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GOOD



HEALTH

CONDUCTED
BY

J. H. KELLOGG M.D.

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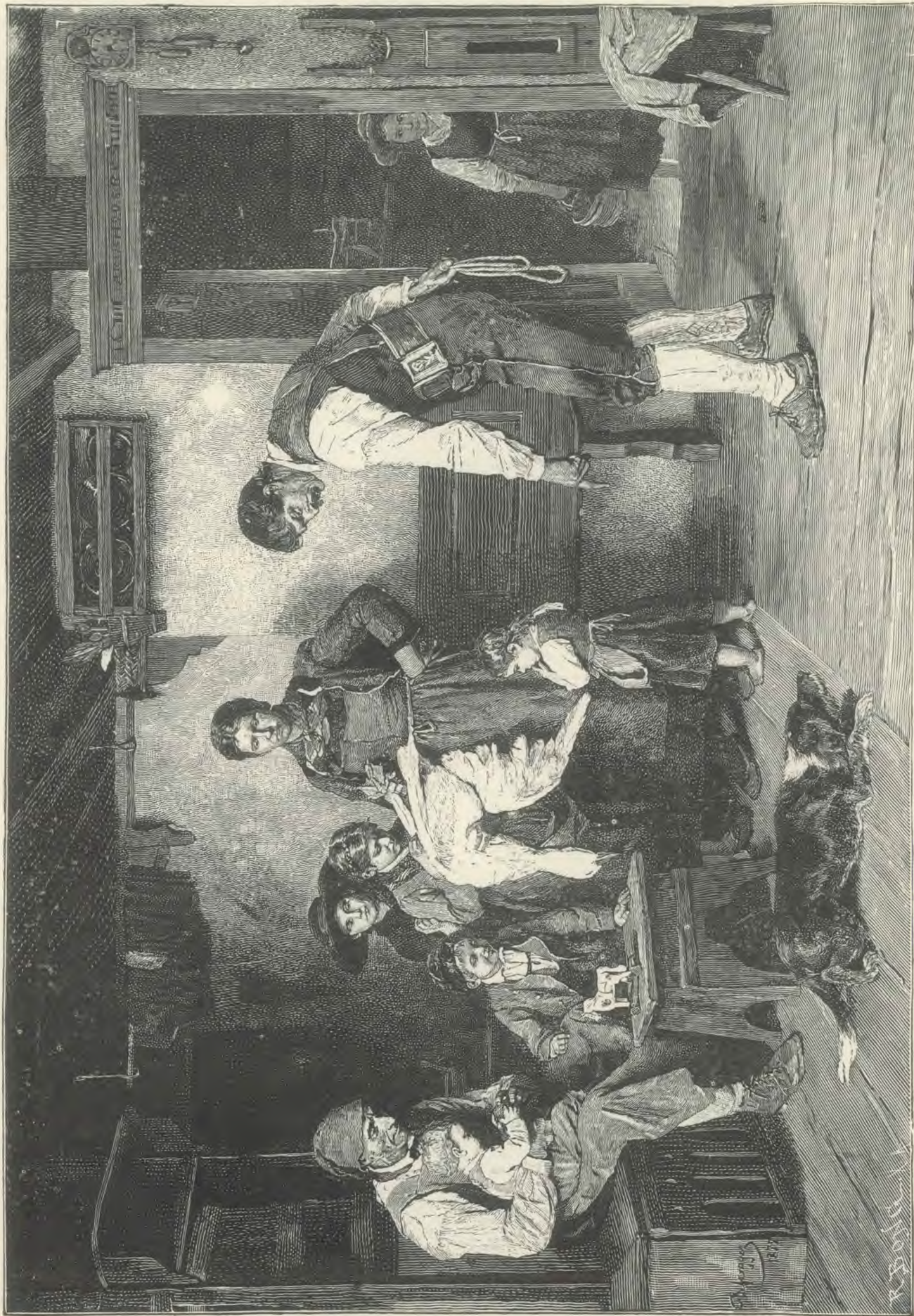
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NUMBER II.

BATTIE CREEK MICHIGAN

NOVEMBER, 1890.

INTERNATIONAL HEALTH STUDIES.

BY FELIX L. OSWALD, M. D.

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

19. — Abyssinia.

A FEW months ago, an Atlanta paper called attention to the curious fact that in the course of our Civil War the troops from the Mountain States, on each side of the border, had done the best fighting, as proved by the evidence of the regimental records; viz., New Hampshire and Pennsylvania on the one side, and North Carolina and Virginia on the other.

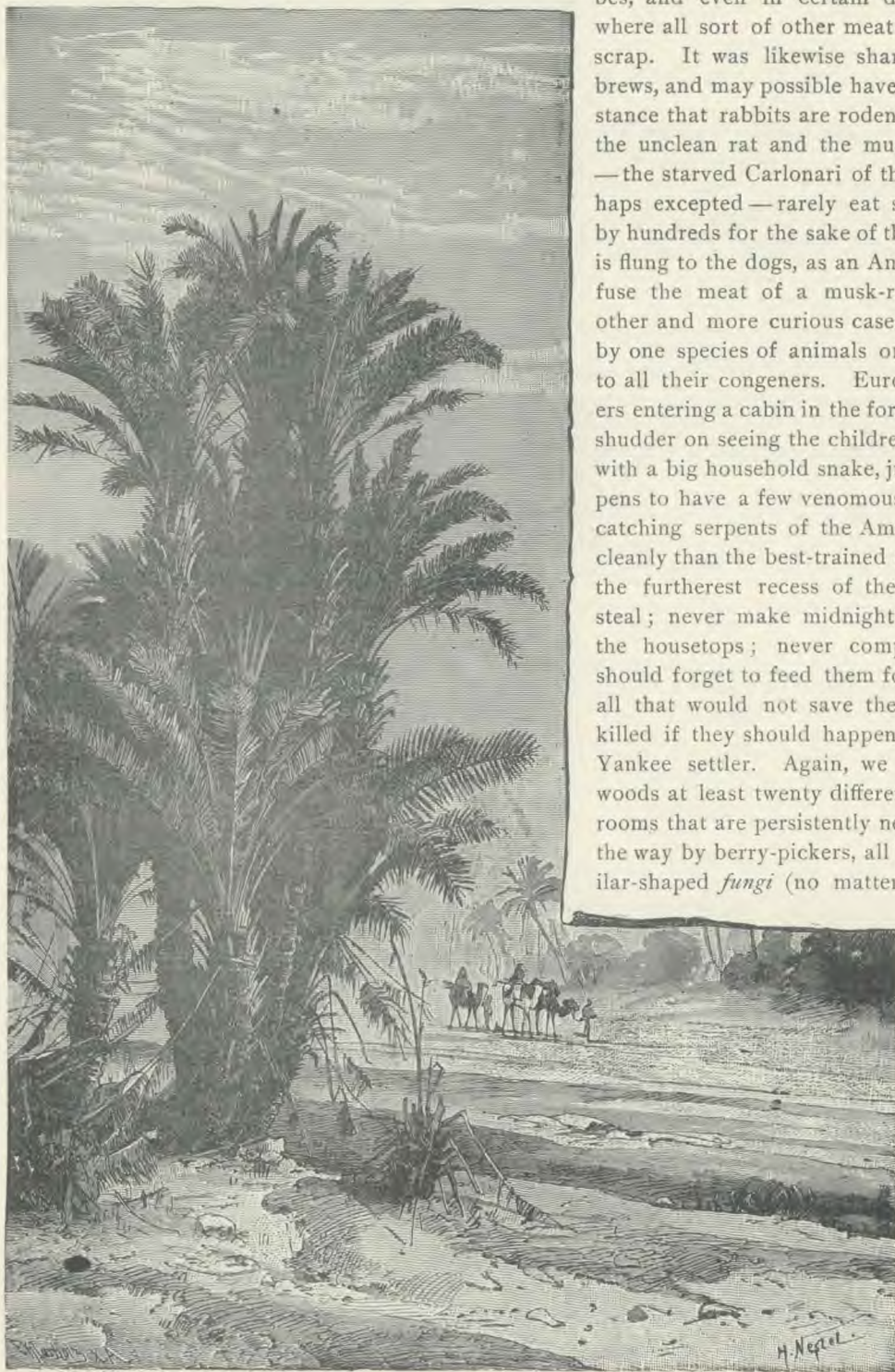
An array of still more conclusive statistics in favor of highland populations could, however, be deduced from the ethnology of Abyssinia. The country known to its Arab neighbors as *Jebel Habesh*, — "the mountain land of mixed people," — forms a vast plateau with a double fringe of lowland plains, one on the shore of the Red Sea, and the other on the borders of Nubia and Sennaar. Two principal races, the Abyssinians proper and the Gallas, inhabit those hills and plains, and it so happens that with all differences of language and origin, the lowland Gallas on the west bear a strong resemblance to the degenerate lowland Abyssinians on the east — the Red Sea border; while in the uplands of the central plateau, both the Abyssinians and the Gallas have preserved the simplicity and frugal industry of their ancestral habits.

Nominally, the Abyssinians are Christians, but their creed is a strange mixture of monkish, Jewish, and Mohammedan doctrines, and the vices of the lowlanders prove that the progress of degeneration weakens the restraining influence of dogmas, just as it weakens the restraints of conscience. Divorce, for instance, is permitted only under exceptional circumstances by the old law of the native scripture, and a father is

held to compromise his honor by permitting his daughters to marry before the age of twelve; but the gay Lotharios of Habesh have found means to circumvent both statutes. A family council of five or six members can override the veto of the *paterfamilias*, who screens himself behind the record of an ostensible protest, while quietly pocketing his share of the bribe offered by a wealthy suitor. Girls of ten, eleven, and even of nine years, are thus often sold like cattle, and left to console themselves the best they can by the hope of superseding a former spouse who, as a preliminary to the new marriage ceremony, has to go through the form of a divorce, but may retain control of the household in the character of a steward. Should she decline that compromise, suborned witnesses (discharged cooks, we presume,) will readily testify to the atrocity of her temper, and support their evidence by exhibiting scars and scratches of dates not easily verified.

The highlanders are too poor to indulge in such luxuries, and content themselves with marrying once, and generally not before both bride and bridegroom have passed their twentieth year. They are brave, honest, and industrious, but nevertheless their lowland neighbors affect to despise them on account of their heretical practices. On metaphysical points, the sects of the lowlands differ considerably among themselves; but their charge against their highland neighbors is more grave and specific. The mountaineers eat rabbit-flesh! That one sin is held to obliterate a multitude of virtues, equaled by the number of

vices that can be palliated by abstinence from the obnoxious diet. A lowland chief who has just signed the divorce of his fifteenth wife, would fight fifteen duels to avenge the slander of having killed a coney for culinary purposes.



A DATE PALM OF AFRICA.

The mountaineers eat all the rabbits they can catch, quietly ignoring the prejudice of their neighbors, which, indeed, is not easy to explain, but involves a curious problem of sanitary ethics. The same prejudice is very strong in Siam, Burmah, on the Island of Celebes, and even in certain districts of Kamschatka, where all sort of other meat is devoured to the last scrap. It was likewise shared by the ancient Hebrews, and may possibly have its origin in the circumstance that rabbits are rodents, *i. e.*, near relatives of the unclean rat and the musky beaver. Europeans — the starved Carlonari of the Upper Apennines perhaps excepted — rarely eat squirrels; they are shot by hundreds for the sake of their hides, but their meat is flung to the dogs, as an American hunter would refuse the meat of a musk-rat. There are, indeed, other and more curious cases of an aversion merited by one species of animals or plants, being extended to all their congeners. European or Yankee travelers entering a cabin in the forests of Southern Mexico, shudder on seeing the children of the proprietor play with a big household snake, just because that pet happens to have a few venomous relatives. The mouse-catching serpents of the American tropics are more cleanly than the best-trained cat; can follow rats into the furthest recess of their hiding-places; never steal; never make midnight hideous by howling on the housetops; never complain if the good wife should forget to feed them for a month or two. But all that would not save them from being instantly killed if they should happen to enter the cabin of a Yankee settler. Again, we have in our American woods at least twenty different kind of edible mushrooms that are persistently neglected or kicked out of the way by berry-pickers, all because one or two similar-shaped *fungi* (no matter how different in color

and flavor) happen to be poisonous.

The rabbit-despising lowlanders of Habbesh are by no means very fastidious in other respects. They eat crocodile eggs, occasionally even young crocodiles, and they lay in large quantities of dried locusts. Sun-dried grasshoppers are ground down to powder, and often even baked into cakes that

keep for years, and are frequently a godsend to the peasants of plains visited by chronic droughts. The very insects that swoop down to devour the parched crops are caught in quantities that make full amends for their ravages; and Prof. Keith Johnson goes so far as to assert that locust-swarms are at any time welcomed by the proprietors of the worn-out fields, if they will only stay long enough for a good catch. The trouble is that myriads of the voracious wanderers often descend after sunset, utterly ravage a cornfield in the course of a few hours, and take wing again before morning. If they linger even a single day, they are very apt to pay their board-bill in full. The children of the peasants are quick as monkeys in gathering the winged visitors, dead or alive, into large reed-baskets, till the haul gets heavy enough for a fair load, when the survivors are first smoked over a grass fire, and then dried on the bare ground, in yards smoothed by scraping and stamping. From the pulverized produce of a good locust-catch, the natives prepare a variety of dishes, and here might take occasion to retaliate the charge of prejudice. If we eat oysters, crabs, and pork, why not locusts, with or without wild honey, *a la* John the Baptist? The question is hard to answer; smoked locusts are certainly both nutritious and digestible, but the power of habit in such matters is almost incalculable. An American miner of my acquaintance, who had learned to eat grasshoppers during a sojourn among the California Indians, almost persuaded me to repeat his experiment. On a prairie trip, he said, he would as soon live on dried locusts as on dry bread, and related numerous instances where he had improved the flavor of a stew by an admixture of grasshopper powder (stirred in without the knowledge of his guests), but spoiled it all by telling me that locusts had a "decided vegetable taste." A person could manage to feast on flying shrimps, but the idea of subsisting on crawling vegetables, reduced my appetite below zero!

Droughts are cruelly frequent on the Abyssinian plains, and large areas of land have been altogether ruined by the drift-sands of the desert; still there is reason to suppose that the country was once almost as fertile as Lower Egypt. The remains of ruined cities are found in hundreds of valleys that now hardly produce grain enough for the support of milch-goats, and in sheltered nooks where a remnant of forest-trees has managed to escape destruction, various garden-plants produce three crops a year. Coffee-trees grow wild on the hills of Habesh, millet in the lowlands, and Boston should organize a pilgrimage to the valleys of the central plateau, where thickets of wild-growing beans are found between the rocks and bowl-

ders. They are brown and small, somewhat similar to our American "cow-peas;" but the indigent highlanders gather them in large bags, and make them an excellent substitute for bread. The wild-growing millet of the coast plains is likewise harvested, but often for a less creditable purpose. By means of fermentation, a strong beer, *boosa* or *booz*, is made from an infusion of crushed millet and water,—a vile stimulant which often keeps its votaries drunk for a week, but which is nevertheless served on solemn feasts, and even drunk (like Dr. Hoff's "Malt Extract" and certain "Bitters" one could name) for "remedial purposes." The climate is generally too dry for the development of fevers, but the natives have found another pretext for alcoholic medication. Meat, in summer, they say, is apt to produce man-worms, and large quantities of intoxicating liquor are absolutely necessary to expurgate those bowel parasites. If the successor of King Theodore should succeed in passing a prohibitory liquor law, "original packages" of *boosa* would probably begin to circulate in barrels or jugs, with labels describing the contents as "Dr. Quackstetter's Worm-Cure"!

The highlanders dispense with such remedies, and make a sparing use even of the free coffee-beans found in their hill-forests. They subsist on goat-milk, maize cakes, beans, if their maize-crop fails, and all sorts of dried berries, but in spite of that meager diet, are probably the most athletic natives of the African Continent. An *attache* of the British expedition against Magdala thus describes the troops of the Great Negus: "The infantry carry a spear, shield, and long, curved saber, and they attack their enemy impetuously at close quarters. The light cavalry is excellent. The horsemen, when charging, let go their bridles to fight with both hands, and guiding and urging their horses with leg and knee only, make them perform the most prodigious feats. Each man has a sword and two lances; the latter rarely miss their mark, and their wound is deadly. They are used like javelins, and are about six feet long. Every horseman is followed by a retainer, who in case of need has to dash among the enemy, sword in hand, in order to recover his master's weapon, and bring it back to him. These horsemen charge headlong against an infantry square, making their horses bound into the midst over the heads of the soldiers, and then backing them in order to break the formation."

Those champions are recruited almost exclusively from the natives of the high table-lands. They carry no regular provisions, but rely on the chance of foraging for both man and beast, and think nothing of living on dry acacia pods for a day or two. In cold

weather, they dispense with fires where wood is scarce, keeping themselves warm by crouching down flat on the ground, and wrapping their long mantles about their knees and feet, and thus often weather severe frosts; for it must not be supposed that Abyssinia is favored with a climate of perpetual summer. Its latitude corresponds to that of Southern Hindostan, but the elevation of the great plateau varies from 8,000 to 12,000 feet, with isolated peaks towering to a still greater height.

A curious illustration of Nature's protective shifts is furnished in the appearance of a large species of dog-faced baboon that haunts the rocks of those chill

highlands. Its face, hands, and feet exactly resemble those of its Egyptian relatives, but from the neck to the hips its body is shrouded in a thick mane that covers it like a mantle, or rather like a heavy Scotch plaid. In moonlight nights those animals occasionally visit the cornfields of the natives, but if daylight should surprise them *in flagranti*, they, too, are apt to be disappointed in their hope of free lunch. They are chased with hounds, who provoke them by constant attacks, and generally with fatal results; for the moment they stop for a rough-and-tumble fight, they are speared without mercy, and their half-tanned fur-cloaks transferred to the shoulders of the hunter.

(To be continued.)

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

BY A DOCTOR.

Hygiene of the Nerves.

WHEN the nerve cells contain a good store of nervous energy, they are said to be in good tone. Anything which impairs the bodily state, lowers the tone of the nerves, and lowered nerve tone involves impairment of the mental tone, and produces a corresponding effect upon the moral tone. Undoubtedly, much crime is justly chargeable to the effect upon the mental and moral faculties of loss of sleep, mental worry, indigestion, and other causes tending to impair the general health and lower the nerve tone.

The brain, like the rest of the body, is made of what we eat. An old German proverb runs: "As a man eateth, so is he." Eating has a special influence upon the brain. If the blood is filled with pungent spices and irritating condiments, it will excite the nerves, causing irritability and nervousness. Excessive use of animal food causes similar results, producing undue nervous excitability, especially of the lower faculties of the mind. The food should contain in abundance those elements which build up the nervous system, particularly the albuminous elements and the phosphates. Patent-medicine venders have taken advantage of the latter fact to introduce articles claiming to be phosphatic food; but the fact is that though phosphorus is a very necessary element, nature is only capable of taking care of a certain quantity, which is abundantly supplied by such natural foods as preparations made from entire wheat or graham flour, also peas, beans, milk, eggs, etc. Anything over the necessary quantity is entirely useless, and absolutely harmful, since it imposes an additional tax on the eliminative organs. The brain and nerve tissues need for their support an abundance of the best food; but over-eating must be carefully avoided, since excess

clogs the brain as well as the other tissues. Students, above all others, should attend closely to rules of diet. Much of the headache, dullness, and mental confusion usually attributed to over-study or mental incapacity, is really due to poor digestion, which furnishes the brain with poor material, and poisons it with the products of indigestion.

Mental worry is in the highest degree detrimental to the health of the brain and nerves. Those who will endure without injury a vast amount of healthful work, will rapidly succumb to the influence of constant worriment and perplexity. The anxiety and constant wearing excitement of the stock-broker or the gambler doom him to an early decline of nerve force and mental power, and perhaps a premature grave. Brain *worry* destroys many; brain *work*, very few.

Violent mental excitement also exhausts the nervous system much more than ordinary nervous action. Such emotions as intense fear, hatred, jealousy, envy, anger, and all the passions, are extremely exhausting to the nervous system, and sometimes even dangerous to life. Exciting amusements and the reading of exciting books fall in this category, and should be avoided by those who desire to maintain soundness of nerve tone.

The brain and the nerves, when used continually for hours, or when violently exercised even for a short time, become clogged with worn-out particles from the waste of the tissues, and the nervous energy becomes exhausted. When the waste has continued as long as it is safe or proper, nature gives warning of the fact by a sensation of drowsiness and mental weariness, and rest and sleep are required to recuper-

ate the powers. During sleep the waste matters are removed, and a new store of nervous energy is accumulated by the cells of the brain and other nerve centers. Loss of sleep produces irritability of temper and lack of nerve vigor. An adult requires at least seven or eight hours sleep per diem, while children and young people would be benefited by an hour or two more.

For the preservation of nerve tone, the general health must be maintained by attention to all the laws of hygiene. Muscular exercise is especially of great importance, and its neglect is responsible for many of the break-downs which occur in students and professional men, as well as women of sedentary habits. The average individual requires at least one or two hours of vigorous muscular exercise, daily. It will not do to neglect exercise for weeks, and then seek to atone for the neglect by devoting several days to violent exertions. This spasmodic sort of exercise is often nearly as harmful as beneficial. Exercise, like sleep and food, should be taken daily and regularly.

Mental exercise, too, is quite as essential to the health of the brain and the nerves. A brain which is not used becomes weak and incapable, while it should, by judicious use, develop strength and capacity. But to accomplish this end, brain exercise must be carefully regulated. Too much study is harmful, and weakens instead of strengthens the brain. Each brain has only a certain number of brain cells, and is capable of holding only a certain amount of knowledge. When the full capacity is reached, new facts are received only by crowding others out. Hence we should exercise care in what we undertake to store up, that the mind may not be like a neglected garret, — full of all sorts of rubbish, without order and of

little practical value. "Cramming" is exceedingly detrimental to the health of the mind, as is also careless and indifferent study, without effort to master principles. Studying when the brain is weary, is injurious, since the mind is kept at a tension in the effort to retain, while the impressions made upon the brain are very slight and quickly forgotten. Two or three consecutive hours' hard study is as much as any one should attempt to accomplish without rest. A half hour's exercise in the open air will renew the mental powers to a remarkable degree, and calm and steady the unstrung nerves.

But the most detrimental effects upon the nervous system are those produced by alcohol and other stimulants — tea, coffee, etc. In small doses, alcohol seems to excite nervous activity, but a close observer will notice that the controlling power is to some degree lessened. The habitual use of alcohol, even in quantities not large enough to cause drunkenness, often produces permanent results similar to those of a single large dose. By degrees, the nerve centers lose their tone. The hand becomes habitually unsteady, except when the system is under the influence of liquor. The flushed face, red eyes and nose, exhibit the paralyzed condition of the vaso-motor nerves, and the hard drinker sometimes so completely exhausts his nervous system that reason becomes temporarily dethroned, — a condition known as delirium tremens. To a similar, if not so aggravated a condition, does the tea-and-coffee drinker expose himself by the use of these commonly indulged in stimulants.

The brain and nerves control the whole body, and perfect mental health combined with good nerve tone, insures that state of functional equilibrium in all the bodily organs which constitutes health.

HOW TO CULTIVATE A WINTER CONSTITUTION.

[Abstract of a lecture by J. H. KELLOGG, M. D.]

At the beginning of winter, many persons neglect to prepare themselves for the change, and oftener than otherwise pursue a course which makes them liable to colds for the whole season. Nature will begin to tone up the skin if she is given a chance. If not, she lets us go, and we suffer from early frosts. Consider what Nature does to a shrub in the fall; take a peach-tree, for example. She begins to thicken the bark and diminish the supply of sap to the limbs, sending much of the latter to the roots to be stored up. The wood begins to harden and contract when the circulation of the sap is lessened. The purpose of all this is to so protect the tree that the branches will not freeze.

Nature does something of the same sort for us, unless she is hindered. She helps us put on a winter constitution, which, if properly developed, will protect us from the cold. If, when the change comes, instead of stimulating the action of the skin and kindling the furnace fires with a greater amount of pure oxygen from out-of-door exercise, we shut ourselves up in close, warm rooms, we will doubtless have colds all winter. Some persons keep their houses warmer in the winter than in the summer — from 80° to 85° most of the time. Then when they go out, not being fortified by a winter constitution, but with the skin relaxed from a close, hot atmosphere, they cannot help but take cold.

With the advent of the early winter weather, one should begin being out of doors as much as possible, and thus inure himself to the state of the weather. The heat-regulating arrangements of the body will thus be educated, and as the difference between the external and internal heat is increased, we will have a brighter flame in our grates and in our bodies. But the heat of a stove will not stimulate the heat of the body; one may toast his feet with hot bricks, or over the register, but they will become cold the minute a slight cold current strikes them. So do not stay in-doors for inclement weather. Nature will store up heat and energy enough to enable you to resist inclemencies. Go out every day; if the sun shines, you will surely need be out a great deal, and if it rains, or the snow blows, go out just the same. Put on rubber coat or cloak, and leggins and overshoes, and face the storm. The tree stands out all the time, and suffers no harm. Nature will prepare you so that you will not suffer any more than does the tree.

The changes of the seasons are wonderfully advantageous. In the summer, Nature slows down all the vital fires. It is necessary to run the vital machinery slower, in order to preserve life. We become more sluggish, and lose our energy and ambition. This is noticeable in all warm countries. It takes a larger force of men a greater length of time to do a piece of work in the South than it does in the North, and if a Northern man goes South and attempts to work as he formerly did, he will either die or learn to submit to the inevitable laziness of the climate. The people of warm countries never put on a winter constitution, and naturally fall into this slow summer rut.

Here in the North, we get the tonic of cold weather. We breathe a little more rapidly; we think faster; we are more energetic; we are lifted to a higher plane of existence. Thus many of those who run away to the South at the first approach of cold weather, suffer great loss. It is well enough for those who are so weakened that they cannot put on a winter constitution; but to those who are able to tone themselves up to freedom of out-of-door exercise, it is the greatest possible blessing to remain in the more invigorating climate of the North. The difficulty is, many are not willing to submit to these toning-up processes and influences. But the most energetic peoples in the world are those who live in the temperate zones, and are inured to climatic changes. They embrace also the largest and the finest specimens of humanity. If we go too far North, the extreme cold is found to have a dwarfing effect, as is witnessed by the Esquimo. The extreme heat of the torrid zone is equally unfavorable for fullest development.

One reason that persons take cold easily when the weather is inclement, is that they do not begin to adjust their clothing soon enough, and then keep changing from time to time as the necessities of the weather require. Some go by the almanac, and lay aside or put on their flannels on a certain day of a certain month, regardless of any other consideration. But one day is cold, and the next may be warm, and there must be a continual change in the amount of our clothing to conform to these changes of temperature; and these changes are a necessary counterpart of the toning-up process. If the cold settled down upon us all at once, we might suffer therefrom. We must remember that when we put on a garment it becomes just as much a part of our body as if it grew there, so far as temperature is concerned;—it is a sort of artificial skin. But we must regulate its thickness according to need, making a change every day, if necessary. That is the penalty we pay for wearing clothing at all. Our forefathers, the ancient Britons, considered it a superfluity, and their skins became so hardened that they could stand the severe weather which is incident to that climate at certain seasons, without difficulty. We must do with this artificial skin what Nature once did with the natural covering of the body, and it must be as closely and carefully adjusted.

The persons who suffer most from sore throats in winter, are usually the ones who wear comforters and mufflers in all kinds of weather and under all circumstances. In this way, the skin underneath becomes so relaxed and enfeebled that the slightest draught will bring on congestion. A person starts out to walk with an overcoat on and his throat bundled up. The exercise increases the heat of the body, and the surface is soon bathed in a perspiration. He goes into a railway-car, and sits down by the window, or into his own house, and does the same, taking off overcoat and muffler. The change, and the slight current of cold air to which he is thus exposed, is sufficient to cause a severe cold. Keep heavy overcoats and mufflers for the most severe weather, and for protracted exposures, like a long carriage drive. Wear protection enough for comfort and warmth on ordinary occasions; but do not attempt any rash hardening process.

Many make the mistake of putting on too much outer-clothing, and too little underclothing. A garment which fits the body closely is a great deal warmer than an overcoat, and a great deal cheaper, and the very poorest can provide themselves with underclothing enough to keep them warm. The feet should be clothed all the time with boots or shoes of uniform thickness, and at all times should be warmly

dressed. This is very important as regards health. The shoes should also be large enough to admit of wearing thick woolen stockings.

If a person is specially sensitive, it is a good plan to keep the body covered with cocoanut or olive-oil. An old traveler said that a coat of oil on the skin is as good as an overcoat. The oil should be rubbed on after

bathing. Do not go out directly after a hot bath. Always follow a warm bath with a dash or a spray of cold water for a few seconds. This will produce the necessary reaction, and start again the vital fires which have been slowed down while the body was submerged in warm water, and will prevent taking cold.

THE LIME-KILN CLUB AS SANITARIANS.

THE doings of the Lime-Kiln Club, embodied in a series of humorous sketches published by the *Detroit Free Press*, hit off admirably the general frailties of humanity—colored humanity, in particular. In the following, the Hon. Deeprock Wellington, a colored notable from abroad, being presented to the Club with all due formality, thus addresses them upon the subject of public sanitation:—

“‘ My deah frens, I ar’ happy to be wid you dis eavenin’. As you hev doubtless bin informed, I shall speak to you on de subjick of health. What is health? I answer dat it is Natur’ in her simplest form. Man is supposed to be created in a perfectly healthy state. He is a finished piece of mechanism. All de wheels an’ levers an’ springs an’ gearin’ ar’ in place, an’ all run smoothly. Now, what stops de masheen? Man’s own ignerence an’ keerlessness. Elder Toots, fur instance, has a baby at his house—a lump o’ charcoal ’bout a y’ar ole. [The elder blushes.] Dat baby was bo’n in de best of health, an’ Natur’ would keep him dat way if she war’ ’lowed to. But she hain’t ’lowed. Mrs. Toots goes an’ puts clothes on it, an’ she feeds it sweetened milk, an’ doses it wid paregoric, an’ weakens its spine by drawin’ it in a baby kerridge, an’ it is tumbled into a feather bed o’ nights, to roast ’tween two grown people. [Agitation.] Dat masheen is outer order afore it is a ya’r ole. Den de ole woman she recommends sassyparilla, and de ole man he recommends burdock, an’ all de women come in an’ recommend dis, dat, an’ de odder, an’ if de baby libs frew it, it’s kase luck is wid him.

“‘ My frens, de aiverage man comes mighty nigh being an idiot in takin’ car’ of hisself. You hev seen him wearin’ a fur cap on his head, while his shoes let in de snow and water. He wears an obercoat on his back, an’ nuffin’ but a thin shirt over his chist. He’s mighty skéert about freezin’ his fingers, while his throat is exposed to blizzards. An’ he’s ailin’—ailin’—or thinks he is. It’s herb teas, root tonics, pills, plasters, an’ cures, until de balance wheel in his machinery comes to a dead stop. [Applause.] Natur’ wants to keep goin’, but she can’t. He drinks whisky and dat clogs de valves. He drinks beer an’ dat

clogs de wheels. He pours down lemonade, gingerale, buttermilk, ice-water, tea, coffee, an’ what not, an’ den wonders why de fires under his biler wo’n’t burn. [Shouts of applause.] Take an ox an’ put him through a like performance, an’ he’d be dead in a y’ar.

“‘ De simplest an’ plainest laws of health ar’ outraged ebery hour in de day by de aiverage man. Did Adam smoke? Did Eve wear corsets? Did Solomon chaw terbacker? Did Ruth chaw gum? Did de children of Israel make for a beer saloon after crossing de Red Sea? Did Rebecca eat gum-drops an’ ice cream, an’ call for soda water? Adam was de fust man, an’ made perfeck from head to heel. How long would he hev remained so arter eatin’ half a mince pie before goin’ to bed? Suppose he had slept in a bedroom 6x8, wid de window down, de doar shet, an’ two dogs under de bed? [Yells of applause.] Supposin’ Eve had laced herself up in a corset, put on tight shoes, sot up all hoers of de night, eaten her fill of trash, and sizzled her ha’r? When you cum to look into de way man misbehaves hisself, you can only wonder how he eber libed to get dar.

“‘ De man who wants to lib to a good ole aige en’ keep shet of de doctors, has got to obsarve sartin principles. No dead cats must be ’lowed to remain under de house above a week. He may love his dog, but de dog should be giben de parler bedroom if he must sleep in de house. Bones, fish-heads, hens’ feathers, ole rags, an’ rats should be cleared away from de back doah at least twice a year. He must wash his feet now an’ den, eben if it is a little trouble. Good, plain water is what his system wants, an’ anything else is an injoory. Let de air into your sleepin’-rooms, eben if you ar’ behind on your rent an’ expect a visit from de landlord. Adam had only fruit an’ vegetables to eat; chicken pot-pie is onhealthy. Warm biscuit an’ honey don’t do no particular good, an’ cause flutterin’ of de heart. I reckon coffee acts to thicken the blood, an’ watermellyons—’

“The speaker was here interrupted by tremendous applause, so hearty that thirteen joints of the stove-pipe fell with an awful crash, and such confusion resulted that the hall was not quieted for ten minutes.”



THE REIGN OF THE CORSET.

[Abstract of a lecture by J. H. KELLOGG, M. D.]

It is simply impossible to talk to women too much on this subject, for none of them are over-doing the matter of reform, while the great majority have no proper appreciation of the damage their bodies sustain from corsets and bands. It is the tightness that does the harm, no matter how applied. The corset is not a modern institution, although supposed to be so by many; for Galen, in a medical work written in the first century, disclaims against its use. Greek physicians also found fault with their women for binding so many bands and girdles about the waist. This was not in the palmy days of Lycurgus, when the regimen of diet, dress, and exercise of every man, woman, and child were prescribed by law, but in later times. The idea, still so popular, that the human female figure was not made right, then began to prevail; and so the mothers took to shaping their daughters' forms by means of bands and girdles, much as Chinese girls have their feet shaped to useless deformity.

When we consider the outside of the figure with reference to the inside, it is perfectly astonishing that women will allow themselves to become so much deformed. I have made careful physical examination of twelve or fifteen thousand women and about ten thousand men, and in only a few instances have I found a man with displacement of the kidneys, unless from abscess or something of the kind, a small number with displacements of the stomach, and but two or three instances of displaced liver. In these cases I invariably found that the man had, at some period of life, worn a tight belt instead of suspenders. But these displacements are exceedingly common among women. Is there any anatomical reason why women should not hold together as well as men? The organs constituting the internal viscera in both men and women are largely held in place by contiguity—the cavities are so filled that while each organ has abundance of room, there are no vacant spaces. Additionally, each is amply supported and fastened to place by ligaments and bands, it being very important that

they stay precisely where nature put them. Further support is afforded by the abdominal walls, which are made up of numerous strong muscles. But women unhesitatingly destroy the integrity of these muscles by compressions which prevent their being naturally exercised, and so they atrophy, and become useless as supports. In consequence, the stomach becomes prolapsed, and this in turn prolapses the colon; then the kidneys, liver, spleen, small intestines, and other organs are displaced in various strange fashions, until not an internal organ is in its true place, and all sorts of functional disorders naturally follow.

Not only are the internal organs deranged, but their derangement distorts the contour of the body, and throws it out of balance. The chest is flattened, or else unnaturally full; there is a hollow where the stomach should be were it not fallen down, and then an unsightly protrusion below, caused by the general prolapsus and the flabby condition of the abdominal muscles. As women advance toward middle life and beyond, what large numbers of them have just such ungraceful, deformed figures as described, due almost wholly to bad dressing! They should understand that nature has packed the body full, and that there is no way of making the waist smaller than it is naturally without getting something out of place. I examined a lady a short time ago who had squeezed her spleen so entirely out of place that it had the freedom of the entire abdominal cavity, and one day it would be found in one place, and the next day in another.

It is safe to say that ninety-nine women out of every hundred who wear corsets and bands,—no need to say *tight* corsets and *tight* bands, for they are always tight unless supported from the shoulders,—have displacements, to a greater or less degree, of various internal organs. Not everything must be laid to the corset, for I have seen a great deal more harm come from heavy skirts dragging down upon tight bands than from the corset, which serves to distrib-

ute the pressure over a larger surface. If you ask me how loose I would have your dresses be, I would say, just as loose as my coat. If you have a dress fitted so as to keep the wrinkles out, it is invariably too tight. Flowing outlines are favorable to looseness, and, besides, are much more graceful than those which sharply define the figure. When you are measured for a dress, take a deep breath, and then add two or three inches to that measurement; for you need room to grow and develop. The various wandering and displaced organs need room to get back to their proper anchorage; the breathing needs to be full and free so as to stimulate exercise. The corseted woman contracts her abdominal muscles, and holds her breath to show you how loose her dress is. The other day a lady solemnly assured me that her clothes were loose, and that she had never worn a tight corset. She measured around the waist, outside her clothing, twenty-five and a quarter inches. My lady assistant then measured her beneath the clothing, and found a measurement of twenty-seven and a half inches. Yet her clothing was not tight!

But the clothing need not be recognizably tight to be injurious. In proof of this, let those of you who wear a ring on the finger, look beneath it. Its light pressure, long continued, has caused the tissues to

waste away and the muscles to atrophy. So bands and corsets, whether very tight or not, cause an atrophy of the muscles of the waist. The ideally correct dress is entirely without bands or strictures of any sort, and it is growing in favor as it is becoming known. There are lamentably few mature women to be found with proper figures. Nature always makes her lines in beautiful curves, and the human body is no exception when allowed to develop naturally. But when a woman puts on a corset, and crowds a mass of flesh above it and another below it, the figure is entirely out of shape and inartistic.

To bring about a reform, the first thing is to remove the pressure, and the next is to go to work to strengthen the long-abused muscles. Massage and electricity skillfully applied, and a thorough course in physical training, are among the best means to the latter end. Deep abdominal and lower chest breathing must be regularly practiced. Sometimes, as a temporary aid in overcoming a bad prolapsus of the stomach and intestines, a well-adjusted abdominal bandage is advisable. This will give the overstretched muscles a chance to shorten. When the muscles are restored to their former tone, there will be no need of mechanical appliances, and it is not advisable to continue their use for a long time.

Few ladies consider that they carry some forty or fifty miles of hair on their heads; the fair-haired may even have to dress seventy miles of threads of gold every morning. The average number of hairs on the human scalp is from ninety to one hundred and twenty thousand. Dark hair is usually much coarser than light hair, and hence fewer in number. A single hair of average size should be able to support a weight of two ounces, and have sufficient elasticity to stretch one third of its length, regaining its former length when the tension is removed.

PROFESSOR VIRCHOW ON TIGHT LACING. — According to the *Pall Mall Gazette*, of London, Prof. Virchow, an eminent German physician and politician, and president of the International Medical Congress recently held at Berlin, "has just made an interesting discovery, which he communicated the other day to the public in a lecture before a large audience. The subject of the lecture was the diseases of the liver, and in pointing out the evil consequences of tight lacing, he drew attention to the fact that if the livers of persons who were addicted to tight lacing at the various periods since the corset was first invented, had been preserved, it would be easy to determine, by the

shape of the liver, to what period the former owner of the organ had belonged. Thus, the liver of the *ancien regime* would be entirely different from that of the time of the Orleans, or of Napoleon the Great, and the present-day liver would no doubt possess other peculiarities still. The learned professor evidently intended these revelations to act as a deterrent to the devotees of tight lacing; but the enlightened woman of the time who counts herself among the latter will, no doubt, after hearing this, reduce her waist cheerfully by another inch, conscious that while she courts the fashion of the day, she supplies, in her crippled liver, future generations with an important scientific object."

CLOTHING. — Dr. Richardson, an eminent English sanitarian, makes the following excellent remark respecting the necessity of porosity as an essential quality for healthful clothing: "Whatever holds or takes up the fluid exhalations from the skin, is not clothing fit to wear. Whatever cannot be breathed easily through is not clothing fit to wear. No kind of clothing for the human body is so good as that which admits freely into and through its meshes the most perfect purifier, non-conductor, and healthful equalizer of temperature known, — atmospheric air."

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.

MRS. DREXEL'S THANKSGIVING.

BY S. ISADORE MINER.

MRS. DREXEL'S mind was in as great chaos as her sitting-room, which she was busily setting to rights after a genuine frolic with the twins. The latter having disappeared around the corner in their pretty warm capes and bright bonnets, on their way to the kindergarten, Mrs. Drexel turned from the window to re-attack the room and the momentous question that had fairly weighed down her spirits all that drear November month.

It was close upon Thanksgiving now, and something must be done about it. "Oh, dear!" and Mrs. Drexel sighed for the good New England days when strangers were not expected to share the Thanksgiving feast, but each family, with the numerous uncles, aunts, and cousins always within reach, made a household crowded to overflowing. In this far Western town where the Drexels had migrated, nobody claimed kith or kin to anybody else; but for lack of nearer ties a sort of breezy friendship quite antagonistic to conservative Mrs. Drexel's ideas, had sprung up, whose warmth, while it usurped the prerogatives of relationship, threatened to ruin the little lady's peace of mind.

Mrs. Drexel admitted that it would not do to be unpopular, for her husband was the youngest physician in the place, and had his own way to make; but she was not yet quite ready to admit that it paid to be popular. Popular they were, and hence her present difficulty. Christmas they had been fêted by the Brown's, New Year's by the Moore's, and last Thanksgiving by the Langford's. She really couldn't remember the dinners the year before,—their first in the town,—there were so many. And yet she had not entertained once during all that time, and she was afraid others beside herself had become conscious of the omission.

This want of hospitality, as some might call it, was not wholly due to Mrs. Drexel's Eastern exclusiveness. A praiseworthy determination to keep within

the bounds of a rather uncertain income, lay beneath it all; besides, the friends who had taken her up, were those possessed of purses well lined, and an ambition to eclipse the dazzling unfoldings of the society papers that found their way in from the great centers. Dinners such as given by the Langford's, or by the Tillbury's at the aristocratic hotel where they made out to live very expensively and uncomfortably,—dinners whose *menus* were six inches long and crowded at that, and followed by all sorts of after-dishes, were entirely out of the question with the Drexels, and it had never yet occurred to them that they could offer less than they had received.

Yet just this was the advice of Miss Tyler, Helen Drexel's old school-mate, who was *en route* to an Indian mission-school still farther west, and spending her last few days of a two weeks' visit with the Drexel's. She had come in from a brisk walk in the keen November air, just as Helen had laid aside duster and whisk, but not her troubled countenance; and so Agnes insisted on sharing her burden, whatever it was.

"Well," she said, when the case was stated, "why don't you serve them one of the simple, dainty dinners you know so well how to prepare? Your dining-room is ample; you can invite them all, and have it all over with at once.

"Oh, but a plain dinner! I'd rather almost do nothing at all than do less than the rest. But if I give anything elaborate, I must give up my charity baskets."

"You can make it such 'a feast of reason and a flow of soul' that you will find the 'nothing' has changed sides, and the giving is all on yours. As you say, you must either give up your poor or your party, unless you are willing to try my plan. Your dear old father left as a sacred legacy from his years of gospel ministry, the custom of giving the unfortunate an opportunity for gratitude of heart on this

yearly feast-day; and I should be sorry indeed to see any of his children, and you, especially, Helen, negligent of this duty. Your debt is surely greater in this direction than to your friends of ease and luxury."

"Well, I'm glad I've had this little talk with you, anyway, although I really felt convinced of what I ought to do before. Only—I do so hate to give up my sole opportunity of canceling my social debts."

"Better social debts than those of another sort; and yet, Helen, why not do both? I had intended to eat my Thanksgiving dinner with Uncle John's, but if you will but consent, I shall be only too happy to stay and help you out.

Agnes, your're a treasure! If you really think something can be done, I place the contents of my slim purse at your disposal, and myself in the bargain; for you will have to plan it all. Here's just ten dollars,—money I've managed to save myself, and I must not ask Cele for a cent more."

"It's plenty, thanks to your window-garden and my case of artist's colors; for the *menus* I shall make myself."

"*Menus*—with pumpkin pie and Boston baked beans! Ridiculous!"

"You'll see," called Agnes over the banister, as she tripped lightly to her room to write in her fine sloping hand, a round dozen invitations to the momentous occasion now scarcely four days distant.

"These include all to whom you are mainly indebted, do they not, Helen?" asked she, thrusting the dainty envelopes into her friend's hands preparatory to their posting.

Helen sat aghast. A dozen invitations, and nearly all would count for two, at least. A ten-dollar dinner for twenty and her poor, and her dining-room but fifteen feet long! Agnes surely must be dreaming.

Miss Tyler laughed. "It is late, you know, Helen, and some I am sure will already have made other plans. You never can count on a full number of acceptances, but the bare invitation is legal tender in society, and you can make these little messengers payment for arrears, and be ready to start in the year a free woman. One would have thought the old English debtors' prison in vogue, and unpaid guest dinners the height of crimes, to have seen your doleful countenance the last week. Cheer up, dear, we'll have quite a lavish spread after all!"

For the next three days there were great goings-on in the Drexel cottage. More than once Helen inwardly blessed the kindergarten that kept twenty small fingers out of mischief, and left her free to superintend the doings of her one servant. Helen was a

true child of New England in being the mistress of the culinary art, and rows of flaky buns, delicate meringued custards and the time-honored pumpkin pie, incased in a plain, wholesome crust, and turned just a discreet brown, attested to her skill. Cakes were limited in both quantity and variety, but were marvels of lightness, though plainly compounded,—“at least good for decorative purposes,” the Doctor said.

To Mrs. Drexel's delight, her yearly invoice of nuts from the old homestead came opportunely to hand,—walnuts, hickory-nuts, and chestnuts to roast. And now the twenty nimble fingers came opportune also, freeing the plump meats from the rough coverings.

Agnes, meanwhile, had not been idle, as many a pine and birch in the near wood could testify. Delicate sprays of green garnished the cottage walls, while in the tiny dining-room grate, resinous pine knots waited but the magic of flame to cast a ruddy halo over the cheery home appointments. Then there were the most wonderful little canoes evolved from the stripped-off parchment of the birch and a few swift stitches of her needle. And these were lined with tin-foil and packed with damp moss, and waited their flowery freight from the window-garden to be as dainty and original little flower-favors as ever city-florist furnished for the guests of a modern Croesus.

And the *menus*. For all Helen's alarm and Agnes's laughing the pumpkin pie did not go on, nor any other of the edibles. "We ar'n't running a hotel," said Agnes, "but I do propose putting a little soul and mind food into our feast." The folded cards of heavy water-color board, were transformed by the touches of her easy brush into veritable gems of art. Careless sprays of wood violets, cape jessamine, or heliotrope, a half-opened rose-bud nestling midst its green, a vista of wood and water, a bright Italian sunset, and opposite, in quaint English script, choice selections appropriate to the season and occasion, both in verse and prose.

The night before Thanksgiving, three well-filled baskets found their way to those Helen termed her parishioners,—her washerwoman, her seamstress, and the motherless family of whom the Doctor's boy-of-all-work was the eldest. "And it ain't the leavings from her big party, bless her heart," said the little seamstress to her invalid sister. "She don't send her favors the day after, like most folks; and besides, I peeked into her pantry jest to-day, an her party victuals air jest the same. The Tillbury's and the Morse's air comin', too, but she ain't the one to scrimp at the back-door to sling on style in the parlor. Bless her, I say, and that there friend of hern, too!"

The dining-table fairly glittered under Agnes's deft

touch, that early Thanksgiving morning. The silver and napery could not be out-done in all the town. What Helen had was good, and what she did n't have she did n't borrow. The Doctor, in recognition of what he was pleased to dub her "bravery," sent up an early surprise in the shape of a basket of choice fruits. It was worth the doing without of the new gloves to see the "little girl's" delight and happy blushes. Agnes had just the knack of making them show their best, interspersed with the bright leaves of the foliage-plant, on the already pretty table, which true to her prophecy, had only to be stretched for sixteen. The Gowan's were out of town; the Parker's regretted they were to dine elsewhere, Mrs. Bahn's sister was ill, and that counted out three, while another family canceled their acceptance because of unexpected guests. Happily, none of them will ever know that regrets were even more welcome than acceptances; not that Helen was in the least hypocritical, either.

And how did it all turn out? We will let fussy, dyspeptic Mr. Tillbury, to whom Agnes singing in the twilight of the cozy parlor was more of a pleasure than after-dinner coffee served in cups of costly china

and with sugared bon-bons,—we will let him tell. The ivory keys of the little piano-forte rose and sank in waves of melody, and Agnes's sweet voice sang an old-time ballad of love and home. Something stirred in the breast of Mr. Tillbury; for under cover of the dusk his hand sought his wife's, and he whispered in her ear, "I'm sorry I was so bearish about coming; Millie. I'm really glad I came." And again in the luxurious parlors of their hotel suite he repeated "Yes, I'm really glad you insisted on going, Millie; but if you only knew the tortures I suffer every time we dine out, you would n't wonder I stood out about it. It's bad enough here, but when one dines out, and must eat a little at least of everything—well, you know I was sick a week after the Langford's Thanksgiving, and I am but just well from that dinner at Hervey's. But Mrs. Drexel is a woman of sense, and her dinner was capital. Never felt better in my life. What an excellent talker her friend is! Interesting, very interesting. I wish you would ring for some colder water, Millie, and sprinkle these flowers. These boats, with a little care, will keep fresh for some time."

AN OLD-TIME CASTLE-PRISON.

BY E. L. SHAW.

FROM a huge, lone rock, laved at its base by the waters of the eastern horn of the blue crescent of Lake Geneva, there rise the snow-white battlements and towers of an ancient pile, transformed by the magic of the historian and the genius of the poet into the Mecca of many a modern tourist—the Castle of Chillon. More than six centuries have passed away since this embodied frown in stone first threw its long, grim shadow over the green and wooded slopes, the lovely Swiss valleys, the smiling Swiss vineyards; and still it stands guard, like some giant sentinel, over the imprisoned beauty of the blue, pellucid waters, flowing—

"A thousand feet in depth below,"—

bearing its image far out upon their quiet bosom.

Seen from a distance (and it is visible for a long way in either direction), the castle has the appearance of an irregular structure, with a large square tower in its center. Coming nearer, its many turrets and towers are brought to view,—

"Round tower in graceful blending with square,"—

revealing what is without doubt a fine specimen of mediæval architecture. A picturesque covered bridge connects it with the mainland.

Erected by Amadeus IV., of Savoy, in the rude, barbarous times when men built for themselves fortresses instead of homes, it served as a stronghold for

the defense of his state, and afterward, as a family residence, preserved from extinction a long, ancestral line. During the Reformation, many Huguenots were confined there, and Bonnevard, a disciple of Zwingli, made himself so feared and hated by the Catholics, that he was seized, and immured for years in one of its rocky dungeons below the level of the lake. When Geneva finally became a Protestant republic, his countrymen thundered at the fortress gates, and brought him forth once more into the free light of day. The castle, now kept as an arsenal, is little modified since then, and the identical ring and chain which bound the Swiss patriot to the stone pillar are still to be seen, as well as the indentation in the stone floor,—

"Worn as if the cold pavement were a sod,"—

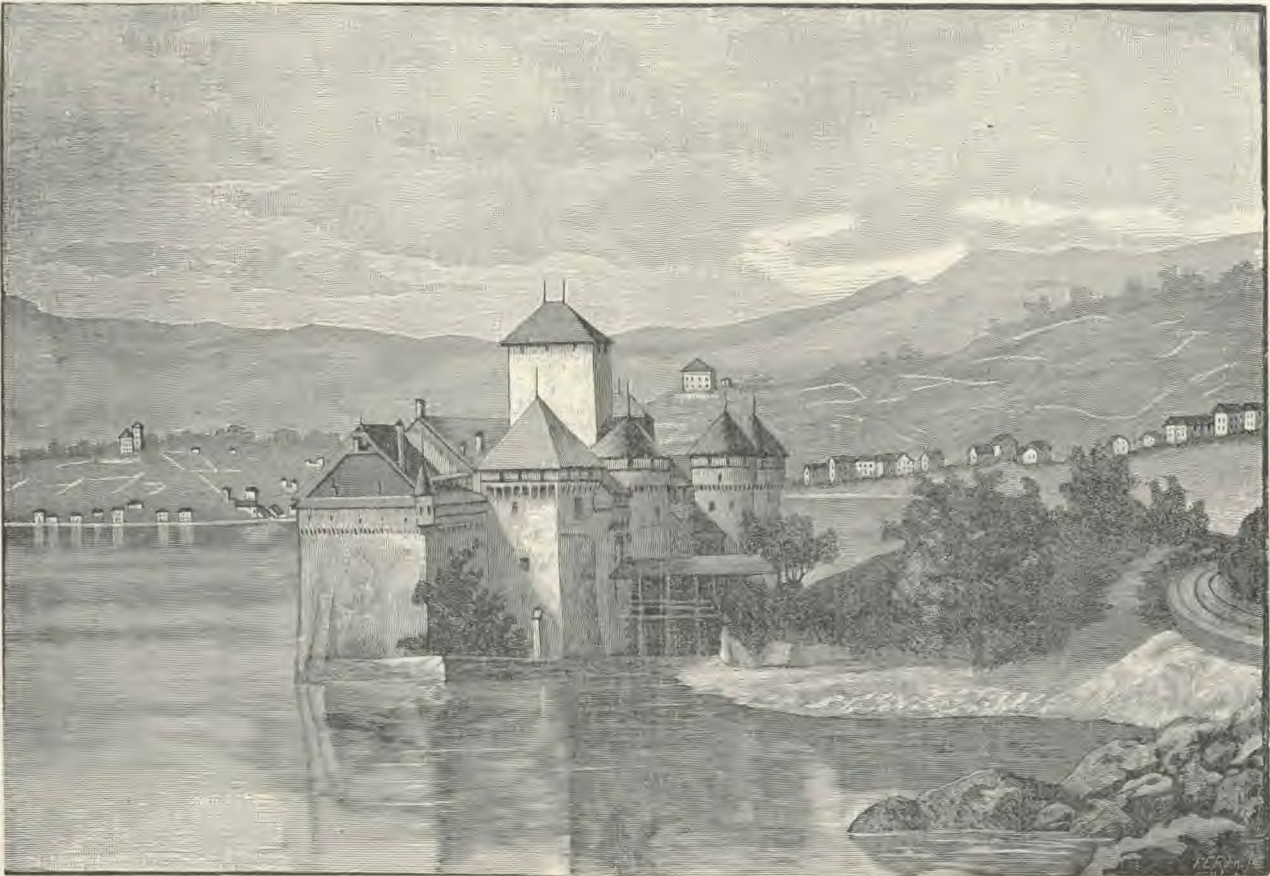
by the weary footsteps of the "Prisoner of Chillon."

But other dungeon cells there were in Chillon, deeper and darker than Bonnevard ever knew; and to-day mute witnesses from the past confront beholders, telling tales of inquisitorial tortures and inquisitorial horrors, in presence of which angels must have stood in tears. The visitor sickens at sight of the "terrible hole in the wall," through which prisoners' bodies were cast into the lake, the torture-chamber where a wooden pillar stands, deeply burned with hot irons; but even these seem trifling beside the

frightful *oubliette*, a passage-way of midnight blackness, leading down a spiral staircase of only three steps, and when the prisoner's foot sought the fourth, he did not find it, but instead, went down, down, a distance of eighty feet, where large knives received him.

The region hereabout is one of unrivaled natural

former generations. At Lausanne, Gibbon wrote his "Decline and Fall of the Roman Empire;" Ferney was the home of Voltaire; at Coppet lived Madame de Staël and her father, the French Minister Necker; Clarens and its environs is perpetuated in Rousseau's "Nouvelle Heloise;" while at the old "Ancre" Hotel in Ouchy, the gigantic intellect of Byron conceived and



THE CASTLE OF CHILLON.

beauty. Never, since sea and shore first met, has the eye rested upon scenes more delightful in their completeness than are found upon the shores of Lake Lemman. Other influences, too, weave their mystic spell over men. The hero-worshiper looses his sandals here, for this is historic ground,—ground made famous by the presence and labors of the master minds of

wrote, in two short days, the poem which has forever immortalized Chillon. Here, too, in this fair spot, the fanaticism of Calvin ran riot, filling prisons, and making gory work for the executioner. Truly, many are they who have here—

"Sought and found by dangerous roads
A path to perpetuity of fame."

NOVEMBER.

To earth has come November—
The fields and skies are gray,
And winds are chill, while round the hill
The dead leaves whirl all day.
There's scarce a glimpse of sun or moon,
And night comes down in the afternoon!
But as we sit, with fires all lit,
Sweet stories we'll remember;
We talk our best, we laugh and jest,
We sing our songs, and say,—
"Tis happy in November,
If hearts are in their May!"

But in the heart's November,—
Though all the earth is gay,—
There's naught but doubt to think about,
And naught that's glad to say;
The eyes are wet and the lips are dumb,
And the songs have died as the tears have come!
We blindly grope for sweet, lost Hope!
We fain would not remember;
Ah, strange and drear all things appear,
And cold and dark the way,
When hearts have found November,
Though all the year be May!—*Cara W. Bronson.*

TEMPTED AT HOME.

BY HELEN L. MANNING.

"YOUNG Fred Dale was brought to his room in a pretty plight last night."

"What do you mean?"

"Well, if I should put it in plain English, not stopping for soft phrases, I should say he was crazy drunk."

"What else can be expected, considering his companionship and his home bringing-up? He will go to the dogs before he is twenty-one, and no help for it. The sooner the better, I suppose, if he must go."

This scrap of conversation was borne in to me through a half-opened door in the large boarding-house in which I was summering among the White Mountains. It did not seem a theme for jesting; for it always cuts me to the heart to hear such news of any young man, especially a young man so bright and kind and thoughtful of others as Fred Dale,—and he was only sixteen. I noticed that he was not at the breakfast table, and when dinner-time came, he was still absent. In a day or two, he took his old place, a little quieter, and with a trifle of reserve supplanting his former frankness, which was always so winning. I resolved to bide my time for favorable opportunity to talk with the boy, and learn the truth in the matter, and what lay behind it all. It came one evening as I was lying in my hammock, watching the sunset among the hills. Fred came along with fishing tackle, and threw himself into a chair beside me. With a swift little prayer to Heaven for wisdom and guidance, I drew with such gentleness and tact as were given me, the whole miserable story from the boy's lips. He with two or three others was invited to spend an evening with a brother and sister in an aristocratic home in the city. Refreshments denominated port wine were offered and accepted. The liquor was, in reality, something much stronger, but Fred had taken two or three swallows before the difference dawned upon him. Beyond that he did not seem to have any clear recollection.

"It would not have hurt me any if it had really been port wine. I have drunk it ever since I was a child," said the boy, apologetically.

"Do you mean to say it forms a part of your family life?" I inquired.

"Yes; my father has always drunk it, and nothing

could offend him more than to have one of his children take such a cranky notion as to refuse it at table. I never drink more than one glass, but so long as I live at home I cannot give up the practice. My father is a stern man, and thinks he knows what is best for the interests of himself and family."

To counsel a child against the known wishes of a parent is delicate business; but what else could I do in the hope of saving the boy? The only satisfaction I gained by my earnest pleading was this:—

"The experience of the other night has taught me a severe lesson. I will never drink again away from home, and if I ever have a home of my own, there shall be no wine in it for myself or my guests; but so long as I live with my father, I must do as he wants me to do about such things. You don't know my father, or you would not urge me, dear Miss M——," and tears stood in the boy's clear eyes.

Tears brimmed my own eyes, as Fred picked up his fishing tackle and passed on into the house. I said to myself, "Curs't be the social wants that sin against the strength of youth;" for was he not much more to be pitied than blamed for the plight in which home custom had led him?

What can be done to enlighten fathers who, like this one, forge links in the chain which will most likely drag their children down to perdition! Such children are weaker in every way than their fathers, from the taint of wine-steeped heredity, and when the influence of accursed social customs is added, the doom of the child is almost certain. Is there any question as to where lies the heaviest responsibility? Fred acknowledged that he had known dreadful results in the families of others, but he was equally sure that his own family was safe, because it had been thus far. A youth who feels so strong a sense of security on the brink of a precipice, is in far more danger than one who sees his peril, and endeavors to walk heedfully.

It is some time since this incident occurred, and I have never been able to follow the history of my summer friend; but my heart is sad when I think of him and the brilliant and good man he might have made had his home surroundings been better, and which, alas! I fear he was never able to rise above.



TEMPERANCE NOTES.

A NEW monthly, the *Temperance Teacher*, devoted to scientific temperance, has just been started in New York.

ALL the licensed cigar-dealers in Cape May City N. J., have signed a contract, under a forfeiture of fifty dollars, not to sell another cigarette to either man or boy during the present winter.

A SPANISH temperance newspaper, entitled *El Intransigente*, is published at Valparaiso, Chili. A late number records the organization in that city, of a third Spanish-speaking lodge of "Buenos Templarios" (Good Templars).

CRAZED BY CIGARETTES.—The *Chicago Herald* gives an account of a young man residing in that city who recently became insane through cigarette smoking. The young man began the use of cigarettes about a year ago. The habit has gradually grown upon him until he spends a great share of his time consuming cigarettes. Cases of insanity from the use of cigarettes are becoming more and more frequent.

NEW YORK CITY spends over \$70,000,000 annually for beer, wines, and other intoxicating liquors.

It is proposed to establish an Australian Temperance League, on lines similar to those of the National Temperance Leagues of England and America. It is believed that such a league would advance the temperance movement much more effectively than the isolated societies now existing. The extent of the drink evil in Australia demands more aggressive measures.

THE *Indian Witness* says in regard to the teaching of scientific temperance: "School education has a great part to play in bringing in the day when all men will see that intoxicating liquor of any kind is always harmful as a beverage. We must have textbooks in every school in India, teaching the rising generation what alcohol does for the blood, the nerves, the stomach, the brain. We must have our school-houses hung with diagrams showing alcohol poison in the tissues of the body."

POPULAR SCIENCE.

A MESSAGE transmitted by the Atlantic cable occupies about three minutes in going from one end of the line to the other, — a rate of seven hundred miles per second.

THE web of a spider is spun from a thread formed by the union of more than four thousand smaller threads, so fine as to be almost, if not quite, invisible to the naked eye.

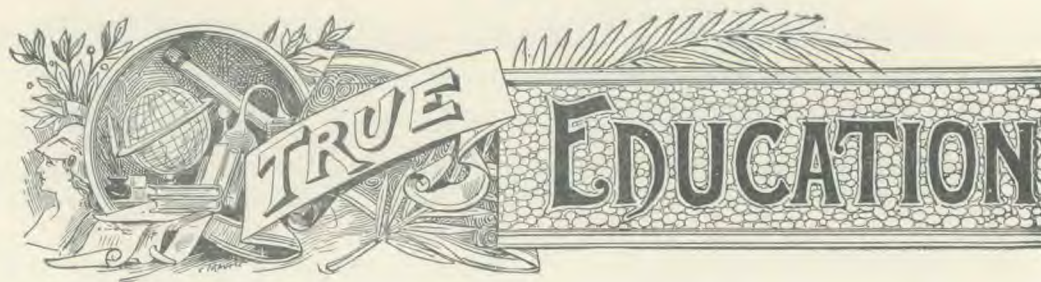
THE steamer *Connecticut*, of the Providence and Stonetown steamship line, has been furnished with an electric light which will penetrate the densest fog for one-half mile, enabling objects to be clearly seen at a distance of two miles in the darkest night.

A FLOWER of exceeding beauty has been found in South America, which possesses the remarkable quality of blossoming only when the wind is blowing upon it. The shrub belongs to a species of cactus, and has warty excrescences which are unfolded by the wind, bringing to view large, lovely flowers of creamy hue, which, however, fold up and immediately disappear when the wind subsides.

A NEW element said to have been discovered in an extinct volcano in Europe, weighs only 0.5 — half the weight of hydrogen, and is, consequently, the lightest known substance. It has been named "damaria," from Damaraland, where it was discovered.

AN immense shaft of granite, larger by many feet than any which ancient records give an account of, has recently been quarried by a granite company in Maine. If erected, this huge American monolith will largely overtop and outweigh the very tallest of the Egyptian obelisks now standing, and indeed any single stone that ever stood in ancient or modern times.

A LATE newspaper correspondent tells of a species of tree found growing upon an island off the coast of Africa, the condensing power of whose leaves furnishes the sole water-supply of the island. Upon our own continent, also, in the forests of Washington and British Columbia, trees have been observed which drip copiously through the night, and until ten or eleven o'clock in the forenoon, when the flow gradually ceases, only to begin again at or near sunset.



WHAT GIRLS SHOULD LEARN.

BY S. ISADORE MINER.

THE avenues of education open to the girl of today are not the narrow, limited ones of the past. Her grandmother, and even her mother, were not educated in the broad sense that their brothers were. A girl of their day needed not to understand the principles of compound numbers, or to know whether Kamschatka was the capital of Peru; if she could write as a letter a series of formal platitudes, if she could gracefully turn off a few French phrases, if she could dance, play, sing, paint, or draw, she was accomplished, indeed. But the young women growing up all about us have come into a world of a broader plane. The womanly brain is given the substance, not the froth, to digest; the necessities, not the luxuries of knowledge. She may be a successful teacher, and not know one note of music; she may be a lawyer or a physician in good practice, without having the slightest sense of the artistic.

But advanced thought along these lines must not lead us into the error of disregarding the wisdom of our fore-mothers because it was a part of the illiberal past. Whatever she is, be it doctor, or lawyer, or teacher, or artist, our girl of really sound judgment and broad knowledge will neglect the learning of no womanly duty, be it ever so homely, whether or not she expects to ever be brought to meet it face to face.

And now I hear a chorus of fresh young voices interposing: "Oh you are going to say something about housekeeping; but we do n't any of us intend to marry, so it won't be of any use. Mary is going to be a machinist, Laura is studying architecture, and Alma painting, while I am already a stenographer. All the rest are taking some profession or trade, too." Now we are always glad to hear girls say they have no *intention* of marrying. No strong-minded, right-principled girl has; she leaves that anticipation for shallow, weak-brained flirts. The girl who has no intention of marrying just goes about her business, mind and heart free, and makes a success of whatever it is; and when the right time and the right man

comes — why, she does marry after all, and makes the very best possible wife and mother.

But for sufficient other reasons beside this, a scientific knowledge of housekeeping should be a part of every girl's home education. It properly belongs in the common school curriculum, and some day we shall see it there, recognized as the science that it is. Until then, the home kitchen must needs be the scene of many dearly bought victories. In addition to the general routine of cookery, how to prepare healthful and palatable food for the occasional invalid should be learned. No one knows how many lives have been jeopardized, and even lost, because of the house-mother's ignorance of how to cook for the sick. The physician's orders to give the patient a cup of gruel, or an egg, or a slice of toast, admits of considerable latitude. The gruel may be far from the nourishing, assimilative compound he had in mind; the toast may be browned on the surface, but a soggy, moist mass inside, rendered further indigestible by a copious supply of melted butter; the egg may be very similar to a bit of fried leather.

There is, too, a certain amount of domestic medicine that should be thoroughly mastered. Especially is this desirable in remedies for emergencies. We remember the forethought of a little girl, a mere child of eleven, who was left all day alone with a baby brother. By some means the little fellow found, unnoticed, a half-emptied bottle of ammonia, and of course it made its way to his mouth the first thing. Screaming with distress, he ran to his sister, who as she afterward naively expressed it, "thought he was going to die every minute. But I remembered hearing mamma say that ammonia was like lye; that it liked grease to eat. So I just fed him all the grease he would swallow, and then I kept thick cream in his mouth all the rest of the day." By night, when the family had returned, the little mischief was scarcely the worse for his experience; but we wonder how many of our older girls would know as well what to

do in a similar case. It is wiser to keep poisonous and harmful substances out of the reach of children, but even older persons sometimes take them by mistake, and often the battle must be lost or won, according to the ignorance and wisdom of whoever is at hand, long before medical help can arrive. Women are the nurses of the world, and every girl should learn the simple antidotes for all the deleterious compounds commonly kept about the house, as well as the treatment for burns and sprains and all the simpler diseases to which flesh is heir, especially as relates to children. How many a young mother, awakened in the stillness of the night by the ominous rattle that portends the dread enemy, croup, would give the world, were it at her command, had her mother taught her how to successfully combat it. As it is, she frantically paces the floor, vainly striving to hush the wild beating of her heart and the pitiful cries of her babe, cruelly realizing her own helplessness and the preciousness of the moments in which she waits for aid. Such ignorance, in the good time coming, will be held little less than criminal on the part of those who would send thus unprepared, any young person to assume the responsibilities of human life.

The ventilation, plumbing, and drainage of our homes have so much to do with the health of its inmates, that the principles on which they are scientifically effected should be in the possession of woman, under whose oversight more than any one's else, these things will naturally come. Every housewife should have it in her power to know whether or not the various rooms are being properly aired; whether there is danger from lead-poisoning with the water-supply pipes, and whether some death-trap in sewer-gas is not lurking to seize its unmindful prey. If women do

not learn to know these things, they often come to those who are well-versed in such matters, but unfortunately denied the necessary opportunity for discovery, too late to be of any service at the time, and death not infrequently pays the penalty.

Among other household accomplishments, every young lady should be mistress of the making up of her toilet, from the trimming of a bonnet to the fitting of a gown. In this country of quickly made and quickly spent fortunes, it is not infrequent to see a family with riches in its grasp one year, and the next barely able to obtain the necessaries of life. The girl who comes to the top amid the reverses of fortune, is the one who knows how to put her shoulder to the wheel, and make a new dress, if need be, out of an old one, in more senses than one. And many a poor girl could go well and becomingly dressed if the price that went to the dressmaker could be added to the comforts of her wardrobe.

Above all else, we would have every girl learn to become self-supporting. It is a consciousness that any woman may well be proud of, to feel that come what may, she is prepared to conquer the sternest realities. She is not compelled to depend on the cold charity of friend or relative; she is not compelled to marry for a home; she is not compelled to barter her youthful bloom and beauty and her pure soul that the body may linger through a miserable existence, as, alas! too many of her sisters in adversity have done, because they could do nothing else.

The girl of the future, the hope of a millennium to which all eyes are turning, will be a helpful, natural, noble creature, untrammelled by conventionalities in dress or education, and of whom, when she has finished her work, the world will say, "We have been the better for her living."

THERE is nothing more daring than ignorance.

A CHILD'S first great instructor is example. Those impulses to conduct which last the longest and are rooted the deepest, always have their origin near our birth.

WHAT IS SUCCESS? — What is this success for which we are all striving? What is this never silent voice which urges us on to more and more than we have yet accomplished? For, however much we have done, something always remains beyond. Every true musician has felt the throb of higher harmonies than he has yet produced. Every fine architect has vis-

ions of structures that have never yet been built. Every righteous merchant sees better methods and nobler results for commerce than have yet been attained. Every earnest and upward-striving worker in whatever direction, has felt the stirrings of grander possibilities in his sphere of action than he has yet achieved. This ever-growing desire for something higher and better is the human but heaven-born instinct which urges the development of all the possibilities within us, however great or however small they may be. This is our real work in life; this should be our main thought, this is the real and only success — to develop to the utmost those capabilities with which we were endowed.

SOCIAL PURITY

THE SHINING CLUE.

OF all the beautiful human relations, that existing between mother and child is the most intimate and sacred. That which binds a mother to her unborn babe with its pulsing tides of life-blood, is but a figure of that deeper tie that links a mother to her child forever. And just as that life-blood flows directly from mother to child or the little life perishes for lack of nutrition, so is it ordained by a loving All-Father that certain spiritual truths, certain glimpses of himself, must come to a child through some mother-heart, or the little one is left hungry and defrauded. For this end has he endowed woman with superior delicacy and spiritual insight.

In many cases the real mother is snatched away by death, and some other woman is called in to fill her place. If a true woman, the care of the little helpless mite will develop in her the heart of motherhood, and the relation between them will scarcely differ from the real tie. Now the very sacredness of this relation becomes the beautiful shining clue which the Lord puts into every mother's hand for the safe guidance of her child.

As in the old Grecian fable of the labyrinth, with the awful monster—the minotaur—hidden somewhere in its tortuous windings, the only safety for the individual who must enter it, was to hold fast to the ball of strong silken thread—the *clue* put into his hand that would unwind as he went forward, and a pull at which, if preserved unbroken, when the minotaur appeared, or its ominous roar was heard, would draw him back to safety: so is it with this clue which every mother holds for the guidance of her child through the labyrinth of life with its modern minotaurs, more real and dreadful than any that Grecian fable ever pictured.

There is no post of duty where education, in its broadest sense, is so much needed as that occupied by the mother. Every new want of the unfolding mind is brought to her. If she fails to meet it, there is an inevitable loss of that beautiful faith which every child cherishes. Shall I startle you by announcing my conclusion, gathered from all my years of experi-

ence and observation, that—*four mothers out of five lose their clue before their child is five years old!* And this fatal loss occurs at one special point in every mother's experience, which we may well mark as a danger point.

For a period usually covering three years of a child's life, the little mind is entirely satisfied with what comes to it through the senses. But suddenly, at three or four years old, it awakens to the consciousness of a deeper want, a craving or hunger to know about life itself and its mystery. Every child feels this, and instinctively goes to mamma with its want. This awakening constitutes an epoch in the child's life. The mother always knows when her child reaches this land-mark, because every child marks it by eager, artless questions.

If mothers were only trained for their work, they would be watching for these questions, and be ready to meet them. But alas! as a rule, women have no special training whatever for the most sacred duties that she will ever meet. And so, when these questions come, and through them the voice of the Lord, saying, "Mother! Mother!" she is all unprepared, too busy with the things that perish, over-worked, half-sick, perhaps, and she pushes her child rudely from her with impatience—"Oh, go away!" "Do n't bother!" "You must not ask such questions!" "Maybe I'll tell you sometime; you could not understand about it now."

We dare not estimate how many mothers push off their children rudely and fatally with *falsehood*. O mother, it is the last place in all the journey of life when you can afford to tell a falsehood. Your child has come to you asking, for the first time, for a *sacred truth—the bread of life*. Will you give it a stone? The mother who thus deals with her child *loses her clue* right then and there. She fails utterly to satisfy this new, deep hunger, and leaves it to grope in all sorts of dark and dangerous places for its knowledge of life. The child pushed off from mother will go elsewhere with this new hunger. No child thus treated will ever forget the question, the thin false-

hood which mother offered—which never satisfied for one moment, as the necessary sequel—the place, time and manner of its first glimpse of the truth which it sought. We do not forget the epochs of life, especially when they are not smoothly passed.

Have you *lost your clue* with your girl or boy, O mother? Is there a screen growing up between you so that you realize dumbly that you do not quite know your child any more? It is time to get down on bended knees and hunt diligently for your clue.

"The mother's face is the child's first heaven." Every mother, as she looks down into the little upturned face, knows her child through and through.

SIN has many tools, but a lie is a handle which fits them all.—*Holmes.*

THEY are never alone that are accompanied with noble thoughts.—*Sir Philip Sidney.*

THE use of tobacco is a strong influence leading toward impurity. Not only are the physical effects of its use such as have a constant tendency in that direction, but quite naturally tobacco-using leads to bad companionship; and as a well-known writer most truly says, "lewd conversation comes more naturally from tobacco-stained lips than from clean ones, because the characteristic action of nicotine is to deaden moral sensibility." Strange that boys are allowed, by parents and guardians, to come up as they will as regards this vile habit, when to build up a pure character above it is as if one tried to build upon sand, or to uprear any fine superstructure with a crumbling foundation underneath!

THE IRON BELLS.—The iron bells are ringing,—the iron bells that seem to have frost in their throats, even in the summer, that ring out a noisy clamor when brooks are running like streaks of silver through an emerald setting, when the birds are singing only of joy, when anthems float through the open windows of the old stone church on the warm, quivering air, to heaven. And the iron bells are ringing. Over yonder, in a barren corner of the graveyard, where suicides, murderers, and waifs are buried, an old man is digging a grave, singing as he delves, a weary monotone that goes: "Ashes to ashes, and dust to dust!" And he digs away. And who is to be buried there?—Only a prodigal daughter, gentlemen. Only a girl whose cold hands are crossed on her cold breast by such as she; only a poor, worn-out human being who died in the blackness of the midnight and the other

This is her clue. Every mother holds it at first,—educated or ignorant, rich or poor, savage or civilized. It is God's special gift to mothers, and for its preservation and sacred use, they must give an account. In the hereafter, when all our mother-work is ended, we shall have no query concerning the number of dainty garments we have made for our children, or the sweetmeats and nice dishes we have laboriously prepared for their pampered appetites; but we shall be confronted with the solemn question, "Where is the boy and girl committed to your charge? Where is the shining clue I gave you, O mother?"—*Mrs. C. T. Cole.*

blackness of the world that repudiated her. And the prodigal son goes merrily home to eat the fatted calf, and have his father fall upon his neck and bless him. Is it any wonder that the bells that are ringing are made of iron? She was turned out in the snow,—in the whiteness of the world and the blackness of the skies, never to be forgiven; he was turned out in the summer day, to be taken back and folded to the parental bosom. And the iron bells are ringing.—*Denver Daily News.*

A LITTLE COAT.—In the touching story of Hannah's motherhood, the child so earnestly prayed for, dedicated to the Lord before its birth, and "when weaned, taken to the house of the Lord, that he might there abide," we are told that "moreover his mother made him a little coat, and brought it to him, from year to year." We can imagine how she lingered over the pleasant task of fitting this garment on her growing boy. We have here a symbol of that spiritual coat which must be made for a growing child by some mother's hand, and refitted year by year. If faithfully done, with the divine blessing it will prove indeed a *coat of mail*—a protection from many a fiery dart of temptation. It is not too much to say that in our modern life no child is safe without such protection. It is an alarming fact that one can rarely find a boy of twelve that has not somehow, somewhere, come in contact with the contagion of evil. There is no natural instinct to ward it off, and the untaught child will not realize the wrong that he is cherishing. But unless the spell is broken, ruin is certain. Such wrecks are everywhere,—a great army of them,—a standing reproach to parental neglect. If the better life within these victims had power to assert itself and make itself heard, what a pathetic plea we should hear for every mother to make for her child *a little coat!*"—*Sel.*

GOOD HEALTH

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

BATTLE CREEK, MICHIGAN.

THE INHABITANTS OF CHEESE.

GREAT interest has been shown in the discussion at various times of the question as to whether or not the moon is inhabited, and quite recently some curious light phenomena in connection with the planet Mars, have been interpreted as indicating that the inhabitants of that planetary neighbor of ours were endeavoring to attract our attention by means of a species of light telegraphy. No one has yet been able to make out the signals, but some earnest study is being given to the subject by persons who believe that the solar spheres are peopled by inhabitants closely resembling those of our world.

In view of the great interest in the matter of the hypothetical population of celestial bodies so far away from us, it is somewhat remarkable that so little interest should have been manifested in the study of populous communities much nearer home. The moon is not made of green cheese, as some of us were told in the early day of our investigations of scientific subjects, but if it were, it would be a vastly more populous planet than this earth; for, according to the observations recently published by Prof. Adametz, who has been making a careful study of the microscopic organisms which inhabit cheese, this common food substance contains, in addition to the skippers, mites, and other visible maggots and larvae, with which all

are familiar, prodigious numbers of microbes of various sorts.

According to Prof. Adametz, perfectly fresh cheese contains to every gram (fifteen grains) from 90,000 to 140,000 microbes. The population of a soft cheese twenty-five days old was found to number 1,200,000 for every gram, while the same quantity of a cheese forty-five days old, was found to contain 2,000,000 microbes. It was observed that the microbes were much more numerous near the outer portion of the cheese than in the center, probably due to the fact that the proximity to the air favors their growth. One soft cheese examined was found to contain near its outer surface from 3,600,000 to 5,600,000 germs, in a quantity of cheese barely equaling in size a small marble. Combining many observations, it was found that cheese, on an average, contains in every pound nearly twice as many germs as there are people upon the face of the earth.

Notwithstanding these scientific facts, there are doubtless many persons who will continue to consume, under the name of "cheese," the usual quantity of decayed milk; and after swallowing some millions of microbes at a meal, will wonder why they suffer from sour stomach, heart-burn, flatulence, biliousness, and a variety of other symptoms which are due to germs.

SOMETHING ABOUT THE OYSTER.

A STATEMENT is traveling among the papers, bolstered up by such names as Dr. Lenac and Dr. Pasquier, to the effect that oysters are a panacea for persons suffering from impaired digestion, debility, and lowness of spirits; that they are excellent in surgical cases, because they increase blood without producing fever; that they possess a most remarkable vivifying influence upon the nervous system; and, lastly, that

the liquor they contain is a noted tonic. It would be hardly possible to crowd more absurdities into the same space. The nutritive quality of the oyster is very low, being nearly all water, and bad water at that. Take an oyster and dry it, and see what is left. The oyster is not easily digested, requiring, when stewed, three and a half hours, and when eaten raw, thirty-five minutes less, or two hours and fifty-five

minutes. It takes as long to digest the oyster as it does a hard-boiled egg, and nearly every one considers hard-boiled eggs unfit for an invalid stomach. Even roast goose takes no longer time for digestion, whereas there are plenty of simple, nutritious foods which digest in a much shorter time. Rice is digested in one hour, milk in two hours, a soft-boiled egg in an hour and a half, etc.

It has been supposed that the oyster was an aid to digestion when swallowed raw, in that it went on making gastric juice for a while after being taken into the stomach. Such a proceeding would appear rather cannibalistic at best, but the notion is entirely fallacious, as has been demonstrated by recent experiments. As to the liquor being a tonic, we have investigated the oyster from a microscopic stand-point, and find its juice to be literally swarming with myriads of germs, wriggling and swimming about. The juice certainly needs to be disinfected before being used, and this a certain French physician has proposed to do. The Frenchman eats snails, which we are accustomed to look upon with loathing; but these snails are vegetarians, living upon vine leaves, and certainly in the matter of diet is much superior to the slime-eating oyster. The oyster is one of the lowest of scavengers, and everybody knows that the food of an animal affects the flavor of its flesh; for instance, if a hog eats carrion, the pork tastes of it. In the sea, nature has put a great variety of creatures at work as scavengers, by which means the water is in a large measure purified from the death and decay of animal and vegetable life within it. Once, when sailing on the Gulf of Mexico, we caught one of those beautifully colored creatures known as the Portugese man-

of-war, and while examining it, suddenly noticed a terribly offensive odor, which was soon traced to a dead fish, around which it had twined its delicate arms all resplendent with color. But that was exactly what the creature was made for.

The scavengers at the top of the water have the first pick of all the decaying substances which find their way into it; lower down, other scavengers make their meal; but the crumbs from the tables of all the other scavengers drop to the bottom, and there they find an oyster stuck in the mud, with its mouth wide open. The hard, brown part of the oyster is its excretory organ,—liver, kidneys, spleen, etc., all combined in one. Its diet is so bad that it needs a big liver to keep it alive. Why a man will turn away from fruits which hang ripe and luscious over his head, and put his hand into the mud after this loathsome creature, is more than one can imagine. It is singular how any one could have conceived the idea that the oyster is good for food. As the poet says:—

"That man must had a palate covered o'er
With brass or steel, who, on the rocky shore,
First broke the oozy oyster's pearly coat,
And risked the slimy morsel down his throat."

If additional reason for not eating the oyster is needed, it is found in the fact that a deadly poison known as tyrotoxin is liable to be contained in it. A while since, we were called to attend a patient who was deathly sick; the pupils of his eyes were dilated, he was in a cold, clammy sweat, and vomiting terribly. He had been eating oysters, and told where he got them. We immediately sent for a quantity, and an analysis showed that they contained a large amount of the poison named. Repeated instances of this kind might be mentioned.

EATING EXCRETORY ORGANS.—The liver and kidneys of certain animals are considered especial luxuries by many persons, yet the idea of eating the excretory organs of any creature is monstrous and disgusting. One ounce of liver contains poison enough to kill a rabbit inside of two minutes, yet people will cook and eat the organ, full as it is of poisonous, waste material.

QUARANTINE AGAINST CONSUMPTION.—At a recent meeting of the State Board of Health of Michigan, a resolution was passed recommending the exclusion from all public schools, colleges, and institutions of learning, of all persons suffering from consumption. To persons who are unacquainted with the nature of this disease and its contagious character, this resolution may seem to be uncalled for. It is nevertheless

demanding by the results of numerous scientific investigations, which have been carried on in relation to this subject within the last ten years.

The great prevalence of this disease, which is responsible for from one fifth to one seventh of all the deaths which occur in civilized communities, indicates the existence of some widely extended cause which ought to be discovered, and, if possible, removed. It is believed by many scientific physicians that this cause is to be found in the inhalation of the dried and pulverized matters expectorated by consumptives. It would seem, if this theory is true, that the presence of a consumptive person in a public school might be the means of destroying the lives of many hundreds of persons; and it is but proper that efficient means should be taken for the protection of the public against this most dreaded disease.

"LUMPY-JAW" BEEF.

THERE has recently been a lively controversy going on in the Chicago papers, the basis of which is an investigation made by the State Board of Live Stock Commissioners, which disclosed the fact that large numbers of cattle suffering from actinomycosis, commonly known as "lumpy-jaw," were being slaughtered and used for food. Actinomycosis is a germ disease which may affect human beings as well as lower animals, being undoubtedly contracted from lower animals, particularly cattle. Drs. Baker and Hughes, who made the investigation, made the following statements in their report:—

"The large tumors, those in the jaws and around the throat, contained pus in a more or less liquid state, and the small tumors or nodules in the bowels and liver, contained inspissated pus, the liquid parts of which had been absorbed into the system. The abscesses in the lungs were large, and contained considerable pus. In such cases there is a continuous ab-

sorption of pus into the system, causing more or less blood poisoning, emaciation, and debility, rendering the meat unfit for food. We made microscopical examinations of many sections taken from the diseased cattle, and in every case found fungus. In our opinion, cattle affected with actinomycosis (lumpy-jaw) are diseased, and the meat from them is unfit for food."

Notwithstanding this clear statement on the part of the eminent veterinarians referred to, a prominent live-stock journal published in Chicago, styles the investigation above quoted as "an utterly senseless scare," claiming that "lumpy-jaw" meat is good food. We are willing to agree that the flesh of "lumpy-jaw" animals is good enough for the editor of such a journal as the one referred to, but human beings who have an average amount of respect for themselves, we feel confident would prefer more wholesome food.

CIGAR POISONS.—According to an article recently published in the *Therapeutic Gazette*, by Dr. Walter Barr, it appears that cigars contain not only nicotine and other poisons natural to the tobacco plant, but a variety of substances which he affirms, in the quantities in which they are taken, are even more poisonous than the nicotine itself, such as valerian, tonka, Jamaica rum, etc. We are not prepared to state how much truth there may be in the Doctor's statement, but it is certainly worth while to know that the poisonous properties of nicotine are re-enforced by those of other dangerous drugs, in thus adding to the deleterious properties of cigars.

KILLED BY BITTERS.—A small boy, the son of a saloon-keeper of Detroit, was recently killed by a dose of "Dr. Harter's Wild Cherry Bitters." These bitters, like other nostrums of the same sort, are chiefly composed of alcohol flavored with some bitter substance. The saloon-keeper kept the bitters in stock, presumably for the benefit of those of his customers who consider it less sinful to swallow bad whisky flavored with bitters than to take their whisky straight. He took a bottle home, and deposited it in the family cupboard, without a stopper. The little boy helped himself to a drink from the bottle, and as the result, he shortly afterward was found by a physician dead drunk, and died in convulsions a few hours later.

A GERMAN professor recently called attention to the fact that persons who eat water-cress, consume a large assortment of small insects in so doing.

A NEW GERM.—A Russian physician of St. Petersburg has discovered that granular ophthalmia, or what is commonly known as granular sore eyes, is due to a germ.

THE foulness of the Seine, from which a large part of Paris draws its water supply, may be judged by the fact that the barbel (a species of fish) in that river, are said to have been nearly exterminated by a kind of fish cholera, which is attributed to the impurity of the water.

THE following from a French medical journal, the *Bulletin de Therapeutique*, illustrates another one of numerous ways in which consumption, now well recognized as a contagious disease, may be communicated: "Dr. Maljean has observed a case of tuberculosis in a musician, which he concluded was due to the use of a trumpet which previously belonged to a phthisical patient. To demonstrate the fact, he introduced through the tubes a certain quantity of sterilized water, which he agitated for ten minutes. Two centimeters of the liquid was subsequently injected into a guinea-pig. The animal died of tuberculosis."

MEASLES OR GERMAN MEASLES?—The question whether German measles, or *rotheln*, is a distinct disease, is still under discussion. Physicians maintain that what are commonly called German measles are nothing more nor less than mild measles, although several medical authorities express a different opinion. At any rate, German measles, like ordinary measles, are contagious, and not infrequently followed by such serious results as chronic disease of the lungs, throat, eyes, and ears; consequently the same precautions should be taken against them as against the ordinary form of the disease.

KILLED BY A FAITH HEALER.—We have long predicted that sooner or later some one of the numerous mind-cure doctors, faith curers, and metaphysical healers about the country, would be involved in a trial for manslaughter, and hence are not surprised to find the following in a recent number of the *Times and Register*: "The practice of faith healing has received a severe check, if not its deathblow, in the city of Toronto. A certain well-known citizen, who had for some time been the subject of diabetes, and had been dieted for it, thought he would give himself the benefit of the newest fashion, and accordingly placed himself in the hands of a Mrs. Stewart, one of the apostles of the new art. Being by her instruction freed from all dietetic restrictions, he speedily died of diabetic coma; and an inquest being held, the jury found that 'he came by his death through the gross ignorance of Mrs. Stewart, who undertook to cure him of his disease, in not advising him to continue the restricted diet prescribed by his former physician.' Mrs. Stewart is consequently now awaiting her trial for manslaughter."

BAD BREATH.—Dr. Frank H. Gardner, in the *Dental Review*, speaks of the causes of bad breath. He concludes: First, decaying particles in the mouth as far back as the pharynx vault, taint the breath, if exhaled, very little, if at all. Second, mouth-breathers have a bad breath when the tonsils are enlarged, or when cheesy masses exist in the tonsillic mucous folds. Third, certain gastric derangements taint the breath only when gases are eructated through the mouth. Fourth, the principal cause of bad breath is decomposition in the intestinal canal, the retention of fecal matter in the transverse and descending colon, and the absorption of gases into the circulation, finally exhaled by the lungs. Fifth, catarrh, nasal, pharyngeal, or bronchial, causes bad breath. Sixth, medicines or aliments which undergo chemical changes below the esophagus may, by rapid absorp-

tion through the stomach walls, or immediately below, give to the breath the characteristic odor. Bad breath is often a source of serious annoyance to patients, and the fact that it has more than a local cause is too often ignored by the physician, who therefore fails to cure it.

HOW THUNDER STORMS SOUR MILK.—There is a popular notion that the souring of milk is somewhat related to thunder storms, and numerous theories have been offered in explanation of this commonly observed phenomena. The latest explanation offered is the fact that the electrical discharges connected with a thunder storm develop ozone in the air, which is supposed to develop acid in the milk by some chemical change. This theory is somewhat erroneous, however, as an examination of milk soured by thunder storms, shows as large a number of germs as are found in milk soured by the natural process. An explanation is to be found in the fact that just prior to the outbreak of a thunder storm, the temperature of the atmosphere is as a general thing unusually high. The elevated temperature facilitates the development of microbes in milk, and thus produces the souring. It is neither the ozone nor the thunder which is responsible for the souring, and due attention to cleanliness, and the cooling of the milk, will be found a perfect preventative.

DANGER TO CHILDREN.—An English contemporary publishes the following warning, which is well worthy consideration: "The widespread custom among children of making dirt-pies, shoveling about the dry earth, making gardens with sticks, etc., is one deserving of notice. Whooping-cough and measles may be transmitted to children who thus make dirt-pies in gardens and parks where crowds of other children play. Recent researches made by MM. Malassez and Vignal have shown that sputa from tuberculous patients treated in the same way as sputa that have fallen on the ground, contain the bacillus of tuberculosis, retaining its vitality and virulence. These scientists have dried, pulverized, and then moistened tuberculosis sputa, and have found the bacillus in the sputa thus treated many times. This treatment is precisely the same as that of all *destritus* which falls to the ground; it becomes desiccated by the action of the air, pulverized by being constantly trodden on, and again moistened by rain. Children with their spades and pails put in motion the dust, which may be laden with germs of transmissible illnesses, especially such as whooping-cough, measles, etc., and swallow them by inhalation."

THE RUSSIAN CURE FOR INEBRIETY.—The soldiers of the Russian army are cured of inebriety by a curious method. The drunken man is locked up, and placed upon a diet of which every article of food has been flavored with his favorite alcoholic drink. The result is that he soon acquires an unutterable and extinguishable loathing of the intoxicant.

POISONED BY GLYCERINE.—It is not generally known that commercial glycerine contains a considerable proportion of arsenic. The fact should be borne in mind by persons who imagine this article to be so harmless that it can be used in almost any quantity. A recent medical journal reports a case in which a gentleman nearly lost his life through symptoms closely resembling those of cholera, by the use of a cheap grade of glycerine. Unless the glycerine is chemically pure, it is liable to produce poisonous symptoms when taken internally.

DISEASE BY SUGGESTION.—The effect of the mind in producing disease has long been understood. Doubtless a large share of the chronic maladies from which people suffer, if not produced, is at least aggravated, by mental influence. The following dialogue, which occurred between an eminent Parisian physician and a patient, illustrates the influence of the mind upon the body in producing disease:—

Patient : "I am suffering greatly, doctor."

Physician : "What appears to disturb you?"

Patient : "I have such susceptible bowels, that yesterday, seeing a man eating a melon, I was immediately attacked by colic."

RAW-MEAT DIET.—Raw meat has so frequently been commended as an article of diet, especially useful in various conditions of the digestive organs in both adults and children, that it is important to call attention to the fact that the danger involved in the use of a diet of this sort is far greater than can be counterbalanced by any good likely to be developed by a diet of raw flesh. Uncooked flesh is very likely to contain the embryo of animal parasites of various sorts, such as tape-worm, trichina, etc. In addition, flesh which has not been subjected to a boiling temperature is certain to contain germs, some of which may be capable of producing the most dangerous symptoms when taken into the human stomach. In our opinion, uncooked flesh should be entirely discarded as an article of food by either sick or well. Raw flesh is less digestible than flesh which has been properly cooked, beside being much more liable to produce disease.

BUTTER FROM BOILED MILK.—It is next to impossible to keep butter perfectly sweet. It is just as hard to keep as milk or meat, unless the milk from which it is made has been boiled so as to kill all the germs. The French people boil their milk and cream before making butter, and then serve the butter without salt; but of course this has to be eaten while perfectly fresh, or else it is not good, lacking the salt, which serves as a preservative to some degree. If butter must be eaten, it had much better be made from milk that has been boiled and not exposed to the action of germs.

DIGESTIVE VIGOR.—The question is often asked why animals are able to eat almost constantly, and yet enjoy good health, since it is claimed that human beings must eat only at certain hours if they are to maintain health. If digestion were with us as with dumb animals, the main business of life, doubtless we might concentrate all our energies upon our stomachs, and keep them filled the most of the time, and still continue in fair health. The lower animals have greater digestive vigor, and less mental ability. Dumb animals have little hard work and few annoyances. Take an animal and worry it as many a poor mother or business man is worried, and it would not live a week. If we undertake to do brain work and muscle work, and at the same time give our stomachs no rest, there will surely be physical failure in some direction after a time. If we want to do the most and the best work, "plain living and high thinking" must be our rule.

LEGISLATION AGAINST TOBACCO.—The New York Legislature has recently passed a law which we would commend to every State. This law makes it a misdemeanor, punishable by fine, for any child actually or apparently under sixteen years of age, to smoke or use tobacco in any form in any street or place of public resort. The law entered into effect the first of September. We hope this law will be vigorously enforced, and can promise most excellent results in the lessening of disease and of crime if the law is thus made effective. We are astonished to see that our esteemed contemporary, the *Popular Science News*, considers this law "an interference with private affairs and personal liberty." The smoking of tobacco on the streets or in a public resort is by no means a private affair. Every one in the vicinity is compelled to participate in the smoke, whether he desires to do so or not. No person has any better right to poison the air which another breathes than to poison the water which he drinks.

FIGHTING DIPHTHERIA BY ERYSIPELAS.—A German physician publishes an account of a case in which the patient was apparently cured of diphtheria by an attack of erysipelas, which supervened. A Polish physician, taking his clue from this fact, has been experimenting with cases of diphtheria by inoculation with erysipelas, and reports most successful results. The number of cases in which this has been tried, is yet too small, however, to form a basis for an opinion as to the value of the remedy. Fighting germs with germs may possibly sometime come to be a practical and therapeutic measure, but at the present time we should hesitate long before undertaking to cure diphtheria by administering a dose of erysipelas germs.

RUSSIAN BABIES.—The Russian peasant mother seems not yet to have emerged from the state of barbarism in her method of treating children of a tender age. The author of "A Journey Due North," thus describes the manner in which these unfortunate little ones are disposed of during the first years of life:—

"The youngest children are always swaddled and rolled up tightly in bandages, so that they may be conveniently put away without risk of getting themselves into mischief or danger.

"I entered a peasant's house, and my first thought was that the Russian peasants had their idols and penates, with their heads carved out in a remarkably life-like manner, the bodies being left in block, rudely cut. One of these 'idols' was lying on a shelf, another hung to the wall on a peg, and a third swung over one of the main beams of the roof.

"I looked curiously, and saw the eyes turn and the head move. 'Why, that is a child!' I cried in astonishment.

"'What else should it be?' the mother asked.

"I went up to the little figure which hung from the wall, and inspected it more closely. On a nearer view I was impressed by the extreme untidiness of the little creature. I could not resist asking if the mother often washed these swaddled babies.

"'Washed!' almost shrieked the mother, 'washed! what, wash a baby? You would kill it!'"

THE EFFECTS OF ALCOHOL ON DIGESTION.—Prof. Kochlakoff, of St. Petersburg, recently experimented on five healthy persons, aged from twenty to twenty-four years, with reference to the effects of alcohol upon digestion. Ten minutes before each meal, each person was given about three ounces of alcoholic liquor, containing from five to fifty per cent of alco-

hol, about the proportion found in ordinary liquors. The following results were obtained:—

"1. Under the influence of alcohol, the acidity of the gastric juice, the quantity of hydrochloric acid, as well as the digestive power of the gastric juice are diminished.

"2. This enfeebling of the digestion is especially pronounced in persons unaccustomed to the use of alcohol.

"3. With increase of concentration (the quantity of alcohol remaining the same) of the alcoholic beverage, the digestive power of the gastric juice still further diminishes.

"4. From the fourth hour of the digestion, the digestive power of the gastric juice increases notably. The acidity of the gastric juice and the quantity of hydrochloric acid are double the ordinary quantities.

"5. Under the influence of alcohol, the secretion of gastric juice is more abundant and continues longer than ordinarily.

"The movements of the stomach are equally diminished, and especially so the greater the concentration of alcohol."

VIGOROUS VEGETARIANS.—The Congo railroad is not yet completed, and the cataracts of this great river render transportation by water possible only to a certain distance; and, curiously enough, there are no beasts of burden in this part of the world. The only means of transport is the shoulders of men. The porters are, according to the *Century*, "natives of the Bakongo tribe, inhabiting the cataract regions. In physique these men are slight and only poorly developed; but the fact of carrying on their heads from sixty to one hundred pounds' weight twenty miles a day, for sometimes six consecutive days, their only food being each day a little manioc root, an ear or two of maize, or a handful of peanuts, pronounces them at once as men of singularly sound stamina. Small boys of eight and nine years old are frequently met carrying loads of twenty-five pounds' weight." This observation agrees exactly with the reports of travelers concerning the great strength of the rice-eating coolies of China, the banana-eating natives of South America, the vegetarian Hindoos, and the barley-fed Turkish peasant. It comports also perfectly with the fact that the strongest members of the animal kingdom, among which must be mentioned the ox, elephant, and hippopotamus, are strict vegetarians. Physiologists who make a scientific study of this question, are coming to recognize the fact that the flesh of animals is not necessary to the maintenance of the highest degree of health and physical vigor.

DOMESTIC MEDICINE



FOR HEADACHE.

HEADACHE may be caused either by an excess or a deficiency of blood in the brain. It is quite probable that headache is as frequently the result of a diminished blood supply as an excess of blood. Headache due to excess of blood is usually accompanied by throbbing of the temples, flushed face, exhilarated pulse, and other indications of vascular excitement. Headache resulting from deficiency of blood is indicated by pallor, uneven pulse, and general symptoms of anæmia.

For relief of headache due to excess of blood in the brain, cold applications may be made to the head by means of ice bags, cloths wet with cold water, or the simple application of cold water to the head by means of a sponge or the hand. The hair should be well moistened, so that the cold water will come in contact with the scalp. The applications must be made continuously, otherwise the effect of the cold

will be to increase rather than diminish the amount of blood in the brain. Derivative applications may be made to other parts of the body, especially if the circulation is defective in these parts, such as warm sitz baths or leg baths, massage to the legs and abdomen, or the application of the flesh-brush to the whole surface of the body.

For anæmic headaches, warm applications should be made to the head, and the patient should swallow a quantity of hot water. Water may also be taken to advantage by enema. The water should be introduced into the bowels slowly, so that it can be retained. By the absorption of the water taken through the mouth or by enema, the amount of blood is so increased that the blood pressure in the brain is also augmented. The simple act of sitting in warm water seems to increase the blood flow to the brain, and often gives relief from a very distressing headache.

THE AIR ENEMA.—An English physician has recently published a report of a case in which obstruction of the bowels in a child was relieved by inflating the bowels with air by means of a pair of bellows. This is a measure well worth remembering. An ordinary Davison syringe may be used in such cases.

THE COLD-AIR CURE FOR CONSUMPTION.—Dr. Briand, a European physician, has been experimenting with what he calls the "cold-air cure for consumption." The following is the method employed: "Slowly accustoming the patient to the action of air, Dr. Briand first opens the window, then moves the bed on which the 'subject' is lying a little nearer to it every day. The last stage of the cure consists in sleeping in the open air, regardless of wind, rain, or snow. It is said that four patients who submitted to the kill-or-cure treatment last winter, have gone home to their families rejoicing, every consumptive symptom having disappeared."

REMEDIES FOR ERYSIPELAS.—Erysipelas is now so well recognized as a germ disease that the remedies recommended for its treatment are naturally those which include some form of germicide. The following methods are respectively recommended by physicians of high authority and large experience:—

1. Wash the affected parts and the surrounding skin with soap, and then apply a solution consisting of one part carbolic acid to twenty parts of alcohol.
2. Apply ordinary mucilage containing one part of carbolic acid to twenty-five parts of mucilage.
3. Apply an ointment consisting of one part carbolic acid to twenty parts vaseline.
4. Paint the affected parts with an ointment consisting of creoline, one part, iodoform, four parts, lanoline, ten parts. Cover with rubber gutta percha tissue.
5. Apply compresses wet with a solution of salicylate of soda, one part to twenty of water, covering the compresses with rubber gutta percha tissue.

FOR SWEATING FEET.—Mix together one part of powdered alum and five parts of finely powdered chalk. Dust this powder on the feet freely twice a day. Sub-carbonate of bismuth may be used in the same way, with good effect.

SWOLLEN FEET.—Swelling of the feet, when of such character that a little hollow, or "pit," is left behind after a few second's pressure of the finger, should always excite alarm, as it is an indication of a condition of the system which may be serious. This kind of swelling may be due to disease of the heart or kidneys, or it may rise simply from a condition of anæmia, or poverty of the blood. In either case it is a condition which should lead to a careful investigation by a competent physician.

TREATMENT OF FEVER.—For some years back, the idea has prevailed that the great danger in fever is a high temperature, and the remedies at present most popular in the treatment of the various forms of febrile diseases, are known as anti-pyretics, among which are anti-pyrene, anti-fibrine, and a great variety of similar drugs. We have, from the first announcement of these remedies, opposed their use, for the reason that they have no hand in removing the causes of the disease for which they are administered. Prof. Cantanni, of Naples, whose authority as an experienced and observing physician is second to that of no contemporary, has recently brought forward a very interesting theory respecting the relation of heat to fevers. It is not generally known that the high temperature connected with febrile diseases is the result of the poisonous matters developed by the germ causes of the disease. The cure of the disease necessitates the destruction of these germs. Prof. Cantanni holds that the elevation of temperature is one of nature's methods of destroying the germs to which the fever is due, and that any medicinal agent, the administration of which has the effect to simply lower the temperature, is a direct damage, since it paralyzes the efforts of nature to antagonize the disease. This theory is one of great interest, and if generally adopted, will greatly revolutionize the treatment of fevers. Dr. Cantanni recommends the use of water as the only safe and proper method of lowering the temperature in fever. The method of treating typhoid fever by means of baths, is obligatory in the French army. As the result, the mortality, which was 24 per cent in 1865, had fallen to 11 per cent in 1876, and to 9 per cent in 1883.

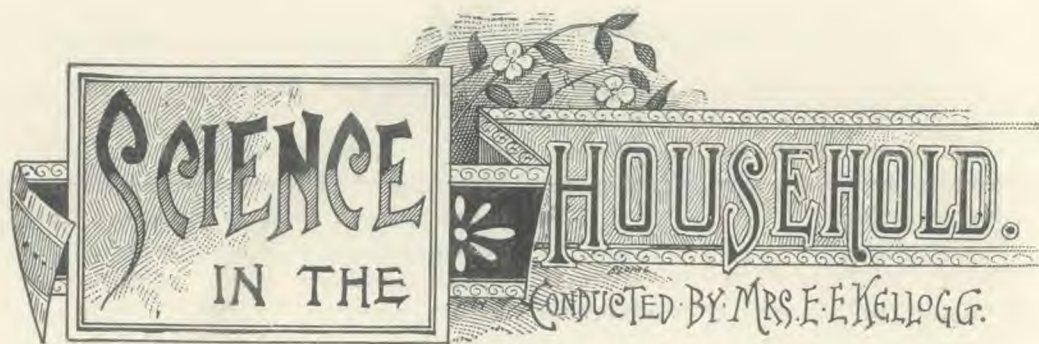
HOW TO STOP PALPITATION OF THE HEART.—According to Dr. Nebo, in the *Journal de la Sante*, excessive palpitation of the heart can always be arrested by bending double, with the head downward and the hands pendent, so as to produce a temporary congestion of the upper part of the body. In almost all cases of nervous or anemic palpitation, the heart immediately resumes its natural function. If the respiratory movements be suspended during this action, the effect is only the more rapid.

DISINFECTION BY SULPHUR.—There has been much discussion recently respecting the efficiency of sulphur as a disinfectant for various infectious diseases, the efficiency of this method of disinfection having been denied by some physicians whose opinions have been widely quoted in the newspapers. Conformatory of the results obtained by the State Board of Health of Michigan, we are glad to be able to quote the following from a work by Dujardin-Beaumetz, entitled "*Les Nouveils Medications*":—

"Twenty grammes of sulphur to a cubic meter (1.53 lbs. per 1,000 cubic feet of air space), destroy the different micro-organisms in a moist state, but it is necessary to increase this dose if one wishes to destroy some organisms in a dry state. In fact, since the last communication to the Academy, M. Bardet and myself, aided by M. Chambou, have continued these experiments upon micro-organisms in a dry state, and particularly upon vaccine virus. We have taken from the pustules of vaccinia, scabs which we have reduced to fine powder, and placed in chambers where were variable quantities of flowers of sulphur. When a dose did not exceed 20 grammes per cubic meter, the vaccine powder did not lose its properties, and one could, by inoculating animals and infants, obtain a vaccine eruption.

"With 30 grammes per cubic meter (2.297 pounds per 1,000 cubic feet of air space), the results obtained were uncertain, sometimes the powder losing its properties; but when the dose is increased to 40 grammes per cubic meter (3.06 pounds per 1,000 cubic feet of air-space), the inoculations are always inactive. So, then, for vaccine, and probably for variola, if one desires to destroy the contagious "germs" in a dry state, it is necessary to double the dose of 20 grammes which we have already fixed.

"According to the experiments of Vallin and of Legouest, 20 grammes are sufficient for typhoid fever, while, according to Vallin, 40 grammes are necessary for the microbe of tuberculosis."



HELPS FOR THE INEXPERIENCED.— II.

Of the various manners of cooking foods, perhaps none is so little understood as broiling, or grilling. This method, which is cooking by radiant heat over glowing coals, is adapted only for thin pieces of food with a considerable amount of surface. The object to be attained by this process is to cook the food in its own juices and at the same time retain them. To accomplish this the heat must be sufficiently intense to immediately sear, or form a crust over, the outer surface of the food, before any of the juices have time to escape. This crust prevents further loss, and the inner portion of the food is cooked in the juice. This is a very desirable method of cooking some foods, as it precludes the loss of any of the nutritive elements.

Roasting is allied to grilling in principle, and the same object is to be attained; but it is only appropriate for bulky articles. Care must be taken, in both broiling and roasting, to first sear all surfaces. In roasting, the time usually allowed for thorough cooking is twenty minutes for each pound of food, less half an hour deducted on account of searing.

Frying, which is cooking by immersion in hot fat, is unhealthful, and consequently the least desirable of all methods of cooking. The ordinary way is that called by the French *sauter*, that is, putting the food into a heated, shallow pan into which but a small allowance of fat is placed, and cooking the article first on one side and then on the other. Foods cooked in this manner are greatly conducive to indigestion, and many cases of dyspepsia might be directly attributed to this very common practice. The article thus cooked becomes incrustated with fat, if not entirely impregnated with it, and it is therefore rendered indigestible, since the gastric juice has little more effect upon fats than has water. Indeed, fats undergo no change in the stomach at all allied to the digestion of other food elements; and not only do fried foods resist digestion, but they hinder the digestion of other foods that have been eaten at the same time. These facts account for much of the unwholesomeness of pie crust, puff paste, cakes, and other similar foods so generally compounded with fats.

DOMESTIC USES FOR AMMONIA.

A LITTLE ammonia in tepid water will soften and cleanse the skin.

Spirits of ammonia will often relieve a severe headache.

Door plates should be cleansed by rubbing with a cloth wet in ammonia and water.

If the color has been taken out of silks by fruit stains, ammonia will usually restore it.

To brighten carpets, wipe them with warm water in which has been poured a few drops of ammonia.

One or two tablespoonfuls of ammonia added to a pail of water will clean windows better than soap.

A few drops in a cupful of warm water, applied carefully, will remove spots from paintings and chromos.

Grease spots may be taken out with weak ammonia in water; lay soft white paper over, and iron with a hot iron.

When acid of any kind gets on clothing, spirits of ammonia will kill it. Apply chloroform to restore the color.

Keep nickel, silver ornaments, and mounts bright by rubbing with a woolen cloth saturated in spirits of ammonia.

Old brass may be cleaned to look like new by pouring strong ammonia on it, and scrubbing with a scrub brush; rinse in clear water.

A tablespoonful of ammonia in a gallon of warm water will often restore colors in carpets; it will also remove whitewash from them.

Yellow stains left by sewing-machine oil on white goods, may be removed by rubbing the spot with a cloth wet with ammonia, before washing with soap.

Equal parts of ammonia and turpentine will take paint out of clothing, even if it be hard and dry. Saturate the spot as often as necessary, and wash out in soap-suds.

Put a teaspoonful of ammonia in a quart of water, wash your brushes and combs in this, and all grease and dirt will disappear. Rinse, shake, and dry in the sun or by the fire.

If those who perspire freely would use a little am-

monia in the water they bathe in, every day, it would keep their flesh clean and sweet, doing away with any disagreeable odor.

Flannels and blankets may be soaked in a pail of water containing a tablespoonful of ammonia and a little suds. Rub as little as possible, and they will be white and clean, and will not shrink.

One teaspoonful of ammonia to a teacupful of water will clean gold or silver jewelry; a few drops of clear aqua ammonia rubbed on the under side of diamonds will clean them immediately, making them very brilliant.—*Scientific American*.

MASHED SWEET-POTATOES.—Either bake or steam nice sweet-potatoes, and when tender, peel, mash them well, and season with cream and salt to taste. They may be served at once, or be made into patties and browned in the oven.

TURNIPS WITH CREAM SAUCE.—Wash and pare the turnips, cut them into half-inch dice, and cook in boiling water until tender. Meanwhile, prepare a cream sauce by heating a pint of thin cream to boiling, and thickening with a tablespoonful of flour

rubbed smooth in a little cold milk or cream. Drain the turnips, turn the cream sauce over, let them boil up once, and serve.

CAULIFLOWER WITH TOMATO SAUCE.—Boil or steam the cauliflower until tender. In another dish prepare a sauce by heating a pint of strained stewed tomatoes to boiling, thickening with a tablespoonful of flour, and salting to taste. When the cauliflower is tender, dish, and pour over it the hot tomato sauce.

AN exchange says in regard to salt: "If the chimney catches fire, run to the salt box, and empty it out upon the flames; they will be reduced as if by magic. If soot falls upon the carpet, cover it thickly with dry salt; it can then be swept up without leaving a stain or a smear. If anything runs over upon the stove and catches fire while cooking, throw salt upon it at once. It will put out the fire and prevent a disagreeable smell, which otherwise may often be retained in the house for days."

THE *Journal of Chemistry* gives the following as an infallible vermin exterminator: "Dissolve two pounds of alum in three or four quarts of boiling water; then apply it with a brush, while boiling hot, to every joint or crevice in the cupboards where ants and cockroaches do congregate, to all the pantry shelves, and to the joints and crevices of bedsteads. Brush all the cracks in the kitchen floor, and in the baseboards with this mixture. A cement of chloride of lime and alum, used to stop rat-holes, and the walls and cracks and corners washed with hot alum, with borax added, will drive away rats and mice, as well as insects."

BAKING THE CANS.—Many a housekeeper, felicitating herself, as the canning season approached, upon the fact of having on hand a large number of old cans, "just as good as new," has, as time went on, been grievously disappointed in those same cans, and found to her disgust that fruit sealed up in them could not be depended upon at all. "Dear! dear!" said one to us a while ago, "although I always scald them the same as I do the new cans, and always use all new rubbers, I have to watch those old cans more than all the rest of my fruit put together. What can be the matter?" "Have you ever tried *baking* the cans in a hot oven?" we suggestively inquired. She tried the plan at the beginning of the present canning season, and has so far had no trouble whatever. She placed the cans in a cold oven, and then built a fire as if to bake bread. She baked the cans and their lids, thoroughly, to the utter extermination, no doubt, of every germ so unlucky as to abide therein. Then, to cool them, she let them remain in the oven until the fire went down, thus cooling them off gradually. Housekeepers treating their old cans in this way, will, we feel sure, have little to complain of as regards their keeping qualities.

E. L. S.

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.]

RAW POTATOES.—Mrs. L. J. C. wishes to know if eating raw potatoes will prove injurious to children.

Ans.—The starch of raw potatoes is not easily managed by the digestive organs, and must be treated by the stomach and bowels as so much unusual substance.

SODA IN BEANS.—Mrs. S. V. D., N. Y., asks: "Should soda be used in parboiling beans?"

Ans.—There is no more harm in using soda for parboiling beans than for hulling corn. The solution should be weak, however, and should be carefully washed out before the beans are used as food. It is not, however, the best method of preparing either beans or corn.

COTTAGE CHEESE.—W. C. E., Minn., wishes to know the food value and digestibility of cottage, or Dutch cheese.

Ans.—The food value of cottage cheese, if made in such a manner as to destroy the germs contained in the sour milk, or if made by curdling sweet milk with lemon juice, is somewhat higher than that of ordinary sweet milk. It is also somewhat more digestible than ordinary milk.

GRADES OF FLOUR.—D. C. P., Minn., writes: "Our millers make three grades of flour, patent, straight, and baker's. Which would be the most wholesome to use in a family with growing children? and will a pound of patent flour make more bread than the same amount of the others?"

Ans.—Patent flour is the only grade of flour made by the modern process of milling which can be recommended. The gluten contained in the other grades of flour is sacrificed to increase the quality of the "patent flour."

REMEDIES FOR INSOMNIA.—Mrs. S. M. S., Mich., says she has tried teas made of hops, camomile flowers, and celery-seed for sleeplessness, and has also been advised to take an asafetida pill. She wishes our opinion of these drugs, and to know if lime-water, or a raw egg taken before breakfast, will aid a weak digestion.

Ans.—We do not approve of the use of sleep-producing drugs of any kind. They render the nerves obtuse, but do not renovate the exhausted system. Sleep should be obtained by removing the cause of the sleeplessness. Lime-water used as a remedy is sometimes useful, but more often does harm. Raw

eggs are easily digested if beaten to a stiff froth. They should never be taken without beating. Raw eggs are nourishing, and may be used in some instances to advantage.

HOW TO STERILIZE MILK.—Mrs. E. H. B., Wis., wishes to know how milk is sterilized.

Ans.—By boiling. Put the milk in a bottle, place the bottle in a kettle of water. Bring the water to a boil, and continue boiling for half an hour. Cork the bottle with a clean stopper before removing it from the water. Keep it in a cool place. The next day remove the stopper, and boil again for fifteen minutes. Repeat this for three days in succession, if the milk is to be kept for any length of time. If it is to be used at once, one boiling is sufficient.

DIET, ETC., FOR OLD AGE.—E. P., Tex., is seventy years old, of good habits, enjoys good health, and wishes to preserve it by a strictly hygienic life. He asks for information on the following points: 1. Diet, out-door exercise, bathing. 2. His teeth are nearly gone; would it be advisable, at his age, to have them extracted, and a false set made? 3. Would reading at night aggravate failing eye-sight? 4. Would the use of a cane induce a bowed back? 5. Should he abandon business altogether? 6. Would a change of climate from Texas to California be beneficial? 7. Is fond of fish and salt bacon; are they liable to do him injury?

Ans.—1. Adopt a strictly hygienic diet, plenty of fruits, grains, milk and cream, no condiments, little or no flesh food, avoiding fats and all articles difficult of digestion. Be very careful to avoid excess in eating. Two meals a day with about seven hours between meals are preferable to more. Live out-of-doors as much as possible. Take a tepid bath, to be followed by a vigorous rubbing two or three times a week. Follow the bath by rubbing the skin with oil during cold weather. Stimulate the skin by use of the flesh-brush every morning. 2. By all means have decayed teeth removed, and artificial teeth substituted. 3. Reading at any time in a bad light should be avoided. In a good light, when the eyes are not over-taxed, they may be used without injury. 4. No. 5. No. 6. California affords all kinds of climate. Some portions of Texas afford as healthful climate as any portion of the world. 7. By all means avoid salt bacon. A moderate use of fish is not likely to be followed by any apparent injury.

LITERARY NOTICES.

THE *Jenness-Miller Magazine* for October comes with an increased number of pages, and many really bright articles touching congenial topics, trenchantly written and elaborately illustrated. Among its excellent contributions are those on "Physical Culture," under the title of Philosophy of Motion; "Politeness"; "Social Etiquette—Mourning"; "Tapestry"; Mrs. Miller's Story, "The Philosopher of Driftwood"; "A Classic Toilet"; "A Girl Student's Year in Paris"; Fashion and Fancy; Book Reviews, etc. Jenness-Miller Pub. Co., New York.

THE *Chautauquan* for November contains "The Intellectual Development of the English," by Edward A. Freeman; "How the Saxons Lived," by R. S. Dix; "The Tenure of Land in England," by D. McG. Means; "What Shall we Do with our Children?" by Harriett Prescott Spofford; "The Origin in Literature of Vulgarisms," by Professor Edward A. Allen; "Observations on Greenland," by Charles M. Skinner; Woman's Council Table: "Points of Law Which Women Should Understand," by Lelia Robinson Sawtelle; "The Paraphernalia of an Ideal Kitchen," by Katherine Armstrong; "A Song of Reunion for Thanksgiving Day," by Flora Best Harris. *The Chautauquan*, Meadville, Pa.

WITH the November number, the *Century Magazine* completes its twentieth year. One of its special features for the year to come,—the Gold Hunters,—is begun by John Bidwell's illustrated paper describing "The First Emigrant Train to California." W. Woodville Rockhill begins another important series in his "An American in Thibet." Dr. Albert Shaw heads the list in a series on municipal government, by his contribution entitled, "How London is Governed." There is also a pictorial series begun in this number, headed by Will H. Low's "The Portrait." The astonishing progress made in magazine printing during the last twenty years, is celebrated in an illustrated article by Theo. L. De Vinne, of the De Vinne Press. Altogether, this is a remarkable number. The Century Publishing Co., New York.

Scribner for November has much of unusual interest. Herbert Ward, the African traveler, tells the "Tale of a Tusk of Ivory," with the history of a tusk from the trapping of an elephant, to the sale of the ivory on the coast. The narrative is finely illustrated. "A Day with a Country Doctor" is written, drawn, and engraved by Frank French. "Through the

Grand Canon of the Colorado" (illustrated), by Robert Brewster Stanton, is the story of a railroad surveying expedition along the Colorado river,—a distance of twelve hundred miles. Mrs. Frederick Rhinelander Jones gives much definite and explicit information on the subject of nursing. Another illustrated article of travel and adventure, though in a widely different sphere, is R. F. Zogbaum's "With Yankee Cruisers in French Harbors," the concluding article on the recent cruise of the "White Squadron." Charles Scribners' Sons, New York.

St. Nicholas begins its eighteenth year with the November number, which is filled to overflowing with things that delight the eye and cultivate the taste of its young readers. We notice with especial interest, "David and Goliath in Naval Warfare," by John M. Ellicott, U. S. N., illustrated from photographs. This article gives in language shorn of technicalities, the chief types of torpedo boats, the manner of their use, explaining the difference between the old man-of-war and the new. "A Giant with a Sweet Tooth" illustrates many of the habits of the elephant at home, and "Through the Back Ages" (seventh paper) by Teresa C. Crofton, tells in a most interesting and enjoyable way where the big boulders came from, and explains the formation and the march of the glaciers. The Century Publishing Co., New York.

"JOTTINGS FROM THE PACIFIC: Life and Incidents in the Fijian and Samoan Islands," by Emma H. Adams, 160 pp., illustrated, Pacific Press Publishing Co., Oakland, Cal. This volume gives in brief, an exceedingly well-written and interesting description of the Fiji and Samoan groups, their government and religion, physical and social peculiarities, wonderful productions, together with their manners and customs, and many of their traditions.

Uniform with the above in style and price, issued by the same house, and likewise forming a part of their "Illustrated Young People's Library," is "SIBERIA AND THE NIHILISTS," by William Jackson Armstrong. The writer, with the opportunities afforded by his official capacity, has undoubtedly drawn a true picture of Russian barbarism in connection with her political prisoners. Strong and vivid as it is, this little book with its terrible array of blood-curdling facts and statistics, can hardly fail to fulfill its mission,—that of educating its young readers to a deeper love for our own free land and institutions, and an uncompromising hatred of autocratic brutality.

PUBLISHER'S PAGE.

WANTED.—A live agent to canvass for GOOD HEALTH in every State and town in the United States. A liberal commission given.

* *

FOR THE HOLIDAYS.—A valuable holiday present for both young and old, is a copy of the "Sunbeams of Health and Temperance," which will be sent post-paid on receipt of price. The work contains over 240 quarto pages, including colored plates, and is bound in cloth, embossed in jet and gold; gilt edges. Agents are wanted to introduce this book for holiday trade. A large business can be done in the next sixty days by agents who will push the work energetically.

* *

THE editor is constantly in receipt of letters calling for homes for orphans or friendless children. Appeals are also frequently made from parents who wish to place their children under hygienic care, and where they will be properly trained. For the information of many who are making inquiries of this sort, we wish to say that the Sanitarium is a medical institution, and is not authorized by its charter to engage in work of this sort. The work which has been and is being done in this line is a personal effort on the part of the editor of this journal and his wife. The dozen little waifs now under their care are all they can at present accommodate in their home, and all their resources enable them to support and educate. They hope, however, to be able to enlarge the number from time to time. An effort is being made to meet the existing demand by the organization of an "Orphan's Home," which shall be carried on upon strictly hygienic principles. When organized, as it probably will be in the near future, this home will be a place in which children will be submitted to a rational system of education, which will train the whole individual, giving due attention to physical as well as mental and moral development. Any who are interested in this enterprise are invited to correspond with the Editor.

* *

THE Sanitarium patients are rejoicing in the possession of a large, new parlor, which occupies almost the entire first story of the six-story addition made to the main building the present summer. The new parlor is 40 x 50 feet in size, and connected with it by large sliding doors are two other rooms, 20 feet square,—a ladies parlor, and a library. The parlors are beautifully finished in oak. The floors are of oak, arranged in artistic manner, and covered with large dhagistan rugs of varied and beautiful patterns. Numerous large plate glass windows admit an abundance of light, which brings out with fine effect the beauty of the natural wood finish in the paneled doors and windows. Scores of easy chairs of various forms and styles invite the invalid as he enters the commodious rooms, while a huge grate of wood, bearing, on a pair of old-fashioned andirons a heap of imitation logs, heated by gas, gives a rustic and home-like charm to the place, which makes the stranger feel at ease at once, and fitly harmonizes with the home atmosphere which pervades the entire place.

The Sanitarium is a good place for sick people to be at any season of the year, and there is probably no place on the continent where the average invalid can spend the winter to better advantage than at this institution. A large proportion of those who annually migrate to warmer climates would receive far greater benefit, from a few weeks' stay at this unrivaled institution.

A GOOD BUSINESS.—One thousand agents are wanted to engage in the circulation of GOOD HEALTH and the other publications of the Good Health Pub. Co. There is no more profitable business in which a young man or a young woman can engage at the present time than that of selling by subscription a useful and attractive periodical. This business, which was once considered hardly respectable, has come to be an established profession. A subscription book agent who will pursue his business in a straight-forward and honorable manner, may make himself as useful as a colporter or a city missionary. A good book left in a family is a silent but most effective missionary, the influence of which can scarcely be estimated. There are thousands of young men and women engaged in various trades and vocations, the utility of which is very limited in character, who might, by a proper course of preparation, be fitted to engage in a work which is not only one of the most useful, when pursued with the right purpose, but which offers pecuniary rewards much superior to those offered by the ordinary pursuits of life, such as farming, mechanical work, school-teaching, etc. Young men and women of ability can generally command from fifteen to fifty dollars a week in the introduction of a useful book. There is no class of literature of which people stand in greater need, nor which is capable of accomplishing more good, than works such as are issued by the Good Health Pub. Co. The following are the leading works which are now offered by this Company, for sale by subscription book agents: "Home Hand-Book of Domestic Hygiene and Rational Medicine," "Man, the Masterpiece; or Plain Truths Plainly Told about Boyhood, Youth, and Manhood," "The Ladies' Guide in Health and Disease; Girlhood, Maidenhood, Wifehood, Motherhood," "Sunbeams of Health and Temperance."

* *

EXCURSION TO CHICAGO.—The Chicago & Grand Trunk Railway announces their last excursion to Chicago for the season, to be run Wednesday, Nov. 12, the tickets to be good for all trains west-bound on that day, and good to return up to and including Monday, November 17, on all trains leaving Chicago, and stopping at station from which ticket was purchased. Provided, however, that on limited trains No. 3, leaving Chicago at 3:15 P. M., and No. 7, leaving Chicago at 10:30 A. M., holders of excursion tickets will only be admitted to the train after holders of regular tickets have been admitted, and then only up to the seating capacity of those trains. Extra sleeping-car accommodations will be provided for those desiring to take the night trains. The rate from Battle Creek will be \$4.80. Agents have been supplied with special advertising, giving the details, which will be furnished on application.

* *

CROFUTT'S OVERLAND GUIDE TO THE WEST.—Crofutt's Overland Guide, just issued, graphically describes every point on the Union Pacific, "The Overland Route," between the Missouri River and the Pacific Coast. Persons should not start West without a copy of this guide in their possession. It furnishes in one volume a complete guide to the country traversed by the Union Pacific System, and cannot fail to be the greatest assistance to the traveler. It is for sale on trains on the Union Pacific, or by enclosing \$1.00 to the undersigned, a copy will be mailed to any address in the United States. E. L. LOMAX, Gen'l Pass. Agent U. P. R'y, Omaha, Neb.

PUBLISHERS' PAGE — Continued.

CHICAGO, MILWAUKEE & ST. PAUL R'Y. — Electric-Lighted and Steam-Heated Vestibuled Trains, with Westinghouse Air Signals, between Chicago, St. Paul, and Minneapolis, daily. Through Parlor Cars on day trains between Chicago, St. Paul, and Minneapolis. Electric Lighted and Steam Heated Vestibuled Trains between Chicago, Council Bluffs, and Omaha, daily. Through Pullman Vestibuled Sleeping-Cars, daily, between Chicago, the Yellowstone Park, Tacoma, and Portland, Oregon. Solid Vestibuled Trains, daily, between St. Paul, Minneapolis, and Kansas City, via the Hedrick Route. Through Pullman Sleeping-Cars, daily, between St. Louis, St. Paul, and Minneapolis. Finest Dining-Cars in the World. The best Pullman Sleepers. Electric Reading-Lamps in Berths. 5,700 miles of road in Illinois, Wisconsin, Iowa, Minnesota, Missouri, South Dakota, and North Dakota. Everything First-Class. First-Class People patronize First-Class Lines. Ticket Agents everywhere sell Tickets over the Chicago, Milwaukee, and St. Paul Railway. A. V. H. Carpenter, G. P. & T. Agent, Chicago, Ill. Harry Mercer, Mich. Pass. Agt., 90 Griswold St., Detroit, Mich.

* *

MONTANA, OREGON, AND WASHINGTON. — The Northern Pacific Railroad passing through Minnesota, Dakota, Montana, Idaho, Oregon, and Washington, was the first line to bring the region occupied by these States into communication with the east. Its main line and branches penetrate all sections of these

States, reaching nine-tenths of the chief cities. It is the short line to Helena and Butte, Mont., Spokane Falls, Tacoma, and Seattle, Wash., and Portland, Ore., and the only line running through train service from the east through the States of Montana and Washington. Pullman Sleepers and furnished Tourist Sleeping-Cars are run via the Wisconsin Central and Northern Pacific, and Pullman Palace Sleeping-Cars via Chicago, Milwaukee & St. Paul, and Northern Pacific, from Chicago through to the Pacific Coast without change. This is the Dining-Car and Yellowstone Park route. The large travel on the Northern Pacific line necessitated the inauguration in June, 1890, of a second through train to the Pacific Coast, thus enabling this road to offer the public the advantage of two through trains daily to Montana and points in the Pacific Northwest, carrying complete service of sleeping-cars, dining-cars, and regular day coaches. The train leaving St. Paul in the morning runs via the recently completed Air Line of the Northern Pacific through Butte, Mont., making this the shortest line to the latter point by 120 miles. Colonists for Washington, Oregon, and British Columbia points should take no other line than the Northern Pacific, as by this line only, can all portions of the State of Washington be seen. Stop-overs are allowed on second-class tickets at Spokane Falls and all points west, enabling settlers to inspect the country without extra expense. For Maps, Time Tables, and Illustrated Pamphlets, or any special information desired, address your nearest ticket agent, or Chas. S. Fee, G. P. & T. Agt., St. Paul, Minn.

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.....	P. M.	11.55	P. M.	12.05
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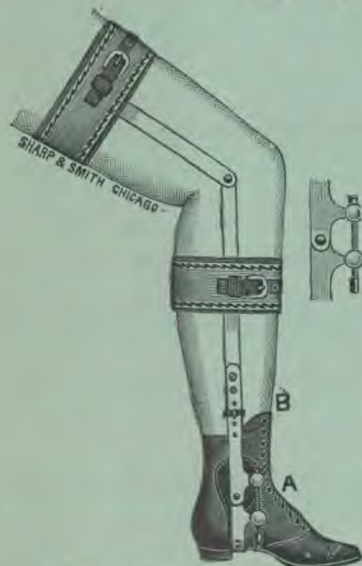
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