seventeenth and eighteenth centuries, including pen portraits of many of the leaders and a detailed account of the organization and composition of several historical salons. A great number of interesting portraits will be given with the series, forming a valuable collection.

ALL SORTS. No. 3, Graded Series for Children. Lithograph covers. Illustrated. Price, \$1.20. Review & Herald Pub. Co., Battle Creek, Mich. Worthy work, both in the way of letter-press and illustration, has been done on these late children's books issued by this House.

Demorest's Monthly Magazine for November, has for one of its attractions, a paper on "Women Writers of America," which contains many fine portraits of those with whose names and books we are so familiar. An interesting article on "Pearls" is beautifully illustrated by J. Carter Beard; and there are, besides, numerous other excellent articles and stories. Fine illustrations constitute a feature of this magazine, and in the November number there are over one hundred of them. Published by W. Jennings Demorest, 15 East 14th St., New York.

ONE of the features of the November *Scribner* is an important contribution to the knowledge it has already furnished us concerning Africa, in the illustrated paper by Col. H. G. Prout, entitled, "Where Emin Is." The writer was a friend and trusted lieutenant of Gordon, his successor as Governor of the Equatorial Province, and formerly a fellow officer of Emin Bey, and is therefore fully equipped with valuable information concerning the continent, so much of which is still unknown, and whose future is so great a problem. A remarkable article by Dr. James E. Pitcher, Captain in the medical department of the United States Army, entitled, "A New Field of Honor," treats of devices by which the wounded may be assisted, pain spared, and the lives of the injured saved, both in war and accident. An illustrated paper on "Goethe's House at Weimar," comprises the first views ever permitted to be taken of the interior, which has been rigidly closed to the public till last year, everything remaining as the poet left it. There is, besides, much other valuable matter. Charles Scribner's Sons, New York.

PUBLISHERS' PAGE.

THE managers of the Sanitarium Training-School for nurses, propose to organize a Nurses' Exchange, and for that purpose, desire to obtain the names and addresses of all their old nurses who are still employed in the profession of nursing. All who are interested in this matter should send their names and addresses at once to Mrs. L. M. Hall, Matron, Sanitarium, Battle Creek, Mich.

* *

7 As we go to press, the American Health and Temperance Association is holding its eleventh annual meeting, in this city. A large number of persons, interested in the work of this organization, are present from all parts of the United States, also from England, Switzerland, Africa, and Scandinavia. The interest in the work of this organization is growing, and its sphere of influence broadening, yearly. The Association will probably, during the year to come, support one or more field secretaries, who will travel constantly from state to state, stirring up an interest in the work of the Association, and organizing State and Local societies. This organization is the only one in the world whose platform includes the principles of healthful, as well as temperate living. We will publish in our next number a more extended notice of the work of the Association.

* *

DR. J. H. KELLOGG expects to spend, during the present month, a week or two in Colorado, for the purpose of locating, and laying the foundation for a health Institution in that State. There has been, for many years, a crying demand for an Institution of this kind in Colorado, and the many friends of the Institution in that State have insisted that the Sanitarium should establish a branch at some favorable point in the Switzerland of America. The managers have finally taken into consideration the propriety of so doing, and are prepared to engage in the enterprise at once, if suitable inducements are offered, and will be glad to correspond with any who may be interested in the enterprise. Letters should be addressed to Dr. J. H. Kellogg, Battle Creek, Mich.

* *

THE "Home Hand-Book of Domestic Hygiene and Rational Medicine," has done an important educational work in thousands of families. A lady who has long been acquainted with this work, and who thinks her life was saved at the time of a serious illness by carefully following its instruction, writes that while traveling in a strange place, more than a thousand miles from home, she entered a house by the way-side to obtain a drink of hot water. She was so struck by the clear complexions and rosy appearance of the three beautiful children, whose mother supplied her wants, that she was led to inquire about their dietary. "Oh," replied the lady, "I am raising my children according to the instructions of a big book, and never give them meat." On further inquiry respecting the book, the lady placed in her hands a copy of the "Home Hand-Book." Thousands of families might testify to the benefits received by them, as well as their children, through following the instructions in this work, which many who are best acquainted with it have come to regard as necessary for the household as a dictionary or newspaper. Descriptive circulars of this work may be obtained by addressing THE GOOD HEALTH Publishing Co., Battle Creek, Mich.

THE Training School of Domestic Economy, which has now been carried on for nearly two years at the Sanitarium, is one of the most excellent schools of the kind in the United States. The instruction given students in the school is of the most practical kind, and includes a course of instruction in hygienic cookery, both individual and domestic hygiene, such as is not given in any other school of the kind in the world. Every young woman would be benefited by attending a school like this. Some important additions have been made to the teaching corps of this school for the next year. Those who think of joining the school, or wish to obtain further particulars concerning it, should address Mrs. L. M. Hall, Matron, Sanitarium, Battle Creek, Michigan.

* *

WE are pleased to note the prosperity of our sister journals published in the Scandinavian language. Some eight or nine years ago, Rev. J. G. Matteson, at that time pastor of a church in Christiania, Norway, presented to us the project of a health journal in the Norwegian language. We were much pleased with his ideas upon the subject, and gladly offered any assistance in our power. Mr. Matteson began the publication of the journal at that time, and found its success so great that he was soon obliged to publish a Danish edition. Two or three years ago the same publishing house also began the publication of a Swedish health journal. All these journals have met with extraordinary success in the three countries for which they are published. They have also been circulated to some extent in this country. Within a year, through Mr. Matteson's efforts, a health journal published simultaneously in the Swedish and Danish languages, has been established in this country, and has already acquired a very large circulation.

WE trust the time is not far distant when health journals of a character similar to this one, may be published in the German and French languages. There is a great demand for the introduction of such a journal in both France and Germany. The only obstacle in the way at present is the want of proper persons to take the editorial management of the journals in those countries.

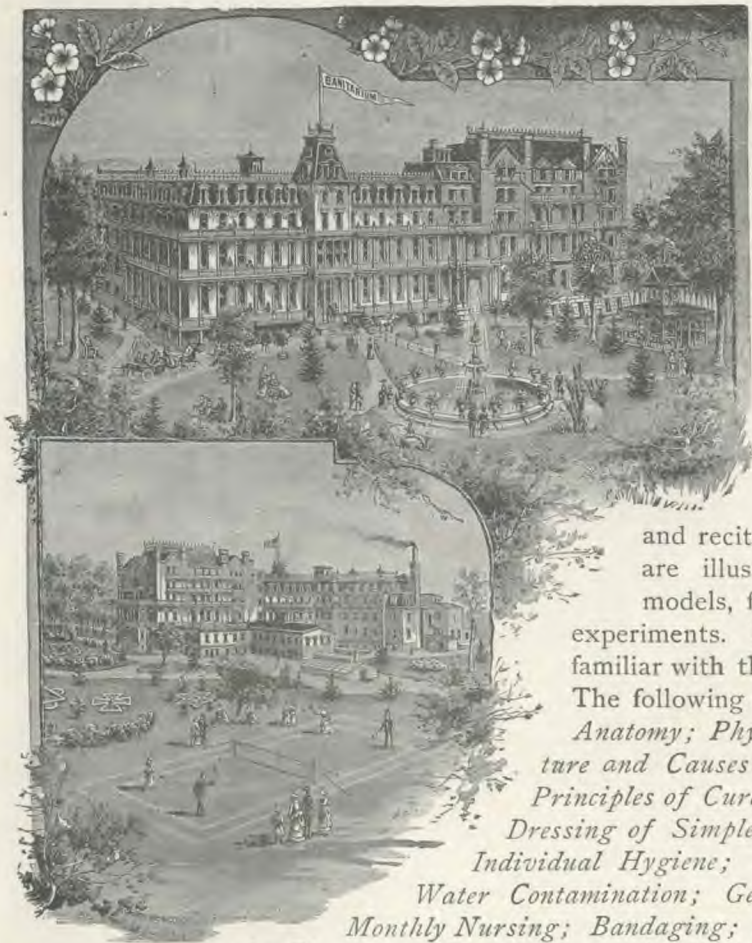
* *

THE annual meeting of the Stockholders of the Health Reform Institute, now in session at Battle Creek, Mich., is the most largely attended of any meeting which has been held for many years. The friends of the Institution are more than gratified with the marvelous prosperity which has attended its work, and have an increasing interest in its success. Organized some twenty-three years ago as a water cure, with a few small wooden buildings, this Institution has grown to its present capacity as the largest Sanitarium in the world, with an invested capital which is rapidly rising toward one-half million dollars. The report of the treasurer and medical superintendent shows a larger amount of work done the last year than any previous year in its history, and the numerous improvements which have been made in all its departments, guarantee a still further increase of prosperity in the future. The founders of this Institution certainly have a reason for feeling a just pride in the foresight which led them to plant it upon a philanthropic basis, securing to the public for a long time to come the beneficent advantages of this self-supporting charitable institution.

Sanitarium Training School

FOR NURSES.

Students Received at Any Time.



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

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

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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.

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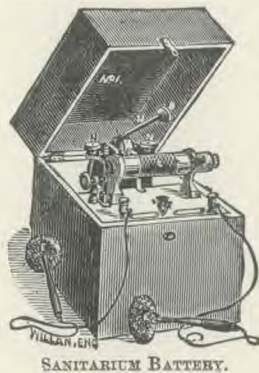
FIG. 2.

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.

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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.



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. *
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FIG. 1.

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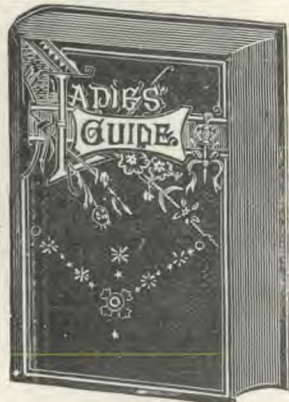
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BY J. H. KELLOGG, M. D.,

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.

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
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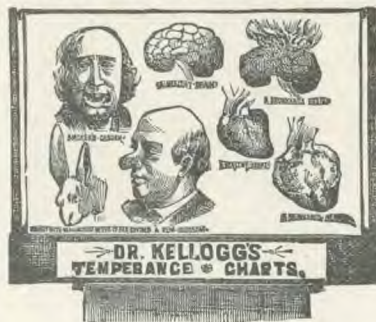
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- PLATE 4. Stomach of a Hard Drinker.
- PLATE 5. Stomach in Delirium Tremens.
- PLATE 6. Cancer of the Stomach.
- PLATE 7. *A.*—Healthy Nerve Cells. *B.*—Fatty Degeneration of Nerve Cells. *C.*—Healthy Blood. *D.*—Blood of an Habitual Smoker. *E.*—Blood 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.
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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.

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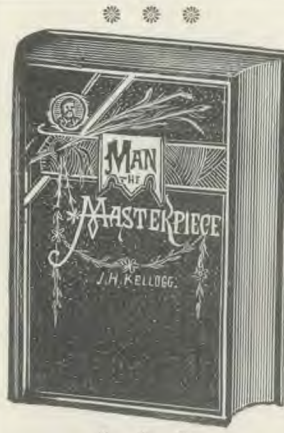
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Michigan City	pm 10.08		12.28	4.54	am 12.23	11.27	6.58	
Niles.....	11.4		pm 1.30	5.49	1.50	am 12.55	8.17	
Kalamazoo....	1.12		2.45	6.58	3.35	2.27	pm 10.00	
Battle Creek..	1.55		" 20	7.33	4.25	3.15	am 7.10	pm 5.30
Jackson.....	3.35		3.39	8.49	6.15	4.45	9.35	6.25
Ann Arbor....	5.04		5.43	9.41	7.50	6.00	10.43	8.30
Detroit.....	6.30		6.50	10.45	9.20	7.30	11.50	
Buffalo.....	8.3	am 4.25	am 7.15	pm 5.55	pm 5.55	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	pm 8.50	am 7.20			11.15	
Boston.....		10.00	10.50	9.35			pm 2.50	
WEST.								
STATIONS.								
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New York....			10.03	6.00	11.30			
Syracuse....			pm 7.40	am 2.10	am 9.0			
Rochester....			9.55	4.20	11.30			
Buffalo.....			9.30	am 12.15	6.15	pm 1.30		
Detroit.....	am 9.00		8.00	pm 1.20	d 11.15	pm 4.00		
Ann Arbor....	10.27		9.02	2.34	11.25	4.15	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	
Niles.....	4.20		1.30	6.27	4.32	3.06	am 7.60	8.40
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Lmd. Exp.	Mail.	Day Exp.	Pacific Exp.	Pacific Exp.	B. Crk. Pass.		Mail.	Lmd. Exp.	Atlc. Exp.	Lmd. Exp.	Pf'n Pass.	
pm 12.45	am 7.15	am 6.40	pm 7.45	pm 8.55	pm 4.10	Dep.	pm 10.20	am 1.15	am 7.35	am 12.00	am 10.50	
8.48	8.05	9.18	10.20	5.40		..... Port Huron	8.40	11.53	6.17		9.17
2.25	9.23	8.39	9.45	10.55	6.20	..... Flint	7.55	11.27	6.40	10.15	8.36
2.53	10.00	9.05	10.35	11.35	7.15	..... Durand	7.15	10.58	5.03	9.40	8.00
3.45	11.05	9.55	11.40	12.37	8.32	..... Lansing	5.20	10.07	4.00	8.55	6.35
4.55	12.35	11.00	12.55	1.55	10.05	A } BATTLE CREEK } D	4.42	9.37	3.25		6.02	
45.00	12.45	11.18	1.00	2.00	pm D }	..... Charlotte	3.45	8.55	2.35	7.45	5.15
	1.28	11.51	1.48	2.50		..... Vicksburg	2.58	8.11	1.48		am
	1.38		12.00			..... Schoolcraft	2.48		1.33		
6.19	2.23	12.30	2.50	3.45		..... Cassopolis	2.05	7.26	12.45	6.19	
6.50	3.05	1.05	3.35	4.25		..... South Bend	1.25	6.50	12.00	5.45	
	4.15		4.52			..... Haskell's	12.05				
8.10	4.0	2.30	5.10	5.55	6.55	..... Valparaiso	11.50				
10.10	7.00	4.15	7.30	8.10	9.45 Chicago	9.05	3.25	8.15	2.35		
pm	pm	pm	am	am	am	Arr.	Dep.	am	pm	pm	pm	

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