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VEGETARIANISM.

IT is a fact perhaps not generally understood that the mode of life known as vegetarianism is steadily gaining ground, year by year attracting fresh adherents, forming new societies, issuing new periodicals, and, in short, employing well-organized means of every kind to promulgate by example and exhortation its peculiar principles and theory. Through its zealous and enthusiastic votaries, it is, therefore, becoming familiar to the world as a distinctive system recognized by principles that certainly appeal most plausibly to what appear to be the plain indications of nature regarding man's physical life. These principles are stated as follows:—

The vegetarian selects the most commodious apartment in the house as a sleeping-room, securing, if possible, exposure to the full morning sun, and sleeps, winter and summer, with open windows, the bed consisting of mattress, cotton or woolen coverings, and a flat horse-hair pillow. A daily bath from head to foot, or a half-bath, with vigorous rubbing, is never omitted. As far as may be, he lives in the open air; and if this be impossible, owing to the nature of his occupation, he works for the greater part of the year, at least, with open windows. The vegetarian diet consists of grains, fruits, and vegetables, to which some will add milk, butter, and eggs; the daily bread is made from Graham flour, a coarse-ground wheat undivested of bran, and baked without salt, yeast, or leaven of any kind. As regards drink, he indulges only in water and the juice of various fruits; inasmuch, however, as vegetarians eat no salt, no spiced or highly-flavored food, and never smoke, they have but little thirst, and small requirement for liquids. Through the observance of these simple rules, taught, as he believes, alike by nature and common sense, the vegetarian secures at once health, cheerfulness, and strength, and at the same time subsists at less than half the expenditure incurred by the flesh-eater and consumer of spirituous drinks.

But it is especially among the happy children reared under this system,—children whose stomachs are never made the sepulchres of animal matter,—that its advantages are most apparent. Rosy, intelligent, and light-hearted, enjoying full immunity from scrofula, "nerves," and even the law-imposed vaccination, against which all vegetarians strongly protest, these children invariably present a very marked superiority over those raised on different principles. In fact, Prof. Niemeyer, M. D., though no vegetarian himself, goes so far as to assert that "none but vegetarian mothers can produce really sound and healthy children."

Furthermore, it may be safely claimed, that a man who from infancy has followed this mode of life, may count with certainty upon old age and a painless death. "Euthanasia" is the name applied to this natural and gradual falling asleep which sometimes accompanies, and was doubtless intended to crown old age; and, in truth, all things teach us that gentle nature would have man drop from the great life-tree as peacefully and painlessly as the mature and beautiful leaf flutters from its stem on the late autumnal day.

"The being who lives unnaturally must meet early destruction," says Goethe; and in his work on longevity, the French philosopher, Flourens, declares that, "In the luxurious and perverted mode of life common to this present age, man does not *die*,

but kills himself." Alas! it must be admitted with Schopenhauer, "Man no longer comprehends the language of Nature, it has become too simple for him."

And last, but not least, should vegetarianism strongly commend itself to the race of to-day in consideration of the claim openly put forth, especially by its votaries of England and America, that it alone offers a key to the problem known as the great Social Question, and exerts an influence such as no other system can hope to do, on social reform.

It is possible that many may ask, Why, then, if really possessed of such palpable advantages, are not these principles of life more generally and promptly adopted by thoughtful, intelligent minds? The answer has been given by two of our deepest thinkers. Mankind is too weak, too little master of itself, to reject indulgences estimated as pleasures, and therefore is unwilling to abstain from the so-called enjoyment and stimulation of animal food and strong drinks. Logical arguments are sought for assailing the principle which denounces this weakness, and, none being found, jests and ridicule are blindly hurled against the supporters of this new life. But no longer is vegetarianism regarded as the whimsical hobby of modern would-be world reformers; for it can be readily proven the primitive rule of life in all ages and among all people. It is only through the sweeping changes wrought by time and events, the pernicious influence of false ideas of culture, and the fictitious wants growing out of a misdirected civilization that the voice of Nature has slowly been drowned and well-nigh forgotten. The wisest among the wise of the ancients, law-givers, creed-founders, and philosophers, not only accepted this as the true system for man, but regarded it as essential to the highest physical, mental, and moral perfection of individuals and nations. From Plutarch to Cuvier, all philosophers have taught that man's physical construction plainly indicates fruits and plants as his proper food; and on the first page of the Bible (Genesis 1 : 29) stands written the command that the fruits of the earth "shall be to him for meat." Gladly would the wise but harassed Moses have led his people from their perverted ways again to this food of paradise, but they sighed and murmured for the flesh-pots of Egypt; and that whole corrupt generation, after clamoring for meat granted them, met death in the wilderness, and were denied an entrance into the land of promise, flowing with "milk and honey," not flesh and blood.

There are many who accept vegetarianism for different reasons, while attaining the same result. They may be classified as follows: 1. Vegetarians from religious convictions; 2. Vegetarians on scientific principles; 3. Vegetarians on sanitary grounds; 4. Vegetarians from æsthetic and humane principles; 5. Vegetarians from economy; 6. Vegetarians necessarily such from their physical condition.

It will require but few words to characterize distinctively each of these classes.

Vegetarians from religious convictions have written many volumes proving their principles from the Bible; and in England this class separates itself from other vegetarians, and its members are called Danielites, from Daniel 1 : 8; and they also call themselves "Brothers," and give aid to each other under all necessities, yielding ready assistance whenever called on, thus at once realizing and solving the "social idea and problem." They carry their convictions and practices beyond all other vegetarians, even clothing themselves on vegetarian principles, using neither silk, wool, nor leather in their apparel, their shoes being made of "vegetable leather."

In her compulsory and frequent fasts, the Catholic church has at least partially preserved to mankind the blessings of this food of paradise, and unconsciously rears a memorial to its claims as the true and divinely appointed diet for man. The members of her most rigid orders, the Carthusians, Trappists, and Camaldolites, all abstain habitually from flesh; and it is remarkable that these monks have ever been noted for health, strength, and vigorous old age, and never has a contagious disease been known in their cloisters.

Vegetarians on scientific principles base their convictions on the writings, both of antiquity and later ages, and the knowledge of the human body. The salivary glands, the teeth, the articulation of the bone of the lower jaw, the zygomatic arch, the masticatory muscles, and, in fact, man's entire internal construction testifies, in their judgment, that he was created as a consumer of fruits, not flesh. Admitting this, then, as the original design of his existence, the vegetarian logically concludes that man can find his truest welfare only by obedience to this law of his formation. These deductions are fully sustained by vegetarians on sanitary

grounds, not only by personal demonstration of their value, but also by the testimony and example of the most noted men of ancient and modern times. Asclepiades, the great physician, whose fame still echoes through the ages, invariably cured his patients by prescribing for them herb and vegetable diet, and he himself wagered never to be sick so long as he abstained from flesh.

In his work on the "Art of Prolonging Human Life," Hufeland says: "The men attaining the greatest age on record have not been flesh-eaters, but, on the contrary, strict vegetarians." Even Leibig asserts that grains, particularly wheat, contain quite as many, perhaps more, nourishing qualities than meat; and of the so-called flesh diet, he says; "To the really weak, meat broth imparts no vigor."

Perhaps it is not generally known that the trained athlete of old was compelled to abstain from flesh to acquire greater strength; and the porters, or carriers, of Constantinople and Rio Janeiro, who carry on their shoulders for a long distance, weights often reaching five or six hundred pounds, the sturdy Scots, Swiss, and Tyrolese, and the indefatigable field laborers of Italy, all live on fruits, oatmeal, maize, and polenta.

In fact, it may be said, if a vegetarian has committed no early dietetic sins for which he must atone, or has inherited no physical infirmities from diseased parents, then it is simply a shame for him ever to plead sickness; he will be a living exemplar to himself and others of the truth of the old proverb: "*Modicus cibi, medicus sibi*"—"He who eats temperately and naturally may be his own physician." It must be admitted by all that the stomach is our most abused, most maltreated organ; and though intended as our good-natured, obedient servant, yet man's impositions and exactions are such that, after long-endured misery, it rebels, and becomes his enemy and his tyrant.

It is another principle with vegetarians to take no medicine; every disturbance of health is met by the simple suggestions of Nature's own laws; a more careful attention to diet, rest, raiment, bathing, friction, and an abundance of fresh air day and night, believing fully in the old truth: "*Natura sanat, non medicus*"—"Nature cures, not the physician."

It is also not generally known that the word "vegetarian" is not derived from "vegetable," but from the Latin, *homo vegetus*, meaning, among the Romans, a strong, robust, thoroughly healthy man.

It is further held by the vegetarians that the great misery, the innumerable evils arising from the curse of drunkenness, can only be effectually checked by a universal return to this mild, healthful diet of fruit and vegetables, firmly believing that it is the rich, highly-flavored, and unnatural food that creates the craving for stimulating and unnatural drink; and by each in turn aggravating and exciting the demand for the other, the evil is strengthened hopelessly.

The vegetarians on humane and æsthetic principles have compiled many books from various authors and poets, all protesting against the cruelty and barbarity of animal slaughter, and man's unwarrantable abuse of power in thus subjecting helpless creatures to his own selfish appetite. From Pythagoras, the great promoter of vegetarian views, from Plato, Virgil, Ovid, down to Goethe, Schiller, Jean Paul, and Schopenhauer are these earnest appeals and sentiments gathered; and it is believed that the most thoughtless epicure would become a convert to their convictions if more familiar with the piteous details inevitable to this wholesale destruction of animal life. A notable thing in connection with this subject is the fact that in England, butchers cannot serve as sworn functionaries in cases relating to murder. It may be justly claimed that vegetarians are the only genuine friends and protectors of animals.

A word, now, in regard to the sixth class vegetarians, who may be called such from necessity, or the requirements of a diseased system, and it must be admitted that of these there is little either of interest or value to say. As a rule, they are men who, having already weakened and ruined the constitution by excessive indulgence contrary to nature, adopt vegetarian principles as a last resort, in the hope of regaining bodily and mental health. These miserable specimens of humanity are often found in vegetarian hospitals, and, as walking shadows and death-marked victims, are pointed out by the opponents of vegetarianism as warning examples of a fallacious system. But the "full-blooded vegetarians" offer a very different aspect; they are erect pictures of perfect health, and have long cheerfully and serenely accepted the epithets of "grass-eaters" and "starvelings," bestowed upon them in ridicule by the dyspeptic, diseased carnivorants,

comforting themselves with the full conviction that "he laughs best who laughs last."

On the score of relative cost of living, the subject is a very interesting one. A book entitled, "How One may Live on Sixpence a Day," written by an English vegetarian, has passed through several editions, and been translated into several languages. It may surprise many to learn that I know millionaries among this class of people, who never spend more; and I now take pleasure in copying an article that once appeared in *Fraser's Magazine*, sent me by the late Thomas Carlyle, whom I had the honor of visiting in 1876. It is merely some facts concerning the life and family of an English vegetarian, whose name, for certain reasons, is withheld:—

"Mr. N., the son of an English clergyman, was born in 1811, and when fourteen years of age, came to the north of England as a clerk in the house of a merchant. Having for three years served as apprentice, he was promoted to a salary of ten shillings weekly, and about that time, becoming interested in the vegetarian mode of life, he adopted its principles; and by the time he reached his twenty-first year, had saved enough from his small income to furnish three rooms, and take unto himself a wife.

"For some time his salary remained the stated ten shillings, 'and this,' he says, 'is the manner in which my wife and I apportioned it: three and one-half shillings went weekly for house rent; one shilling for fire and light; three and one-half shillings for food; and there remained two shillings for clothing and emergencies. Our diet was varied as follows: Bean porridge, three times a week; potatoes, twice a week; batter pudding without eggs, twice a week; carrots, turnips, or some fresh vegetable daily. For breakfast we ate oat-meal mush (the Scotch diet for centuries past) and bread, and for supper a little weak tea, but more frequently, water.'

"When the first son was born to this frugal young couple, the father's salary was increased to eighteen shillings weekly, and from this comparatively munificent income, Mr. N. laid by so much that in a few years his wife was able to open a small dress-making establishment; again his salary was raised, and his wife's establishment was enlarged from year to year; he was promoted from clerk to bookkeeper, then to partner, and, finally, by the death of the sickly heir of the principal, he became sole possessor of the great business house which he had entered as a poor apprentice at fourteen years of age. His present income, as estimated, is from fifteen to eighteen thousand pounds sterling annually.

"Besides his business establishment in the city, he owns a villa in the country, containing thirty rooms and an art gallery, and surrounded by extensive vegetable and fruit gardens, essential, of course, to a vegetarian household. His wife, his eight children, and his domestics are all vegetarians, and there are many who, following his example and instructions in adopting these principles, have secured to themselves comfortable incomes for life. His children are described as healthy, strong, and cheerful, with well-instructed minds, well-formed bodies, sound teeth, and fine, abundant hair."

This wealthy and fortunate vegetarian is ever more firmly impressed with the wisdom and value of the course he has followed, and freely declares it is his conviction that through a universal adoption of vegetarian principles, nine-tenths of the crime and pauperism now in the world would be abolished, and that the public debt of England, if desired, could be liquidated in thirty years.

Every true vegetarian heartily indorses this opinion, and cordially hopes that the readers of this article, not already of their number, may be persuaded to enter the sunny path marked out for man by nature, and in which they alone may find health and happiness.—*Ueber Land und Meer.*

SOME OLD PRESCRIPTIONS.

COLLECTED BY EFFIE HAND MARTIN.

A CERTAIN general who was careless in regard to his person, although very brave on the field, complained to Judge Bushe of Ireland of the intense rheumatic pains which he had to endure. Mr. Bushe claimed to have a remedy which would benefit his friend. After telling him to have his servant bring him every morning a tub three-quarters full of water, he gave the following prescription: "You will then get into the tub, and having previously provided yourself with a pound of yellow soap, you must rub your whole body with it, immersing yourself occasionally in the water, and at the end of a quarter of an hour, the process concludes with wiping yourself dry with towels, and scrubbing

your person with a flesh-brush." It is said that the general thought the matter over for a few seconds, and then remarked, "It seems to be neither more nor less than washing one's self." Where-upon the Judge confessed that the prescription was "open to that objection."

Another striking prescription, or, more properly speaking, antidote, was that suggested by Charles Mathews the elder, the comedian. During his last illness, a friend attempted to give him some medicine, and by mistake gave him a drink of ink. This frightened the friend, but upon telling Mathews of the mistake, the latter took the news coolly, saying, "Never—never mind, my boy—never mind; I'll swallow a bit of *blotting-paper*."

Still another prescription, equally as good, was given by Sir Richard Jebb, a physician of renown, who, when asked by a patient what he should and should not eat, said, "You must not eat the poker, shovel, or tongs, for they are hard of digestion; nor the bellows, because *they* are windy; but eat anything else you please."

It is not always safe to follow prescriptions, as is shown in the case of one of Dr. Cheyne's patients, for whom the latter wrote a prescription. Calling the next day, the Doctor asked if he had followed his prescription, and was answered in the negative; "For," said the patient, "if I had I should have broken my neck, for I threw it out of a two-pair-of-stairs window."

Dr. Cheyne's patient showed perhaps more sense than did the man who, when told to take his medicine in the "vehicle most convenient or agreeable," sent his servant to call a closed carriage, so that he could get in it to swallow his medicine.

A safe prescription for old or young, but nothing new to many ears, is the following:—

"Early to bed and early to rise
Will make one healthy, and wealthy, and wise."

Somewhat similar to this is an old one known in France during the reign of Francis I., which reads:—

"Rising at five, and dining at nine,
Supping at five and bedding at nine,
Brings the years of a man to ninety-and-nine."
—*Good Cheer.*

[The old rhyme, with which the above bit of spice closes, suggests that the custom of eating but two meals a day, which prevails in France at the present time, was in existence more than three and a half centuries ago.—ED.]

SLEEP AS A RECREATION.

"WHAT is your favorite amusement?" asked a friend of the Rev. Charles Kingsley. "Sleep," was the reply.

This answer absurd as it may at first seem to us, has in it a germ of sound physiological truth, especially if we substitute the word "recreation" for "amusement." Recreation primarily means re-creation,—the creating anew. Bridget said that when she slept, she "paid attention to it;" and truly that sleep is the most refreshing and beneficial which engages the whole attention of every part of the organism, and thus becomes, for the time being, our occupation. There are too many who act as if they believed that every hour filched from sleep was a clear gain,—just so much time added to the working hours of the day. The endeavor to lengthen the day by curtailing the hours of sleep, is on the same principle as the Irishman's attempting to lengthen his rope by cutting off the end to piece into the middle, and being surprised to find that at each splicing his rope grew shorter. The hours taken from sleep to add to the length of the day, shorten, by so much, the span of life.

Earthly existence is a continual struggle between life and death. "We die daily," yes, hourly, momently. Every deed, word, and thought destroys some tissue of the body; and in order to maintain perfect health, these dead atoms must be removed, and replaced by new ones. We break down because reconstruction does not equal destruction; and it is in the "solemn hours of night," when the voluntary muscles are quiescent, and the involuntary muscles working more slowly, and with less vigor, and with longer intervals of rest, that the little brownies of our "earthly tabernacle" set our house in order, removing the debris which "life and thought" have made, and build anew the foundations of health and strength.

"Each day we live,
Each night we die,"

said the poet; and this, like much poetry, contains only half a truth. Each day we live the life of mental activity, the life of conscious pleasure or grief; but that very life is physical death. Each night we die to the knowledge of our surroundings, to the remembrance of joy or sorrow; and that death is physical renewal or life.

The famous bard has said that—

"Sleep knits up the raveled sleeve of care."

But care does not ravel the life, it wears

it out. It does not leave good material which has been once used, but is fit to be again incorporated into the life; it leaves worn-out threads, frayed edges, holes, which must be patched with the new material furnished during sleep.

Sleep, that heels and toes the worn-out hose of care, would be a truer simile than that of Shakespeare, although not so poetical.

Nature is a careful housewife, and stitch by stitch she removes the worn-out web of life, replacing each by a new and strong stitch without knot or mark of joining. But if she is too hurried to do all her work well, or material is not supplied, she attends to the most important, that is, the vital; and often great rents are made in the fabric before we are aware, even though it is through our own negligence, or our ignorance of her needs.

The English say we "starve" with the cold, and it is true that we starve for want of sleep.

A mistress once reprimanded her maid for late rising "But, ma'am, I sleep very slow, and it takes me longer than it does other folks," was the explanation. No doubt the mistress thought the reply either very silly or a clever evasion; and yet it may have been absolutely true. We say, "My digestion is slow," or "I have a slow pulse," and there is no more inherent ludicrousness in the statement, "I sleep slowly." Do we not say of one who is sleeping soundly, that he is "sleeping at the rate of ten knots an hour"? Some people sleep much faster than others. The reconstructive process goes on more rapidly, and they awake each morning literally new creatures. Others whose vital forces are feeble, and work slowly, awake in the morning "as tired as when they went to bed." Their house of life has not been thoroughly swept and garnished. They are chained to the corpse of the dead yesterday, and, with Paul, may well exclaim, "Who shall deliver me from the body of this death?" There is no deliverer save—

"Tired nature's sweet restorer, balmy sleep,"

and nature, if robbed of her rightful sleep, will some day take dire revenge. "Never mind," she says to herself. "They think they are cheating me now, but I will take it out of their eyes, teeth, hair, and limbs; and when they find themselves prematurely old, and their aches and pains are innumerable, they will learn that I have not been deceived. I have taken my pay with interest."

In children, the vital processes are all more rapidly conducted than in adults. They digest quicker, and sleep faster. But it must never be forgotten that they need not only re-creation, but primal creation. Not only must waste be replaced by new material, but growth must be provided for. Therefore to stint the child of sleep is to defraud, perhaps to dwarf or deform it. The sleep of any one, but particularly of a child, is sacred, and should never be thoughtlessly disturbed.

It is said of the late Richard Wagner, that when he and his family were at Baireuth, no disturbance of apartments was allowed; but the moment they absented themselves, even for an hour, an army of servants swarmed through the rooms, sweeping, dusting, and renovating in great haste, that all might be pure and clean at the master's return.

So when the impalpable, intangible spirit which inhabits our bodies, relinquishes, temporarily, his command over them, the myriad of servants comprised under the name of vital forces, take advantage of the opportunity to purify and renovate. These beneficent fairies should never be startled in their delicate and important task of removing the worn-out atoms of our foundations, and replacing them with a new masonry of molecules. Nor should the soul be suddenly recalled to a dwelling not yet made ready for its return. A stone may be removed from the foundation of a building, and no harm follow. One by one, each stone may be removed, and if a new one is at once put in its place, the building will stand firm; but if a stone be removed each day, and nothing substituted for it, soon the whole building falls to the ground. There are multitudes of men and women who are just ready to suffer such a fall. Week after week, and month after month they have been destroying the foundations of their physical life, without allowing themselves the recreation of sufficient sleep.

Even the talisman, "the beauty sleep," has lost its power, having been overthrown by the demoniac spell of rouge and pearl powder. Yet there is no touch so powerful to smooth out wrinkles, to whiten sallow complexions, to darken fading tresses, to flush pallid cheeks, as that of velvet-fingered sleep.—*Mary A. Allen, M. D., in Good Cheer.*

—Keep the head cool, the feet warm.

SHORT-SIGHTEDNESS, ITS CAUSES AND PREVENTION.

LAST year the London *Lancet* published some very interesting and practical papers by Dr. H. Power on the above subject, of which the following is one:—

There are still other conditions which deserve attention, and among them may be mentioned quality of paper, character of type, excellence of impression. Now and again the font of type of one of our daily newspapers gets worn out, and every one is aware of the unpleasant effects that are produced by impressions of letters which are partly imperfect,—when, for example, *c* cannot be distinguished from *o* or from *e*, when *t* and *l* become confused, and the rounds of *a*, *b*, *d*, *g*, and *p* become filled with ink. Such imperfections are greatly increased by roughness and inequalities of the paper; and it is only requisite to read a page or two of one of the cheap editions of a popular author, such as Dickens—though even these are princely as compared with works published fifty years ago—and then a page or two of an *édition de luxe*, to appreciate the influence of paper and printing. The introduction of pictures is of decided advantage, since they both excite the attention and relieve the eye.

It would, I think, be useful, especially in cases where there is a hereditary tendency to short-sightedness, to teach by means of long slips or wall-texts with a picture at the head, which are sold by most stationers. The child should be placed with his back to the light, and at a distance of from four to six feet from the slip, the separate letters of which, as well as the details of the picture, may be indicated by the teacher with a light wand.

There is good reason for believing that writing has a powerful influence in inducing short-sightedness. Cohn has accordingly made the sensible suggestion that stenography, or short-hand, should be introduced into schools a little above the lowest classes. The size of the type or symbols is, it is acknowledged, smaller than that of ordinary writing, but not smaller than the Greek. The acquirement of the art is easy, and the saving of time is very great.

The question of the advisability of using slates for instruction in writing has been considered, and, as it appears, there is some difference of opinion. It may be shown that with the same amount of light, and with an equal degree of sharpness of vision, letters of the same size written with ink and with slate pencil are seen, the former at a distance of four feet, the latter at only three feet, even when the unpleasant reflex from the slate is avoided; and hence with the abolition of slates from schools, one condition leading to myopia would be avoided. Weber thinks that many of the difficulties and troubles occasioned by writing are the same, whether slate-pencil, lead-pencil, or pen and ink be used; but he still thinks it desirable that after the first half-year, pen and ink should be preferred. Cohn agrees with Horner, but suggests the employment of white artificial tablets, made by Emanuel Thieben, a manufacturer of Pilsen, which can be written upon with lead-pencil, and which he has found to be so far superior to slate that writing which can be read at six meters* on the white slab can be read at only five meters on the slate.

The work performed by girls, especially when very young, is not beneath the attention of the surgeon. There cannot be a doubt that every girl should be taught the use of the needle and thread, and it is satisfactory that this view is taken by the school boards generally throughout England; but it is by no means necessary that the work which is put into their hands should be of a nature to make a severe strain upon their eyes. That such strain applied to the eyes in this particular way is injurious, is well-known from the effects of lace-making in Belgium and France, which is admitted on all hands to seriously impair the vision of many workers annually. I find that in moderately fine calico there are about seventy-two threads to the inch; and if two of these are taken up at every stitch, the work is done to the thirty-sixth of an inch, which is very small. But finer kinds of cambric run to one hundred and fifty or more to the inch, and must be very trying to the eye.

Weber observes: "Who need trouble himself about a girl learning to knit a stocking requiring 35,000 or even 60,000 loops, when the whole article can be finished by machine work in an hour or two?" But, as Cohn remarks, if the girl is, instead of knitting stockings, occupied with Greek characters or conic sections, she is not much better off. On the whole, it appears that no child should be given work to do which requires to be held

*A meter is 39.37 inches.

closer to the eye than one foot, and with this all due care should be taken in regard to light and other particulars.

From all this we may conclude that children, especially at the age of from ten to seventeen, should not be overtaxed, and that girls in particular should not be pressed to work at periods when they are naturally languid and exhausted. The work to be done should be mainly done in school; night-work and night-lessons should be short. Nor should children be made to do much in the morning before breakfast, nor immediately after eating. The books that should be given to young children ought to be light to hold in the hand; the paper should be clean, white, and smooth. The letters should be large in proportion to the youth of the child, well formed and well printed. The spaces between the lines and the interspaces of the words should be relatively wide. The lines should not be too long. The light should be abundant, and should enter from the left. In writing, he should sit upright and square to the desk. The desk itself should be inclined, and there should be a due proportion between the height of the desk and the bench or stool on which the child is sitting. Reading small print by a dim light is to be discountenanced, and reading should not be permitted in bed. The work given to girls to learn sewing should not be too fine, and no black work should be given, especially at night.—*Health.*

THE INCREASE OF CANCER.

THERE is reason for the frequent inquiry, which meets the ears of medical men at the present day, Is it not true that cancer is increasing? For, however much we may attempt to throw into the shade our convictions upon this matter, the records of the Registrar-General remain to show, in all the obtrusion of an unvarnished statement, the annual increasing mortality from this terrible disease. A reference to the forty-third annual report of the Registrar-General discloses a somewhat alarming state of things, in connection with which it must be conceded that reflection affords but little assistance in the attempt to solve the cause. According to the report, 80,049 deaths from cancer occurred during the ten years from 1860–1869 inclusive, and the annual average increase was 248. During the years 1870–1879, the total number of deaths from cancer was 111,301, and the annual average increase was 320. As far, therefore, as numbers are capable of showing, we have here conclusive evidence of the increment in the mortality from cancer. It is observable also that the rate of increase is much higher in the latter than in the first ten years. It is, moreover, the case that the annual rate of increase is higher in the years 1860–1869 than in the preceding decennium; namely, in the years 1850–1859. In short, in the years 1850–1859 the increment was about 2,000; in 1860–1869, 2,400; in 1870–1879, 3,200.

We have, then, confessedly to face the fact that cancer is increasing in our midst at a rate which bids fair to become more and more serious with the advance of time. In an article entitled, "An Inquiry into the Causes of the Increase of Cancer," published in the *British Medical Journal* a year ago, I drew attention to the observations which had been made upon the subject by the late Charles Moore, whose investigations into the pathology of cancer had brought under his notice the incontrovertible evidence of the increase of the disease. In the year 1865 he published a small book, called the "Antecedents of Cancer," the contents of which chiefly consist in an attempt to explain in what manner the augmentation of cancer is influenced by the circumstances of life prevailing in this country. For instance, he held that the introduction of corn laws, the discoveries of gold, and sanitary improvements, whereby the well-being of the nation was conspicuously established, affected cancer indirectly by bringing into prominence the predisposing causes of its occurrence; and good living, it is thought, which follows as a corollary of commercial prosperity, is intimately associated with the manifestation of cancer. Again, inasmuch as cancer is characteristic of the healthy, it may be expected to abound amidst the conditions of health.

The greater prevalence of the disease among the rich than among the poor can probably be explained in this manner: According to a French observer, the proportion of cancer in the wealthy classes is about 106 in 1,000, in the poor classes it is 72 in 1,000; or at a rate in the former case of ten per cent, and in the latter of seven per cent. Now, curious as it may seem, cancer is met with in the lower animals; and it has been said to prevail more frequently among those which are flesh-eaters than those which are herb-eaters. It has been stated by the late Dr. Crisp, who had good opportunities of judging, that

cancer is by no means an uncommon disease among the domesticated animals, while in wild animals and uncivilized man it is rare. In 230 also of the quadrumana which he had examined, there were no traces of cancer. Thus the inference to be drawn from these statements appears to be plain. It is almost conclusive that the habits of life, either in man or the lower animals, are concerned in the production, or at least in the predisposition, to cancer. The surroundings, it is conceivable, of an autochthonic existence do not include influences which favor the production of the disease; consequently, in uncivilized man the disease is rare. It is, however, different when man becomes civilized; for then the predisposing, if not exciting, causes come into play, and man has entered an area of life in which the disease has acquired not only a pronounced, but an augmenting fatality. And the same is true of animals.

Now, as far as we know at present, cancer has not a zymotic origin; in other words, it does not arise from any microorganism, or "germ." It is, consequently, neither infectious nor contagious. Cancer, in short, can neither be "caught" nor "given." It commences *de novo* in each individual whom it attacks. There is, moreover, no such thing as anything cancerous being transmitted from parent to child in the cases in which the disease occurs in one and the other. It is possible to inherit a predisposition to cancer; that is, if cancer appears in a family, the members may be said to possess a liability to the disease; but practically this statement does not convey with it much significance, because until the disease becomes manifest, no person can be said to be cancerous, inasmuch as he does not inherit the disease, but simply the liability to it. We are confronted with the problem of how to limit the frequency of the disease, and the difficulty of this is apparent in view of the fact that we know almost nothing of its origin.

Cancer, as I have said, is not contagious; it stands almost alone as a disease which increases with our prosperity; and while our health laws are raising the standard of public health, the mortality from cancer stands forth as a blot upon the results, detracting in part, at least, from the measure of the success which has thus far been obtained. Observation has shown that cancer has a certain geographical distribution. It prevails extensively in some parts of the globe, and is scarcely known in others. For instance, it is met with most largely in the central parts of Europe, but in the extreme North of this Continent the inhabitants enjoy an almost complete immunity from cancer. It is stated to be unknown in the Faroe Islands; while in Iceland in one year it proved mortal in only 37 cases out of 50,000 inhabitants, or in a proportion of .07 to 1,000. With reference to England in this connection, Englishmen may be regarded unfortunate; for within the geographical area of these islands, cancer asserts largely its malignant and fatal influence. It afflicts mankind chiefly at an age at which, by universal consent, life is best enjoyed.

Many and various have been the attempts devised to combat the inevitable fatality of its accession. A few years ago a drug—Chian turpentine—was somewhat extensively employed, its introducer, Dr. Clay, claiming that under its influence cancerous tumors would gradually diminish in size, and ultimately dwindle away; but, unfortunately for humanity, various scientific trials, prosecuted with uncomplaining forbearance on the part of the sufferers, yielded in the end negative results, and Chian turpentine was again relegated to the obscurity from which it had emerged for a brief space of time. The gleam of light, however, which has shed some radiancy over the gloominess of cancer comes from surgery. It may be said of the surgery of the present day that better results are obtained from the surgical treatment of cancer than was probably the case in any former age. Some operations are now being practiced which hitherto were not considered justifiable, owing to the want of success which followed their performance. Others have lately been introduced, the practicability of which has proved the wisdom of their conception. Sufferers from cancer who formerly would not have been relieved, are, in the present day, benefiting from the application of the principles of scientific surgery. Years of life—some years at least—and the mitigation of much physical and mental suffering, fall to the lot of surgeons to confer. Even the stomach, which in the male after a certain age commonly becomes the seat of cancer, has been dealt with, and the diseased portion removed, the result being favorable in so far as suffering was relieved and life prolonged.

It must be remembered, however, that

the successful treatment of cancer depends as much upon its early recognition as upon the means adopted for its relief. There should be no hesitation in ascertaining the nature of a tumor or swelling which is suspicious or uncertain. The improvements in the methods of diagnosis enable surgeons to recognize cancer in its earliest stages; and as soon as the presence of the disease becomes unequivocally demonstrated, the probability of a successful result is largely enhanced by its early removal. The reason for this is obvious. Cancer commences in each person presumably as a local disease. But it spreads and infects by means of the blood-vessels and lymphatics, first the nearest lymphatic glands, and then the more distant organs of the body. When this has occurred, the disease is no longer a local one; it has become what is called constitutional. It is therefore manifest that the most favorable time at which to obtain the best results from surgical interference is when the disease persists simply as a local growth, and when the blood and tissues of the body have not received the impress of a cancerous taint.—*Mr. Percy Dunn, F. R. C. S., in Pall Mall Gazette.*

THE WAY TO READ.

THEODORE PARKER said his father always made him give an account, in boyhood, of a book he had read, before he was allowed to read another. In this way, habits of attention and memory were formed, which gave him such a wonderful knowledge of books. Sir Thomas Buxton, another great man, gives some good views:—

"My maxims are, never to begin a book without finishing it, never to consider it finished without knowing it, and to study with a whole mind. If you seriously resolve to be energetic and industrious, depend upon it, you will, for your whole life, have reason to rejoice that you were wise enough to form and act upon that determination. I hold a doctrine, to which I owe, not much, indeed, but all the little I ever had; viz., that with ordinary talent, and extraordinary perseverance, all things are attainable."

—An Irishman once received a doctor's bill. He looked it over carefully, and said he had no objection to paying for the medicines, but the visits he would return.

HOW TO CLOTHE CHILDREN.

BY ADA S. BALLIN.

CLOTHING is one of the great powers which preserve or destroy health. Its influence is unceasingly felt from birth to death. Nay, even before birth; for errors of dress in the mother may seriously injure the child. Too heavy, too thin, or uncomfortable clothes worn by the mother, in lowering the general tone of *her* health, will harm the child indirectly; while tight-lacing, or the undue pressure of her garments, may directly produce deformity in it, or interfere with its circulation.

The first danger the new-born infant has to encounter is from cold. It passes from a high and almost unvarying temperature to one very much lower, and exceedingly changeable. The younger a child is, the less able is it to resist cold; because the smaller it is, the larger is its surface relative to its bulk; for the area of a body varies as the square of its dimensions, while its mass varies as their cube; and the surface of the human body is an evaporating surface, consequently a cooling one. This accounts for the fact that though the adult parts with its heat less rapidly than the infant, when that heat is once lost, there is more difficulty in re-establishing it; for the same surface that gives out heat is the means of receiving it, and the adult's surface is so much smaller, relative to its bulk, than is the infant's. The proportion of infants that die from exposure to cold is alarmingly great. As their lungs are especially active, they are more liable to become diseased than any other organs, and the children fall victims to bronchitis, pneumonia, and croup, and, if they do not die, are permanently injured.

From all this it is clear that children should be better protected from the cold—more warmly clad—than grown people. But what do we find when we look around us? Herbert Spencer said years ago, "What father, full grown though he is, losing heat less rapidly as he does, and having no physiological necessity but to supply the waste of each day—what father, we ask, would think it salutary to go about with bare legs, bare arms, and bare neck?" Yet this is exactly what most people allow their children to do, ignoring the fact that even if colds and the more serious diseases I have mentioned are escaped, injury must result to growth or structure; for, owing to the insufficient

clothing, much of the nourishment which ought to supply the development of the organism, has to be expended in keeping up its temperature. "We have met with none, competent to form a judgment on the matter, who do not strongly condemn the exposure of children's limbs," says Herbert Spencer. Alas, how many millions are incompetent to form a judgment on the matter! The warmth of clothing, whether for children or adults, should be regulated by the thermometer, *not* by the season of the year; and in kind and quantity clothes should be "*sufficient in the individual case to protect the body effectually from an abiding sensation of cold, however slight*," as Andrew Combe wrote forty years ago.

But even though warm, clothing should never be heavy, nor should it ever restrict any of the natural or acquired movements of the body. Before going into details as to what I consider the most healthful mode of clothing children, I wish to urge the total abolition of what Prof. Humphrey calls "a sort of baptism to the numerous evils of fashion in dress," to which the vast majority of infants are subjected, viz., the binder, or swather. I cannot do better than quote Prof. Humphrey's words on the subject from his late address at the Congress of the Sanitary Institute of Great Britain: "Those mischievous two yards of calico . . . . constrict and hinder the expansion of that very region of the body where heart and lungs, stomach and liver, ... are struggling for room to grow and do their work." It hampers the breathing, and—as Mr. E. O. Day points out in his usetul pamphlet, "How to Prevent the Diseases of Babyhood," to which I shall again refer—may occasion rupture by preventing due expansion of the chest when the child coughs. It interferes with digestion, and when the stomach is distended with food, causes pain by its unyielding pressure. Dr. Humphrey continues: "A more pernicious device can hardly be conceived than this relic of ancient nursedom; and it is impossible to estimate the number of deformed or pigeon chests, of hampered stomachs, livers, lungs, and hearts, with their varied attendant life-enduring infirmities and curtailment of life that must result from the use of these 'swathers,' as they are called, for which there is not the slightest necessity."

To continue: "There are," Mr. Day says, "four great faults with our ordinary baby's clothes:—

"1. They are too long and too heavy.

"2. They do not properly fit the neck.

"3. They require the child to be turned over and over in dressing.

"4. They are made to pass over the child's head, and to fasten with hooks or buttons."

To obviate these faults, Mr. Day designed three garments, which were very highly commended at the recent Rational Dress Exhibition. The first is a fine flannel vest, reaching to about four inches below the feet, wrapped round the infant, and tied with tapes in front. The feet should be protected with knitted socks. The shirt should have sleeves reaching to the wrist, and be made four inches below the vest. The robe is to be made in the same way, but trimmed according to taste, and on this and the shirt small buttons may be used, as the vest will protect the skin from their pressure.

With these clothes, dressing is a simple matter. All that has to be done is to lay the shirt on top of the robe, the vest on the shirt, and then slip the child's arms through the arm-holes of all of them together, fasten them up, and you have finished. Thus all risk of entangling the baby in its clothes, or straining it by an unnatural position while being dressed, or making it sick by turning it over and over, is avoided. These clothes fulfill the last two of the important conditions of healthful clothing which I mentioned just now, inasmuch as they are as light as possible, and do not restrict any of the movements of the body or limbs.

The clothes I have just described are admirably suited for summer wear, and can be supplemented for out-of-doors by a cashmere or merino cloak and hood to match. For cold weather, however, more warmth is required than these three garments can give.—*Health*.

THE chief object of ventilation during the summer is to remove the air which has been breathed, most of which lies near the floor; and, also, to remove the air consumed by the burners, candles, or lamps, which, in general, is near the ceiling. An open fire-place, together with a large hole in the chimney, near the ceiling, is generally sufficient; but an open door, or long windows open at top and bottom, are often required in summer to complete the ventilation. It is easier to ventilate a close room in winter than in summer, for in winter the fires create drafts.

TEMPERANCE AND MISCELLANY.

Devoted to Temperance, Mental and Moral Culture, Social Science, Natural History, and other Interesting Topics.

Conducted by MRS. E. E. KELLOGG, Superintendent of Hygiene of the National W. C. T. U.

HOW EASY IT IS!

How easy it is to spoil a day!
The thoughtless word of a cherished friend,
The selfish act of a child at play,
The strength of a will that will not bend,
The slight of a comrade, the scorn of a foe,
The smile that is full of bitter things—
They all can tarnish its golden glow,
And take the grace from its airy wings.

How easy it is to spoil a day
By the force of a thought we did not check!
Little by little we mold the clay,
And little flaws may the vessel wreck.
The careless waste of a white-winged hour,
That held the blessings we long had sought,
The sudden failure of wealth or power,
And, lo! the day with ill inwrought.

How easy it is to spoil a life—
And many are spoiled ere well begun—
In home-light darkened by sin and strife,
Or downward course of a cherished one;
By toil that robs the form of its grace
And undermines till health gives way;
By the peev sh temper, the frowning face,
The hopes that go and the cares that stay.

A day is too long to be spent in vain;
Some good should come as the hours go by;
Some tangled maze may be made more plain,
Some lowered glance may be raised on high.
And life is too short to spoil like this;
If only a prelude, it may be sweet.
Let us bind together its thread of bliss,
And nourish the flowers around our feet.

—*The Watchman.*

SKETCHES OF TRAVEL, No. 17.

BY MRS. E. E. KELLOGG.

STRASBURG AND ITS CATHEDRAL.

JUST on the confines between France and Germany, where the Brusche and the Ill mingle their waters in one common stream, is situated the city of Strasburg, with its quaint, old-fashioned dwellings, its beautiful cathedral, and other world-renowned objects of interest. Built centuries ago by the Romans, afterward conquered by the Germans, it was taken by the French in 1681, and reconquered by the Germans during the late Franco-Prussian war, after a siege of seven weeks, upon the one hundred and eighty-ninth anniversary of its capture by the French. Like most border cities, Strasburg is strongly fortified. Its streets are narrow and irregular; but its curiously built houses, often painted in checks of various colors, with their long, pointed roofs and huge chimneys, on many of which the storks have taken up their abode, give the town a very odd and picturesque appearance.

The one prime object of interest to the tourist is the cathedral. According to tradition, it occupies the site of the sacred wood in which the ancient Druids built their altars, and offered sacrifices to Esus, their god of war. The present edifice, though not the first church founded here, dates its beginning from 1015. Two hundred thousand workmen, imbued with the religious enthusiasm of that epoch, began the work, *for the salvation of their souls*, but several hundred years elapsed before its completion. Earthquakes, lightning strokes, and almost innumerable fires, retarded its construction, injured its beauty, and several times demolished it almost entirely. Since its completion, the vicissitudes of time and the enmity of man have frequently threatened its destruction. The storm of shot and shell that fell upon the town during the war of 1870, left many a mark upon the cathedral to tell the tale of the bombardment. The work of restoration had been so complete, however, that upon our visit we found but few remaining traces of the devastating siege, although we were told that it was struck by more than one thousand projectiles.

Like many European cathedrals, the style of architecture is Gothic. It is built of sandstone, chiseled and carved into many varied forms, so sharp in outline and so beautiful and delicate as to give the structure a light and airy appearance hardly surpassed by any other similar edifice. The number of statues that are arranged to cluster about its portals and stand in the niches of its walls, is very great. A group of fifteen gigantic statues, representing the day of judgment, adorns its front. In the center is Christ, the Judge, on either side, the Virgin and John the Baptist. Angels sounding the last trumpets and bearing the records, surround them, while beneath stand the four Evangelists.

Its one graceful spire rises four hundred and seventy-four feet above the pavement. It was intended, originally, to build two towers, one on each corner of its square front; but for lack of means, only one was completed, and the lack of a second one gives the cathedral an unfinished appearance on one side, which greatly mars the symmetry of its exterior.

Its interior is rich in sculpture, statues, and

some of the finest pieces outside, are the handiwork of a lady, Sabina von Steinbach, daughter of the principal architect of the cathedral.

Though justly celebrated for its beauty, the cathedral contains a great attraction in its most wonderful astronomical clock, the work of a distinguished mechanician of Strasburg. It was just a few minutes before twelve when we found ourselves amid a throng of other expectant sight-seers before this marvelous piece of mechanism, of which the proportions are fifty feet in height and more than half that in width. Immense dial plates indicate the time from seconds to months and years. Four automaton figures, called the four ages, indicate the quarter hours by strokes upon the bell, childhood striking the first quarter, youth the second, manhood the third, and old age the fourth; while a grim figure with an hour-glass in hand, representing Father Time, strikes the full hours.

As the hour of noon turned, we noted Old Age rise and touch the bell, while Time began the twelve long strokes that indicated the hour; at the same instant, a little higher up on the clock, a figure representing the Saviour stepped out and raised his hands, while figures representing the twelve apostles passed, one with each stroke of the bell, bowing before him. During this time, a cock, perched on a pinnacle several feet above, with motions and voice imitating nature, flapped his wings and crowed thrice. This clock also tells the times and seasons of all ecclesiastical feasts and events as far as they are associated with astronomical phenomena. A celestial circle, or orrery, represents the mean tropical revolutions of each of the planets visible to the naked eye; the phases of the moon; eclipses of both sun and moon, calculated for all time; and the equation of time.

The church of St. Thomas, in another part of the city, contains the celebrated monument to Marshal Saxe, erected by Louis XV., of France. The monument consists of an immense marble sarcophagus with lid raised as if in preparation for his burial. At one end stands a grim skeleton in marble, representing Death; while on the right a female figure, personifying France in deep sorrow, stands with upraised hand as if to prevent Marshal Saxe, whose erect statue stands with one foot advanced, from descending into the tomb, and, at the same time, prevent the advance of Death. Other allegorical figures represent the nations he had conquered in arms.

Strasburg is also famous for its goose-liver pies, or *paté de foie gras*. A regular business of producing abnormal geese livers for the manufactury of these so-called dainty dishes is carried on here. Shut up in dark rooms, their feet nailed to planks, and often their eyes plucked out that they may not see, and thus exercise too much, the poor creatures are regularly stuffed every two hours with as much food as can be crowded down their throats. Some thirty quarts of corn are required to complete this stuffing process, by which time the livers are by far the largest part of the goose, so the poor birds are killed, and their livers canned and sent to various parts of the globe for the especial delectation of epicurean palates. We were not quite so fortunate in our visit to the liver factories as in seeing the wonderful clock, for the stuffing season was just over; but we were shown the places where the work was done, and any quantity of canned livers, which were ready for exportation, and on which we might have secured great bargains had we been so inclined.

THOROUGH WORK.

Elizabeth Stuart Phelps, in an article in the May St. Nicholas, entitled, "Supporting Herself," makes the following pertinent remarks which we earnestly commend to all girls who desire to gain their own livelihood:—

"But, girls, if you don't make a thorough business of the occupation you have chosen, never, never, never begin to be occupied at all. Half-finished work will do for amateurs: it will never answer for professionals. The bracket you are sawing for a New Year's present can hang a little crooked on its screws, and you will be forgiven 'for the love's sake found therein' by the dear heart to which you offer it; but the trinket carved for sale in the Sorrento rooms must be cut as true as a rose leaf. You can be a little shaky in your German declensions in the Schiller club, which you join so enthusiastically after leaving school, and no great harm ever come of it; but teach Schiller for a living, and for every dative case forgotten you are so much money out of pocket.

"People who pay for a thing demand thorough workmanship or none. To offer incomplete work for complete market price, is to be either a cheat or a beggar. The terrible grinding laws of supply and demand, pay and receive, give and get, give no quarter to shilly-shally labor. The excellence of your intentions is nothing to the point. The stress of your poverty has not the slightest connection with the case. An editor will never pay you for your poem because you wish to help your mother. No customer will buy her best bonnet or her wheat flour of you because you are unable to pay your rent. When you have entered the world of trade, you have entered a world where tenderness and charity and personal interest are foreign relations. Not 'for friendship's sake,' nor 'for pity's sake,' nor 'for chivalry's sake,' runs the great rallying-cry of this world; but only 'for value received.'

"It is with sorrow and shame, but yet with hope and courage, that I write it, there is reason for the extensive complaint made by men, that women do not work thoroughly. I am afraid that, till time and trouble shall have taught them better, they will not. Is it because they have never been trained? Is it because they expect to be married? That it is not in the least because they cannot, we know; for we know that some of the most magnificently accurate work in the world has been done by women."

BIG SINNERS IN HIGH PLACES.

SPEAKING of "intemperance and the coordinate crimes," Rev. T. De Witt Talmage, in a recent sermon, said:—

"I admit there has been some improvement in this thing. Senators notorious for their drunkenness are either dead, or defeated, or stay at home. The grog-shop that used to flourish in the basement of the Capitol, where senators once went to get inspiration for their speeches, has been abolished, although it is said that there are places in the Capitol where members can get very strong lemonade. The plague is not yet stayed. I knew a man who, only a few years ago, was an example of integrity, and honored everywhere. I went to Washington. I had not seen him for years, and I thought I would send my card into the House of Representatives, and call him out. The card went in by the sergeant-at-arms, and my old friend that I had not seen for ten years came out staggering drunk.

"In this country, the temptations to intemperance in public life are so great that more of our men in office die of delirium tremens, and the kindred diseases that come from intemperance and an impure life, than from all other causes combined. There is one weapon that slays more senators and congressmen and legislators and common councilmen than any other, and that is the bottle. How few of the men who were in prominent political offices twenty-five or thirty years, when they died, came to honorable graves! The family physician, to relieve the family and keep them from national disgrace, said it was gout, or epilepsy, or obstruction of the liver, or exhaustion from patriotic services! But God knew it was whisky.

"It was the same habit that smote the great man down, that smote the dark villain in the alley. The one you wrapped in a coarse cloth, and threw into a rough coffin, and carried out in a box wagon, and put down in a pauper's grave, without prayer or benediction; the other gathered the pomp of the city, and the name was on the silver plate, and lordly men walked uncovered beside the hearse with tossing plumes, on the way to a grave soon to be adorned with a marble pillar of four sides, which shall be covered with the story of the man who died of exhaustion from patriotic services. The difference between the two was this: the one put an end to his existence with logwood rum at two cents a glass, and the other perished in a beverage at three dollars a bottle. I write both of their epitaphs. On a shingle over the pauper's grave I write it with a lead pencil; on the white shaft over the senator's tomb I cut it with a chisel, 'Slain by strong drink.'

"It is a simple fact that dissipated habbits have not in this country been a hindrance to a man's getting office; if he be sober sometimes, if the governor can get straight enough to write his message, if the judge's tongue is not positively thick when he delivers his charge, if the vice-president is not drunk when he is sworn in,—that will do. So we have had world-renowned secretaries of State carried out drunk from their office, and senators of the United States arrested at midnight in houses of shame for uproarious behaviour; judges and jurors and lawyers by night, while the trial is going on by day, gambling and singing the song of the drunkard. Oh, it is a sad thing to have a hand tremulous with intoxication holding the scales of justice, when the lives of men and the destinies of a nation are in the balance; to have a charioteer with unskillful hands on the reins while the swift destinies of government have been dashed to pieces, and empires have gone down in darkness and woe! What was it that drove back your armies in the last war so often? Was it your sons and fathers?—No! It was because drunkenness so often sat in the saddle. What are those graves on the heights of Fredericksburg, as you pass down to Richmond? Was it the sword or the bottle that slew them?—The bottle! for that day drunkenness rode in some of the stirrups, leading forth your sons and fathers to death.

"There is dissipation in all the high circles as well as the low. A trial in the courts ever and anon reveals the fact that

impurity walks in robes, and dances under the palatial chandeliers, and drowses on the damask upholstery. Sin is tolerable, if it is only rich. Stand back, and let the libertine go by, for he rides in a $3,000 turnout. Meanwhile, political parties are silent, lest they lose votes; and newspapers are quiet, lest they lose subscribers; and ministers of the gospel are still, lest some affluent pew-holder should be disgusted. But God's indignation gathers like the fiery flashes around the edges of a blackening cloud just before the swoop of a tornado. His voice sounds through the country to-day, in the words of the text, 'Woe unto thee, O land, when thy king is a child, and thy princes drink in the morning.'"

THE CHILDREN'S JOKE.

"'You can't do this' and 'you must n't do that,' from morning to night. Try it yourself, and see how you like it," muttered Harry, as he flung down his hat in sulky obedience to his father's command to give up a swim in the river, and keep himself cool with a book that warm summer evening.

"Of course I should like to mind my parents. Good children always do," began Mr. Fairbairn, entirely forgetting the pranks of his boyhood, as people are apt to.

"Glad I did n't know you then. Must have been a regular prig," growled Harry under his breath.

"Silence, sir! go to your room, and don't let me see you till tea-time. You must be taught respect as well as obedience," and Mr. Fairbairn gave the table a rap that caused his son to retire precipitately.

On the stairs he met his sister Kitty looking as cross as himself.

"What's the matter with you?" he asked, pausing a minute, for misery loves company.

"Mamma will make me dress up in a stiff clean frock, and have my hair curled over again, just because some one *may* come. I want to play in the garden, and I can't be all fussed up this way. I do hate company and clothes and manners, do n't you?" answered Kitty, with a spiteful pull at her sash.

"I hate being ordered round everlastingly, and badgered from morning till night. I'd just like to be let alone," and Harry went on his way to captivity with a grim shake of the head, and a very strong desire to run away from home altogether.

"So would I, mamma is so fussy. I never have any peace of my life," sighed Kitty, feeling that her lot was a hard one.

The martyr in brown linen went up, and the other martyr in white cambric went down, both looking as they felt, rebellious and unhappy. Yet a stranger seeing them and their home would have thought they had everything heart could desire. All the comforts that money could buy, and all the beauty that taste could give, seemed gathered round them. Papa and mamma loved the two little people dearly, and no real care or sorrow came to trouble the lives that would have been all sunshine but for one thing. With the best intentions in the world, Mr. and Mrs. Fairbairn were spoiling their children by constant fault-finding, too many rules, and too little sympathy with the active young souls and bodies under their care. As Harry said, they were ordered about, corrected, and fussed over from morning till night, and were getting so tired of it that the most desperate ideas began to enter their heads.

Now, in the house was a quiet old maiden aunt, who saw the mischief brewing, and tried to cure it by suggesting more liberty and less "nagging," as the boys call it. But Mr. and Mrs. F. always silenced her by saying,—

"My dear Betsey, you never had a family, so how *can* you know anything about the proper management of children?"

They quite forgot that sister Betsey had brought up a flock of motherless brothers and sisters, and done it wisely and well, though she never got any thanks or praise for it, and never expected any for doing her duty faithfully. If it had not been for Aunty, Harry and Kitty would have carried out their favorite plan long ago, and run away together, like Roland and Maybird. She kept them from this foolish prank by all sorts of unsuspected means, and was their refuge in troublous times. For all her quiet ways, Aunty was full of fun as well as sympathy and patience; and she smoothed the thorny road to virtue with the innocent and kindly little arts that make some people as useful and beloved as good fairy godmothers were once upon a time.

As they sat at tea that evening, papa and mamma were most affable and lively; but the children's spirits were depressed by a long day of restraint, and they sat like well-bred mutes, languidly eating their supper.

"It's the warm weather. They need something bracing. I'll give them a dose of iron mixture to-morrow," said mamma.

"I've taken enough now to make a cooking-stove," groaned Kitty, who hated being dosed.

"If you'd let me go swimming every night, I'd be all right," added Harry.

"Not another word on that point. I will *not* let you do it, for you will get drowned as sure as you try," said mamma, who was so timid she had panics the minute her boy was out of sight.

"Aunt Betsey let her boys go, and they never came to grief," began Harry.

"Aunt Betsey's ideas and mine differ. Children are not brought up now as they were in her day," answered mamma with a superior air.

"I just wish they were. Jolly good times *her* boys had."

"Yes, and girls too, playing anything they liked, and not rigged up and plagued with company," cried Kitty with sudden interest.

"What do you mean by that?" asked papa, good-naturedly; for somehow his youth re-

turned to him for a minute, and seemed very pleasant.

The children could not explain very well, but Harry said slowly,—

"If you were to be in our places for a day, you'd see what we mean."

"Would n't it be worth your while to try the experiment?" said Aunt Betsey with a smile.

Papa and mamma laughed at the idea, but looked sober when Aunty added,—

"Why not put yourselves in their places for a day, and see how you like it? I think you would understand the case better than any one could describe it, and perhaps do both yourselves and the children a lasting service."

"Upon my word, that's a droll idea! What do you say to it, mamma?" and papa looked much amused.

"I am willing to try it if you are, just for the fun of the thing; but I do n't think it will do any good;" and mamma shook her head as if Aunt Betsey's plan was a wild one.

The children sat quite speechless with surprise at this singular proposal; but as its full richness dawned upon them, they skipped in their chairs and clapped their hands delightedly.

"How do you propose to carry out this new educational frolic?" asked papa, beginning to feel some curiosity as to the part he was to play.

"Merely let the children do as they like for one day, and have full power over you. Let them plan your duties and pleasures, order your food, fix your hours, and punish or reward you as they think proper. You must promise entire obedience, and keep the agreement till night."

"Good! good! Oh, won't it be fun!" cried Harry and Kitty applauding enthusiastically; while papa and mamma looked rather sober as the plan was developed before them.

"To-morrow is a holiday for us all, and we might celebrate it by this funny experiment. It will amuse us, and do no harm, at any rate," added Aunty, quite in love with her new scheme.

"Very well, we will. Come, mamma, let us promise, and see what these rogues will do for us. Playing father and mother is no joke, mind you; but you will have an easier time of it than we do, for *we* shall behave ourselves," said papa, with a virtuous expression.

Mamma agreed, and the supper ended merrily, for every one was full of curiosity as to the success of the new play. Harry and Kitty went to bed early, that they might be ready for the exciting labors of the next day. Aunt Betsey paid each a short visit before they slept, and it is supposed that she laid out the order of performances, and told each what to do; for the little people would never have thought of so many sly things, if left to themselves.

At seven the next morning, as mamma was in her dressing-room, just putting on her cool, easy wrapper, in came Kitty with a solemn face, though her eyes danced with fun, as she said,—

"Careless, untidy girl! Put on a clean dress, do up your hair properly, and go and practice half an hour before breakfast."

At first mamma looked as if inclined to refuse, but Kitty was firm; and, with a sigh, mamma rustled into a stiff, scratchy, French print, took her hair out of the comfortable net, and braided it carefully up; then, instead of reading in her arm-chair, she was led to the parlor, and set to learning a hard piece of music.

"Can't I have my early cup of tea and my roll?" she asked.

"Eating between meals is a very bad habit, and I can't allow it," said Kitty in the tone her mother often used to her. "I shall have a mug of new milk and a roll, because grown people need more nourishment than children;" and sitting down, she ate her early lunch with a relish, while poor mamma played away, feeling quite out of tune herself.

Harry found papa enjoying the last delightful dose that makes the bed so fascinating of a morning. As if half afraid to try the experiment, the boy slowly approached, and gave the sleeper a sudden, hard shake, saying briskly,—

"Come, come, come, lazy-bones! Get up, get up!"

Papa started as if an earthquake had roused him, and stared at Harry, astonished for a minute; then he remembered, and upset Harry's gravity by whining out,—

"Come, you let me alone. It is n't time yet, and I am *so* tired."

Harry took the joke, and assuming the stern air of his father on such occasions, said impressively,—

"You have been called, and now if you are not down in fifteen minutes, you won't have any breakfast. Not a morsel, sir, not a morsel;" and, coolly pocketing his father's watch, he retired, to giggle all the way downstairs.

When the breakfast bell rang, mamma hurried into the dining-room, longing for her tea. But Kitty sat behind the urn, and said gravely,—

"Go back, and enter the room properly. Will you never learn to behave like a lady?"

Mamma looked impatient at the delay, and having re-entered in her most elegant manner, sat down, and passed her plate for fresh trout and muffins.

"No fish or hot bread for you, my dear. Eat your good oatmeal porridge and milk; that is the proper food for children."

"Can't I have some tea?" cried mamma, in despair, for without it she felt quite lost.

"Certainly not. *I* never was allowed tea when a little girl, and could n't think of giving it to you," said Kitty, filling a large cup for herself, and sipping the forbidden draught with a relish.

Poor mamma quite groaned at this hard fate, but meekly obeyed, and ate the detested porridge, understanding Kitty's dislike to it at last.

Harry, sitting in his father's chair, read the paper, and ate everything he could lay his hands on, with a funny assumption of his father's morning manner. Aunt Betsey looked on much amused, and now and then nodded to the children as if she thought things were going nicely.

(*Concluded in next number.*)

—Happiness consists not in things, but in thoughts.

Popular Science.

—The exhibition building now undergoing construction at New Orleans will be the largest building ever constructed. It will cover over thirty-three acres. The cost will be $400,000.

—A London editor, an old telegraph operator, recently held communication by telegraph with an operator at Calcutta, over seven thousand miles of continuous wire.

—Another ship canal project recently undertaken will connect the Atlantic with the Mediterranean. The course of the canal will be along the line dividing France and Spain.

—The St. Johns Bread, a curious fruit sometimes found at the fruit stands in the large cities, is a native of oriental countries; its proper name is ceratonid bean, or *ceratonid siliqud*. It is a very sweet fruit, somewhat resembling in flavor the date. It contains about thirty-three per cent of sugar.

—Many of the towns of the Atlantic States experienced an earthquake shock on Sunday afternoon, Aug. 10. The duration of the shock was less than one-half minute. There were two distinct waves of vibration accompanied by a rumbling sound, as of a heavily-ladened wagon rushing rapidly over a rough pavement. Persons upon the ground floors felt the shock most keenly. The sensation was described as like the passing of waves under the feet. In upper rooms the shock was felt chiefly in the vibration of the walls. The earthquake was felt from Boston to Baltimore, and as far west as Ohio.

Oxygen in Water.—A London Chemist, Dr. W. Allen Miller, showed some years ago that Thames water contains seventeen tons of oxygen to every ten million feet of water, and that after receiving the sewerage of the city, the amount of oxygen was reduced to four or five tons. Further examinations show that the oxygen lost is replaced within ten per cent by the time the water has reached Richmond.

Making a Lake of Sahara.—A correspondent to the *Scientific American* has been making a few figures for the purpose of ascertaining the length of time required to fill the Sahara desert with water from the Mediterranean. According to his calculations, it would require "four thousand years for the waters from the Mediterranean to fill the valley of the Jordan, which is one thousand feet below the former; the water to flow through a passage one hundred feet wide by twenty-five feet deep, with a velocity of four miles an hour. With a channel one hundred times this capacity, it is possible, he says, to limit the period of filling to forty years. At the same rate, it would take forty thousand years to fill up the Caspian Sea to the sea-level, and thousands of years to fill up the Sahara."

A People Who Cannot Make Fire.—The Papuans of the Maclay coast of New Guinea are represented by the Russian explorer, Dr. Miklucho Maclay, as being in the most primitive stage. They are wholly unacquainted with metals, and make their weapons of stone, bones, and wood. They do not know how to start a fire, though fire is in use among them. When the traveler asked them how they made a fire, they could not understand his question, but regarded it as very amusing, and answered that when a person's fire went out, he got some of a neighbor, and if all the fires in the village should go out, they would get it from the next village. Some of the natives represented that their fathers and grandfathers had told them that they remembered a time, or had heard from their ancestors that there was a time when fire was not known, and everything was eaten raw. The natives of the southern coast of New Guinea, having no iron, shave themselves now with a piece of glass. Formerly they shaved with flint, which they could sharpen quite well, and used it with considerable dexterity.—*Popular Science Monthly for August.*

IGNORANT NOTIONS ABOUT THE SUN AND MOON.

By the Hurons, the moon is called the Creator of the earth and grandmother of the sun; in the myths of the Ottawas it is an old woman with a pleasant white face,—the sister of the day-star. The Chiquitos call the moon their mother, and the Navajos make it a rider on a mule. Where the planets are worshiped, preference in honors is generally accorded to the brighter and more conspicuous star of day. But the Botocudos of Brazil give the higher place to the moon, and derive most of the phenomena of nature from it; and in Central America and Hayti are also people who hold the moon in no less honor. Curiously, these people find their counterparts among tribes of Western, Southern, and Central Africa, who rejoice with dancing and feasts at each appearance of the new moon, and expect an improvement of their condition from its beneficent influence; and they are not so far removed from the superstitious women of civilized Europe and America who wait for the increase of the moon to change their dwelling, to cut their hair, to be married, and to baptize their children. A belief existed among the ancient Mexicans and Peruvians, the Natches of the Mississippi, and the Appalachians of Florida, that the sun was the radiant abode of dead chiefs and braves. To the Esquimaux of Labrador belongs the honor of having discovered that the moon was the paradise for the good; while the wicked were consigned to a hole in the earth; although some of the South American Indians and the Polynesians of Tokelau may be nearly abreast of them in the competition.—"*The Astronomy of Primitive Peoples*," *by G. Müller Frauenstein.*

GOOD HEALTH.

BATTLE CREEK, MICH., SEPTEMBER, 1884.

J. H. KELLOGG, M. D., EDITOR. TERMS, $1.00 A YEAR.

THE APPETITE FOR SALT.

THE appetite for the mineral substance, chloride of sodium, familiarly known as common salt, which is evinced by most civilized nations, is certainly a very remarkable phenomenon, but perhaps is not more difficult to account for than the love for stimulating beverages, which, in one form or another, are used even more universally than salt. It cannot be denied that both salt and stimulants satisfy a demand which appears to be well-nigh universal among human beings; but whether or not this demand is a natural one, or only an artificial and cultivated taste, is a question which has been much discussed respecting the appetite for stimulants and narcotics, and may with equal justice be broached respecting the fondness for common salt.

The strongest arguments which can be adduced against the argument, as employed in favor of the natural and necessary use of stimulants and narcotics, are:—

1. That these articles, when used in any but very small quantities, can be proven to be decidedly harmful.

2. That no such appetite is natural to lower animals, whose general constitutional requirements are essentially the same as those of human beings.

3. That thousands of human beings enjoy perfect health without indulging in the use of either stimulants or narcotics.

4. That it is possible for persons who have been long accustomed to the use of stimulants or narcotics to abandon their use entirely without injury, and in most cases with very apparent benefit.

These arguments are almost universally accepted as conclusive, as they certainly seem to be to an unbiased mind, notwithstanding the effort of many physiologists to establish a certain food value for alcohol and its congeners, and a physiological necessity for their employment. Now let us apply the same arguments to the use of common salt:—

1. No one will question that chloride of sodium is capable of doing serious harm if taken in any but small quantities. It is a mineral substance, an antiseptic, and, to some extent, a disinfectant, which indicates its antagonism to living things. A larger dose than that to which a person is accustomed, produces great thirst and other discomforts. A still larger dose produces nausea and vomiting. The continued use of large quantities produces one of the most serious diseases due to dietetic errors, viz., scurvy.

2. The popular belief that an appetite for salt is universal among lower animals is without foundation in fact. A certain class only, and that a very small class when compared with all other classes of the animal kingdom, evinces any special fondness for salt. Dogs, cats, and other carnivorous, or flesh-eating animals, show no fondness for salt. The same is true of all classes of frugivorous animals, of which the monkey is a representative, and in natural habits and constitution the nearest approach to man to be found in the whole animal world. Even herbivorous animals do not take salt daily with their food, as

do human beings, but only at intervals, perhaps but a few times a year, or at certain seasons only, which suggests the thought that possibly they take it as a medicine rather than as a food; possibly as a vermifuge, as its occasional use is said to prevent certain intestinal parasites, to which these animals are subject. That salt is not essential to the health, even of herbivorous animals, is evidenced by the fact that in certain parts of the world where salt is utterly unknown as a natural product, antelope of all kinds abound in countless numbers. This is the case in Central Africa, and in other parts of the world; and it is asserted by travelers that in South Africa, even where salt occurs in abundance naturally, the various classes of antelope show no fondness for it. We know of many instances in which flocks of sheep and herds of cattle have been successfully reared without salt.

3. It is a well-known fact that in certain parts of the world salt is even more scarce than gold. In certain parts of Central Africa, to say that a man eats salt is equivalent to saying that he is very rich. Yet these people have existed for ages, and have enjoyed the very best of barbarous health without a taste of salt from infancy to old age. We have also been informed on credible authority that in Siberia salt is not in use as a common constituent of food; and the same was true of numerous North American Indian tribes at the time of the discovery of this continent, and for some centuries after, and is still true of the pampas Indians of South America.

In ancient as well as modern times there were non-salt-eating people, as we learn from Homer, who, in the Odessy, refers to a nation which ate no salt.

4. We might refer to several hundred persons, with whom we are personally acquainted, who have abandoned the use of salt after using it for years, and have not only experienced no injury, but actual improvement in health. In most instances there was some temporary inconvenience, due to the lack of the sapid saline flavor to which the palate had been accustomed; but in a short time the favorite condiment was no longer missed, and the food was taken with a relish previously unknown.

There is no doubt that long use of salt or any other unnatural stimulant establishes not only a tolerance on the part of the system, but even an apparent physiological necessity. This has long been recognized in the case of opium and other narcotics. An eighth of a grain of morphia is an ordinary dose of this powerful poison. A very few grains are sufficient to cause the death of a person unaccustomed to its use; yet we have had, under treatment for the opium habit, a person who took ninety-six grains of morphia in a single day, without other effects than a stupefaction which rendered her oblivious to pain. When the drug is withdrawn after long use, most obstinate vomiting and violent purging are not infrequent results, and the patient experiences most distressing symptoms of varied character. No such perturbation ever follows the withdrawal of salt from the dietary, the disturbance being trivial compared with that experienced in abandoning any of the ordinary narcotics after years of use.

We are confident that chloride of sodium was never intended to be eaten as an article of diet. On theoretical grounds, it would be just as reasonable to add to our food quantities of phosphate of lime, powdered chalk, silica, magnesia, chloride of potash, and other salts which are found in the body, as to add common salt. Indeed, the elements mentioned, or the most of them at least, are found in the body in much larger quantities than is common salt. It is not questioned that in an organized form, that in which it occurs in almost all our foods, salt is useful in the body; but it is certainly reasonable to suppose that the same wise Creator who knew just how much of phosphates and carbonates and other elements to put into our food, should have also known precisely how much chloride of sodium was best for us, and that the admixture of this one nec-

essary ingredient was not left for the haphazard and uncertain judgment of man.

We must not conclude without saying that the chief object of this article is not to induce our readers to abandon the use of salt, but to dispute the popular notion as to its importance and harmlessness, and to suggest that its use may safely be restricted to a very minute quantity without detriment; nevertheless, if any reader should feel disposed to discard the saline chemical from his dietary, we shall not expect to hear of any disastrous results, as we have for many years enjoyed excellent health without the aid of either salt or any other condiment, and have no desire to return to its use.

THE DANGEROUS FLY.

It has long been known that the fly sometimes acts as a carrier of infection by means of contagious matter attached to its feet and wings; but according to the *British Medical Journal*, the common house-fly possesses a peculiar *penchant* for devouring the minute eggs of various worms, some of which are parasitic in the human body. These eggs they deposit in their fæces in all sorts of places, indiscriminately infecting our food and drink in a most reckless fashion. The following is an account of some experiments which substantiate the fact noted:—

"Dr. Grassi is said to have made an important, and by no means pleasant, discovery in regard to flies. It was always recognized that these insects might carry the germs of infection on their wings or feet, but it was not known that they are capable of taking in at the mouth such objects as the ova of various worms, and of discharging them again unchanged in their fæces. This point has now been established, and several striking experiments illustrate it. Dr. Grassi exposed in his laboratory a plate containing a great number of the eggs of a human parasite, the *tricocephalus dispar*. Some sheets of white paper were placed in the kitchen, which stands about ten meters from the laboratory. After some hours, the usual little spots produced by the fæces of flies were found on the paper. These spots, when examined by the microscope, were found to contain some of the eggs of the tricocephalus. Some of the flies were then caught, and their intestines presented large numbers of the ova. Similar experiments with the ova of the *oxyuris vermicularis* and of the *tænia solium* afforded corresponding results. Shortly after the flies had some moldy cream, the *oïdium lactis* was found in their fæces. Dr. Grassi mentions an innocuous, and yet conclusive experiment that every one can try. Sprinkle a little lycopodium on sweetened water, and afterward examine the fæces and intestines of the flies. Numerous spores will be found. As flies are by no means particular in choosing either a place to feed or a place to defecate, often selecting meat or food for the purpose, a somewhat alarming vision of possible consequences is raised. Dr. Grassi invites the attention of naturalists to the subject, and hopes that some effectual means of destroying flies may be discovered."

ABSORBENT PROPERTIES OF MILK.

Dr. Dougall, of Glasgow, recently made some interesting experiments for the purpose of determining the behavior of milk toward different volatile substances by way of absorption, with special reference to its liability to convey the elements of infection by which typhoid fever and various other diseases are communicated. The following is a summary of his results, which we quote from the *Sanitarian*:—

"Putting this matter to the test, he inclosed in a jar a portion of certain substances giving off emanations, together with a uniform quantity of milk, for a period of eight hours. At the end of that time a sample of milk was drawn by means of a pipette from the lowest stratum of the vessel exposed in the jar; and,

quoting from Dr. Dougall's paper, we find that the following were the results of his experiments :—

	Smell in milk.
1. Coal gas	distinct.
2. Paraffine oil	strong.
3. Turpentine	very strong.
4. Onions	very strong.
5. Tobacco smoke	very strong.
6. Ammonia	moderate.
7. Musk	faint.
8. Asafetida	distinct.
9. Stale urine	faint.
10. Creosote	strong.
11. Cheese (stale)	distinct.
12. Chloroform	moderate.
13. Putrid fish	very bad.
14. Camphor	moderate.
15. Decayed cabbage	distinct.

"It thus became obvious that the milk had absorbed the emanations of all the substances to which it had been exposed, and it further transpired that all the specimens examined retained their distinctive odors for as long as fourteen hours after their removal from the glass jar in which they had been exposed.

"Cream, according to Dr. Dougall, may be regarded as acting in much the same manner as milk; indeed, although it contains less water than milk, yet it has special qualities of its own, which may perhaps make it even more liable to retain offensive and dangerous emanations than the parent fluid itself. Abundant evidence has, however, been given to show that far more care is needed in connection with the storage of milk than has heretofore been regarded as necessary, and this especially where milk or cream is kept in apartments or wards occupied by sick persons. If the emanations to which the milk is exposed are of a diseased and dangerous quality, it is all but impossible that the sample can remain free from offensive and dangerous properties; and it should become an invariable rule to keep as little milk as possible in sick-rooms, and never to allow a supply which has been thus exposed to unwholesome emanations to be used for food.

"Under these circumstances it has been lately held desirable to boil all milk which is open to suspicion before using it. In the course of several epidemics in which milk has acted as the vehicle of infection, it has been noticed that persons who had only consumed it after it had been boiled escaped all ill results, whereas other members of the same family or community, who had not taken that precaution, had been attacked with disease."

Soft vs. Hard Water.—There has been much discussion of the question whether soft or hard water is more conducive to health. The question is thus answered by Dr. B. W. Richardson in an admirable essay entitled, "Health in a Health Resort:"—

"Water, to be quite free from injury to health, should not have more than 8° to 9° of hardness; and when it exceeds that, it should, by the lime-softening process, be brought down to the proper standard. In Canterbury the authorities have carried out this process on an extensive scale, and nothing could be more satisfactory than the result. I have visited the works for softening of water in Canterbury, for the purpose of gaining a good practical lesson, and I came away so much surprised and instructed that I would recommend every sanitarian who has not been there, to make amends to himself by going as soon as he can.

"I have no doubt myself that hard water, taken as drink, is a cause of constipation, dyspepsia, and some other derangements of the body which I will not call actual diseases. I feel, also, that the evidence is very nearly conclusive that hard water, as a drink, does, as it is often supposed to do, produce glandular swellings in the neck—*goître*—in susceptible persons. We all know that hard water makes bad tea, and is a bad medium for ablution. Of late years we have lost the dread which was once held in respect to the deleterious action of soft water on leaden pipes, because we are beginning to use iron instead of leaden conduits; so that on all grounds the soft water supply becomes urgent for every town that claims to be called a health resort."

Drunken Pigs.—The pig seems to be a favorite subject for experiments with alcohol, for what reason we know not, unless it be that he takes more kindly to the poison than most other members of the animal kingdom.

"W. Mattieu Williams says that he once witnessed a display of drunkenness among 309 pigs, which had been given a barrel of spoiled elder-berry wine all at once with their swill. 'Their behavior was intensely human, exhibiting all the usual manifestations of jolly good-fellowship, including that advanced stage where a group were rolling over each other, and grunting affectionately in tones that were distinctively expressive of swearing good-fellowship all round. Their reeling and staggering, and the expression of their features all indicated that alcohol had the same effect on pigs as on men; that under its influence both stood precisely on the same zoölogical level.' He quotes also MM. Dujardin Beaumetz and Audege's account to the French academy of sciences of their experiments during the three years on the effects of alcohol diet on pigs. 'Eighteen of these animals were treated sumptuously, according to old-fashioned notions of hospitality, by mixing various alcohols with their food, in proportions about corresponding to a modest half-pint of wine at dinner. The alcohols that we drink in wine, malt liquors, whisky, Hollands, brandy, etc., invariably produced sleep, prostration, and general lassitude; while absinthe (included as another variety of alcohol) produced an excitation resembling epilepsy. Some of the animals died from the effects of alcoholic poison. The survivors were killed, and subjected to a post-mortem examination. All were found to be injured, but the mischief was greater when crude spirits were used; less when it was carefully redistilled and purified.

—A German doctor of Philadelphia attributes nearly all the diseases to which his countrymen are subject in America to the use of beer.

Don't Do It.—Don't undertake to follow all the advice about health which you find in the newspapers, or even in some journals presumably devoted to instruction in matters pertaining to health. It is getting to be quite the fashion to offer advice about health on every possible occasion; and the advice is often set most beneficial when ignored. Here is a specimen of the sort just referred to:—

"Hall's *Journal of Health* says that half a teaspoonful of common table-salt, dissolved in a little cold water, and drunk, will instantly relieve 'heartburn' or dyspepsia. If taken every morning before breakfast, increasing the quantity gradually to a teaspoonful of salt and a tumblerful of water, it will in a few days cure any ordinary case of dyspepsia, if at the same time due attention is paid to the diet."

No better device for making dyspepsia could possibly be planned. Salt, in the quantity recommended, is not only an irritant, but precipitates the active principle of the gastric juice. Experiments have proven that even so small a quantity as seven and one-half grains of salt impairs digestion, and it is hence evident that so great a quantity as a dram must seriously interfere with the action of the digestive juices.

No advice about health should ever be accepted on empirical grounds. If the advice is good, it will be accompanied by a good reason in its support, one which will commend itself to the common sense of all reasoning people.

Drunken Crows.—A Yankee boy down in Connecticut was vexed by the multitudes of crows that stole the seed from his cornfield, and devised a plan for summary vengeance. He soaked a lot of corn in laudanum and whisky, and scattered it about the field. The crows ate it with avidity, and were soon as drunk as lords, as was evidenced by their loud cawing as they rolled about the ground too intoxicated to fly. They were readily dispatched in great numbers.

Cow-Yards and Typhoid Fever.—The numerous epidemics of typhoid fever which have been connected with the common milk supply have occasioned a careful scrutiny of the possible causes which might lead to infection through this medium. In many instances some case of the disease has been shown to have been so related to the water supply of suspected dairies as to account for the origin of the disease; but this has not always been the case, and numerous epidemics have remained unaccounted for even when the milk supply was suspected.

Mr. Lawrence recently presented in the London *Lancet* the theory that cow manure may give rise to typhoid without the aid of a previous case of the disease. In support of it, he cites a number of cases that came under his observation while practicing medicine in South Africa, in which, although the sparse population of the country was favorable to the tracing of infection, no connection with a previously existing case of typhoid could be detected; while there was always evidence of the access of cattle-manure to the drinking-water.

A New Test for Water.—An English pharmacist has recently called attention to logwood as a test for metals in water. The following is a simple mode of preparing and using the test. Obtain at a druggist's a half-dram of pulverized logwood, and six ounces of alcohol. Mix, and allow to stand for a few days, shaking daily. Filter so as to obtain a clear solution. (All this will be done by the druggist if desired.) The test is now ready. To a gobletful of the water to be tested, add two or three drops of the tincture of logwood. If no change is observed, add as much more. Continue adding like quantities, each time stirring to insure complete admixture, until the water becomes colored. If the water is absolutely pure, such as distilled or filtered rain-water, it will acquire a yellow tint, the same as the tincture. If it is ordinary well-water, containing more or less carbonate of lime, it will assume a rose-red tint. If lead or other metals are present, a blue tint or blue precipitate will appear. The depth of the color will indicate the amount of the metal present. This test is so simple that any one can easily employ it.

A Bad Inheritance.—Persons who are addicted to the use of tobacco and alchohol, or even of tea and coffee, would do well to consider the following facts, for which the London *Medical Record* is responsible:—

"Dr. Möbius, of Leipzig, has investigated the genealogies of five families through several generations, in order to obtain some information with regard to the mode of heredity in nervous diseases (*Deutsche Med. Woch.*). He finds, among other things, that drunkenness exerts a most powerful influence on posterity, and that even the apparently healthy members of a nervous family are not normally vigorous, and capable of enjoying life. He is of the opinion that no one who has once suffered from a severe form of nervous degeneration ought ever to marry."

In view of the probability of a bad legacy to posterity, how can persons addicted to the use of stimulants or narcotics, insist that it is nobody's business how much of this or that stimulant they imbibe, since no one is injured but themselves?

Effects of Magnetism.—A New York physician has been making some experiments with magnets in the treatment of certain forms of nervous disease, after the manner of Prof. Charcot, of Paris. It was found that very marked beneficial results followed its use in certain forms of nervous disease, particularly those in which the hysterical element predominated. After a time, a wooden imitation of the magnet was made, which proved to be even more efficient than the genuine article, proving clearly the part played by the imagination in these cases.

An Inch of Sausage with 40,000 Parasites.—It has been found that three men who have been seriously ill at Fairview, Fulton county, for the past few days, are suffering from trichiniasis. A piece of sausage which the men had recently made, and of which they had partaken in a raw state, was submitted to a Peoria doctor, who estimates that in some portions there were fully 40,000 parasites to the cubic inch. The men are very low. They had been engaged in making sausage, and thought they had not eaten any considerable quantity, but had frequently tasted it to see if it had the right flavor. All hope of the recovery of the men is not yet abandoned.

The above is from the Peoria (Ill.) *Despatch*. Illinois is one of the great pork raising States, and undoubtedly furnishes its full quota of cases of trichiniasis, but a small number of which are recognized, however, as in most instances the disease is mistaken for typhoid fever, cerebro-spinal meningitis, or some other malady besides the right one.

Lurking Germs.—At this season of the year, germs are on the war path, lying in ambush in unsuspected places, and taking advantage of every favorable opportunity to invade the vital domain, and do their work of death. Every nook and corner of human habitations, and the surrounding premises should be most carefully searched for possible sources of these death-dealing agents. The vault, the cess-pool, the drain, the back yard, the well, the cellar, the space under the house, the pantry, and even the refrigerator are favorite resorts for many kinds of germs which are dangerous to human life. Eternal vigilance in cleanliness and disinfection is the price of safety from these formidable enemies of the race.

—In Bavaria there is a brewery for every 1,000 inhabitants. The average man drinks two to three quarts of beer each day.

Tobacco and Ear Disease.—Dr. Atwood, of St. Louis, at a recent meeting of the St. Louis Medical Society, stated that for years he had suffered from a loud roaring in the ears, which he had discovered to be caused by the use of tobacco. Both smoking and chewing would greatly aggravate the roaring; and when the weed was discarded, the noises speedily ceased, only to return again when the habit was renewed.

Cholera Germs in Fish.—A Bombay doctor announces the discovery of Dr. Koch's cholera germs in the banela fish. It has been observed that the use of certain fish at some seasons of the year seems to induce cholera.

—A correspondent at Stockport tells us: The latest medical bull perpetrated in this direction occurred last week, when a doctor was called in to see three children, for whom he prescribed. A few hours afterward the mother came to him in great trouble, and told him that two of the children had died. "But," said Dr.——, "I gave you medicine for three. Where is the other?"

—The inhabitants of Marseilles are alarmed by the fact that the sparrows and other birds, formerly numerous in the city, have deserted the plague-stricken place. The sanitary condition of the city must be extremely bad, if even the birds are obliged to flee. The sanitary authorities will, perhaps, soon begin to consider the propriety of disinfection.

—The act to prohibit pigeon shooting for pleasure was defeated in the English house of lords by a vote of 78 against 48.

—The cholera epidemic prevailing in France seems to be moderating in intensity.

—The oriental plague has broken out at Khars, in Asiatic Russia.

—A citizen of Bloomington, Ill., died recently from trichiniasis.

DOMESTIC MEDICINE.

SUGGESTIONS ABOUT INFANT FEEDING.

1. MILK is the natural and proper food for children from infancy to the age of twelve or eighteen months. Starchy foods cannot be digested, owing to the fact that the digestive element of the salivary secretion is not formed in sufficient quantity during the first few months of life to render the child able to digest farinaceous foods, such as potatoes, rice, fine-flour bread, and the like.

2. As a general rule, an infant should be fed once in two or three hours during the daytime, and once at night, until one month old. After this time it should not be fed at night, and it should take its food no more frequently than once in three hours during the daytime until four months of age. Between four and eight months, the intervals should be gradually prolonged to four hours. After this time the fourth meal should be gradually dropped off, so that at twelve months the child will take its food but three times a day.

3. If the child is deprived of its natural food, a healthy wet-nurse should if possible be secured, —at least until the child is two or three months old. When a suitable wet-nurse cannot be secured, milk from a healthy cow constitutes the best food. Care should be taken in the selection of cow's milk, that being preferred which is obtained from a cow which has calved two or three months previously. The health and care of the cow, particularly the character of her food, are matters of importance which should receive attention, as there is no doubt but that consumption is frequently communicated to infants from cows whose lungs have become diseased through confinement in close stalls with foul odors, and deficient and improper food. Cow's milk should be diluted at first to one-half, the proportion being gradually increased as the child's stomach is strong enough to bear it. Pure water, lime-water, barley-water, and thin well-boiled and strained oatmeal gruel, may be used to dilute the milk. The object of the dilution is, first, to render it more nearly like the mother's milk in the proportion of nutriment which it contains; and secondly, to render it less liable to form hard curds in the stomach, which are very likely to occur when the milk is taken undiluted.

4. Cow's milk, or other fluid food, is best given to an infant with a proper nursing bottle. The best forms of nursing bottles are those which are furnished with rubber caps, such as are shown in Figs. 1. and 2. The cap should

Fig. 1.

Fig. 2.

be removed, and well cleansed with warm water in which soda or saleratus has been dissolved in proportion of a teaspoonful to a pint each time the bottle is used. Both the nursing bottle and the rubber nipple should be kept immersed in a weak solution of soda when not in use. They should also be cleansed the second time just before the child is fed. Neglect to observe this precaution is one of the most common causes of stomach disturbances.

5. The diet of the mother while nursing is of very great importance, as anything that will disturb the system of the mother will affect that of the nursing infant more or less. Her food should be nourishing, simple, and wholesome. Stimulants of all kinds, whether in the form of alcoholic drinks or irritable condiments, should be carefully avoided. Pastry, desserts, ice-cream and confectionery, and all similar articles, should be wholly avoided. Oatmeal porridge, or milk and the various whole-grain preparations, eggs, and, with those accustomed to its use, a moderate allowance of meat, together with an abundance of ripe fruits, constitute the best diet. Vegetables, such as cabbage, turnips, and carrots, together with peas, beans, and onions, which are very likely to produce colic in the child, should be carefully avoided.

6. Feeble infants, especially those who are born prematurely, will need to be fed a little

more frequently than others, and will require extra care.

7. The interior of a child's mouth, as well as its lips, should be carefully wiped free from milk or other food after feeding, a moist cloth being used for the purpose.

Incontinence of Urine in Children.—For "wetting the bed at night," a great variety of remedies has been tried, most of which are of no value whatever. The most effective plan which can be pursued, is to restrain the patient from drinking for three or four hours before retiring. An eminent physician has also suggested that the use of meat by children encourages the habit. Whipping, scolding, and frightening children, unless there is good evidence that they are lazy or vicious, will do no good; in fact, these measures are likely to do harm by exciting a nervous condition of the system, which will encourage the very thing which is to be corrected. Wearing a wet bandage about the lower part of the bowels at night is a very useful measure. To prevent the patient from sleeping upon the back, a good remedy is to tie a knot in a towel, and place it about the body in such a way that the knot will come at the center of the back. In cases in which the patient is old enough, and sufficiently intelligent to appreciate moral influence, he should be encouraged, and should be given some simple prescription, in which he should be taught to have perfect confidence as a certain cure, since faith will do much toward effecting a cure when other remedies are of no avail.

TREATMENT OF FRACTURES.

THE limb should be restored at once as nearly as possible to a proper condition, and hot fomentations should be applied to relieve and prevent soreness and inflammation. As soon as possible, a surgeon should be called to set the limb. This is not generally nearly as painful an operation as commonly supposed, it being seldom necessary to apply any very great amount of force to get the parts into proper position. In case very great swelling has occurred before an opportunity is afforded to set the bones, hot fomentations or alternate hot and cold applications should be employed until the swelling and imflammation are reduced, before any attempt is made to set the broken bones.

The greatest difficulty against which a surgeon has to contend in the treatment of fractures is the contraction of the muscles, by means of which the fragments are drawn apart. This may generally be overcome by putting the limb in a condition in which the muscles will be as completely relaxed as possible.

In setting bones, the lower fragment is drawn firmly down, the upper one being held in position, or drawn in the opposite direction. This is always necessary to cause the ends of the bones to come together properly. It is generally necessary, however, to make some degree of pressure upon the sides in order to secure perfect adjustment of the parts. After the bone has been set, a proper splint or other apparatus should be applied in such a way as to keep the parts in position. In measuring limbs to see if they are of the same length, as should always be done, care should be taken to put both limbs in the same position, and to take measurements from the same points.

Compound fractures require very careful management, and with the best of care not infrequently result in considerable deformity.

BOILS.

A BOIL originates in the death of a small portion of the skin, which generally involves a sweat, or sebaceous, gland. Inflammation is the natural process by which the portion of dead tissue is separated from the living. The boil first appears as a red and somewhat painful nodule in the skin, about the size of a bean or pea. Very soon a white point forms at the apex; swelling spreads about the center, usually attaining about the size of a dollar. At the end of four or five days, the central portion, marked by a white point, becomes loosened, and a discharge occurs consisting of a plug or core, together with matter, blood, and fragments of dead tissue. The suppuration generally ceases in three or four days.

Treatment.—Boils may often be cut short if treated early by continuous applications of ice. Dr. Eade, of London, claims to have discovered that boils and carbuncles are parasitic diseases, and that the proper treatment is very strong carbolic acid injected into the center of the boil by means of the hypodermic syringe. The best plan to be recommended for general employment is the early application of hot fomentations, by which the pain may be relieved, and the natural process hastened. When there is a great deal of general irritability, warm full baths are very advantageous.

If the boil does not open promptly, it should

be freely lanced, after suppuration has taken place, as shown by softening. Warm poultices should be continued after lancing. *Blind boils* should be lanced and poulticed. The practice of squeezing boils is a very injurious one, as the matter is thereby dispersed into the surrounding tissues, often producing a numerous crop of boils in the vicinity of the first one. The discharge of matter should be secured by a large opening and gentle pressure.

Question Box.

Goiter.—Mrs. J. F., of Wis., wishes advice about treatment for a goiter of ten years' standing. Is sixty years of age. Has been treated for some time by medicated baths, but without success.

Ans. The treatment of goiter must be varied according to the nature of the particular case, as there are several varieties of the malady. When the goiter is hard, and unyielding to pressure with the finger, it will not be likely to yield to any kind of treatment. When it is soft and compressible, it may usually be reduced in size, and sometimes wholly cured, by the employment of alternate hot and cold applications, and by the use of the cold pack or ice bag at night. The local application of electricity is of great service in these cases. A peculiar form of goiter, in which there is very great acceleration of the pulse, protrusion of the eye-balls, and general debility, is a very grave disease, and demands thorough and prompt attention.

Sleep for Children.—A correspondent inquires: "Ought young children, who are growing fast, and do not seem strong, to be allowed to sleep in the morning until they awaken? or should they be called at an early hour?"

Ans. We do not believe in the special virtues of early rising. The time to get up is when the body is rested by sufficient sleep. Children need much more sleep than adults. It is chiefly during sleep that the processes of repair and growth are carried on. A child that has insufficient sleep cannot develop properly. Children should be taught to retire to bed early, and then they may be induced to get up early in the morning without harm; but if for any reason they are kept up late at night, they should be allowed to sleep in the morning until rested.

Care must be taken, however, to see that the time spent in bed in the morning is devoted to sound sleep. Dozing, or lying in bed awake, should not be allowed in children at any age after they are old enough to understand instruction.

Incontinence of Urine.—A lady desires suggestions respecting treatment of this difficulty in a boy of ten years, who has always been troubled with this annoying complaint.

Ans. Please see article on this subject in the department of Domestic Medicine, page 282.

Chemical Food Preservers.—A correspondent asks our opinion respecting the use of salicylic acid, as a preservative for foods and vegetables. We have frequently expressed our opinion of this article. We consider it decidedly unwholesome, and believe that it cannot be used without injury to health.

Hot Milk and Constipation.—J. B. finds the use of hot milk very strengthening, but observes that it produces inactivity of the bowels, and wishes to know if anything can be added to it to prevent this effect.

Ans. Milk is to some extent confining to the bowels, especially after having been boiled or scalded; and when taken freely, other foods which are of a very relaxing character, such as fruits and coarse grains, should be used at the same time. It is better to avoid raising the temperature so high as to scald the milk when preparing it for food. A temperature of 120° to 130° is sufficient, and will not produce the changes of the milk which are caused by scalding.

Corns.—A lady complains of corns on the bottoms of the feet, and inquires for a remedy.

Ans. Corns or callouses on the soles of the feet are often very painful, and occasion great inconvenience. If very tender, and swollen, with redness of the tissues round about, the proper remedy is rest, lying in a horizontal position, accompanied by proper use of poultices, until the soreness and irritation disappear. After the tenderness has subsided, a loose shoe should be worn; and to relieve the shoe of pressure, apply over the corns thick pieces of buck-skin or felt, with an opening in the middle the size of the callouses. By this means, the pressure can be wholly taken off the callouses, and nature will in due time effect a cure. If the skin is very thick, it may be softened by the application of compresses wet in soda-water and saccharated solutions. In a short time, the skin becomes softened so it can be easily scraped off.

Tomatoes, Coffee, Ruptures, etc.—A young disciple of hygiene, who is ambitious to secure and maintain the highest degree of health, asks the following questions:—

1. Are tomatoes injurious to health? Some doctors claim that they produce cancer.

2. Is coffee, made of wheat and barley browned, a healthful substitute for the present teas and coffees?

3. Is rupture curable at home, or does it require the services of a skillful physician?

4. Some time ago, we read a piece written by a milk inspector of a neighboring city, who said he always placed a cupful of water in his bed-

room before going to bed, to absorb the poisonous gases. He said that a dish of milk set in a refrigerator with strawberries, which are uncovered, would absorb the gas arising from them so much as to color and flavor the milk. Do you think it is a good plan to set some water in the room before retiring?

5. Is not the rind of lemons and oranges injurious if eaten?

6. What do you consider the best soap for clothes and for toilet?

7. What is the best kind of stocking supporter?

Ans. 1. Tomatoes are wholesome food for most persons. The opinion that they produce cancer is wholly without foundation.

2. Burned coffee, crust and cereal coffee, are different names for substitutes for coffee. They are produced by roasting some kind of grain preparation until browned. The color is due to the caramel. Caramel is an innutritious substance, and must be eliminated from the body, but it cannot be regarded as very seriously injurious. This kind of coffee is decidedly preferable to the coffee ordinarily used. We usually suggest plain hot milk as a substitute for warm drinks of any kind.

3. Rupture or hernia is in a large proportion of cases curable by the aid of a proper surgical operation, and subsequent treatment. More full information on the subject can be had by addressing the Sanitarium.

4. The notion that water absorbs impure gases, etc., to such an extent as to be of value as a preventative of danger from such sources, is a serious error. Water in a sick room absorbs gases from the air sufficient to acquire a very unpleasant flavor, but not to a sufficient degree to be of any value as a disinfectant.

5. Yes. The rind of lemons and oranges contains an irritating acid, which if taken in a large quantity, is injurious to the digestive organs.

6. Soaps made from vegetable oils are to be preferred for the toilet. Nothing can be better than genuine castile soap.

7. We consider the stocking supporters advertised in the columns of this journal, and sold by the Sanitary Supply Co. of this place, the best article of this kind in the market.

Freckles.—E. H. asks: "Do you know of anything that will 'bleach' or remove freckles without injury to the skin?"

Ans. There are two kinds of freckles. Those which are produced by exposure to sun and wind are very superficial, and are easily removed by such substances as will remove the superficial cellular layers of the skin. Among the best remedies for this purpose are the following:—

1. Three tablespoonfuls of fresh-scraped horseradish; buttermilk, a pint. Allow to soak six or eight hours, shaking occasionally. Cider vinegar is sometimes used in place of the horseradish. Apply to the face at night, leaving on till morning.

2. Two tablespoonfuls of lemon juice; an equal quantity of water; a tablespoonful of glycerine; a heaping teaspoonful of powdered borax. Apply three or four times a day, drying after fifteen or twenty minutes with a fluffy towel.

Magnetism.—A subscriber takes exceptions to our criticisms of the various magnetic appliances which have been placed upon the market during the last few years. She thinks she has seen good results from their use, and thinks we should recommend them, even though we have no confidence in them, except as a means of exciting the imagination.

Ans. We have taken considerable pains to investigate the qualities of these appliances, and are preparing to make still more extensive experiments, for the purpose of determining, if possible, the truth respecting magnetic force as a curative agent. If we are convinced that it is really beneficial in some such manner as electricity has proven itself to be, we shall be most happy to recommend it to suffering humanity as a valuable agent in competing disease. If, however, our present views are confirmed, we could not do otherwise than speak what we believe to be the truth concerning it. Remedies which are said to do good, but really do none, are not always so harmless as might seem to be the case. The high recommendations given them by advertisers, frequently lead people to employ them for diseases which require the use of vigorous and effective means, which are neglected in the delusion that a cure can be effected by some of the means referred to, until all hope of a cure is passed, and no relief can be of avail.

Lame Hip, Chronic Diarrhea, Rupture, Piles.—Mrs. H. J. W. H. inquires if we can do anything at home for a lame hip. The cause of the disease was a dislocation which was not reduced for more than a week after the injury was received.

2. Can chronic diarrhea be benefited by "water treatment"?

3. Can rupture be successfully treated and cured?

4. What is the best cure for piles or hemorrhoids?

Ans. 1. You will probably find rest, and hot applications, the best means of giving relief.

2. Yes. The employment of the hot enema is one of the most effective methods of relieving this very obstinate disease. The temperature should be 110 or 120 degrees, and as large an amount as can be retained should be taken twice a day. From one to three quarts should be taken at a time.

3. Yes. A large proportion of cases of hernia can be cured by treatment.

4. This unpleasant disorder is usually the result of inattention to the condition of the bowels. It can be radically cured by the aid of proper treatment, and a slight surgical operation.

THE COOKING SCHOOL.

Conducted by MRS. E. E. KELLOGG.

A DINNER OF EIGHT COURSES.

FRUIT FOR DESSERTS AND SAUCES.

Of all the articles which enter the list of deserts, none are so wholesome and inexpensive as the luscious fruits with which Nature so abundantly provides us. Their delicately tinted hues, and perfect outlines appeal to our sense of beauty, while their delicious flavors gratify our appetites. Our markets are bountifully supplied with an almost unlimited variety of the fruits of both temperate and tropical climates, and one might suppose that they would always appear upon the daily bill of fare; yet they are rarely found upon the family board in the majority of homes. People are inclined to consider fruit, unless the product of their own land, a luxury too expensive for common use; while butter, eggs, sugar, and other materials for making pies and cakes are from long custom deemed a necessity. Many who keep a plentiful supply of fruit in store, never think of placing it upon their tables at meals, but eat it at all other times. Fruit is a most healthful article of diet when partaken of at seasonable times; but to eat it or any other substance between meals, is a gross breach of the requirements of good digestion. A simple course of fruit is all that is needed after a dinner; and much time, labor, and health will be saved when housekeepers shall be content to serve the dessert which Nature supplies all ready for use, instead of those more harmful combinations, in the preparation of which they spend hours of tedious and tiresome toil.

For serving, all fruits should be sound, and as fresh and cool as possible. Fruit that has stood day after day in a dish upon the table in a warm room may serve for ornament, but it is far less wholesome and tempting than that brought fresh from the store-room or cellar.

Apples.—In serving these, the "queen of all fruits," much opportunity is afforded for a display of taste in their arrangement. They should be first wiped clean with a damp towel, and may then be piled in a fruit basket, with a few sprigs of green leaves mingled here and there amid their rosy cheeks. The feathery, green tops of carrots and celery are very pretty for this purpose. A combination of oranges and apples interspersed with bits of green makes a very ornamental dish.

Peaches and Pears.—Pick out the finest, and wipe the wool from the peaches. Edge a plate with uniform sized leaves of foliage plant of the same tints as the fruit, and pile the fruit artistically upon it, tucking sprays or tips of the foliage plant in the interstices between the fruit. Bits of ice may also be placed between the fruit to keep it cool. Yellow Bartlett pears and rosy-cheeked peaches arranged in this way make a most ornamental dish.

Oranges.—Cut the skins in eighths half way down, separating it from the fruit, and curling it inward, thus showing half the orange white and the other half yellow; or cut the skins in eights two-thirds down, and after loosening from the fruit, leave them spread open like the petals of a lily.

Peaches and Cream.—Pare the peaches just as late as practicable before needed, since they discolor by standing. Always use a silver knife for paring, as steel soon blackens and discolors them. Do not add the sugar until the time for serving, as it will start the juices, and likewise turn them brown, and destroy much of their rich flavor. Keep on ice after paring until needed for the table. Serve with cream.

Grapes.—Grapes from the market are usually so covered with dust that they need washing before serving. Drop the bunches into ice-water, let them remain ten or fifteen minutes, then drain and serve.

Melons.—Watermelons should be served very cold, and for this purpose should be kept on ice until needed for the table. Cut off a slice at each end, that each half may stand upright on the plate, and then cut around in even slices. Instead of cutting through the center into even halves, the melon may be cut in points back and forth through the center around the entire circumference, so that when separated, each half will appear like a crown. Another very pretty way to serve watermelon is to take out the central portion with a spoon in cone-shaped pieces, and arrange on a plate, with a few bits of ice to keep it cool, if necessary. Other melons should be cut in halves, and the seeds removed before serving, and a lump of ice placed in each.

Frosted Fruit.—Prepare a mixture of the frothed white of egg and a very little cold water. Dip nice bunches of clean currants, cherries, or grapes into the mixture, drain nearly dry,

and roll lightly in powdered sugar. Lay them on white paper to dry. Plums, apricots, and peaches may be dipped in the mixture, gently sprinkled with sugar, then allowed to dry.

Baked Apples.—Moderately tart apples, or very juicy sweet ones are best for baking. Select good, ripe apples free from imperfections, and of nearly equal size. Wipe carefully to remove all dirt, and bake. Water sufficient to cover the bottom of the baking dish should be added if the fruit is not very juicy. Sour apples are excellent pared and baked with the centers, from which the core has been removed, filled with sugar mixed with grated lemon rind. They should be put into a shallow earthen dish with water sufficient to cover the bottom, and baked in a quick oven, basting often with the syrup. Baked apples are usually served as a relish, but with a dressing of cream they make a most delicious dessert.

Baked Pears.—Hard pears make a nice dessert when baked. Pare, halve, remove seeds, and place in a shallow earthen dish, with a cup of water to each two quarts of fruit. If the pears are sour, a little sugar may be added. Bake, closely covered, in a moderate oven until tender. Serve with sugar and cream.

Stewed Fruit.—The simplest method of cooking fruit is stewing. In cooking, always use porcelain or granite-ware kettles. Fruit cooked in tin loses much of its delicate flavor; while, if the fruit is acid, and the tin of poor quality, there is always a liability of the acid of the fruit acting upon the metal and forming a poisonous compound. Use only silver knives for preparing the fruit, and silver or wooden spoons for stirring if required. Prepare just before cooking if you would preserve the fruit perfect in flavor, and unimpaired by discoloration. Cook in a small quantity of water, and do not add sugar until the fruit is done. Sugar boiled with an acid will in a very few minutes be converted into glucose, two and one-half pounds of which only equal one pound of cane sugar in sweetening properties. It will require more than double the amount of sugar to sweeten fruit if added before the cooking process is complete, than will be necessary afterward.

Apple Meringue Dessert.—Prepare and stew some tart white apples with half a lemon rind in a very small quantity of water until tender. A good way is to use a shallow, broad-bottomed stew-pan, on which the apples may be spread out over the entire surface, having only one or two layers. Add but a small quantity of water, and cover closely, that the steam may cook those on top uniformly with those at the bottom. Watch closely that they do not burn. When tender, remove the lemon rind, and rub the apples through a colander. If juicy, return to the fire, and simmer slowly until all the juice is evaporated, or place in a moderate oven until the sauce is dry. Sweeten, place in a glass dish, and pile a meringue made with the whites of two eggs and two tablespoonfuls of sugar over the top. Brown slightly in the oven, and ornament with bits of colored jelly or sugar.

Apple Custard.—Peel, halve, and core eight or ten medium-sized sour apples. Have prepared a syrup made with a teacupful of water, the juice of one lemon, a little grated rind, and a half-teacup of sugar. When the sugar is dissolved, add the fruit, and simmer till tender, but not fallen to pieces. Take out the apples with a skimmer, draining thoroughly, and lay them in a nice glass dish. Boil up the syrup until thick, and pour it over the apples. Make a soft custard with a pint of milk, yolks of three eggs, and two tablespoonfuls of sugar. When cold, spread over the apples; whip the whites to a stiff froth, flavor with lemon rind, and pile irregularly upon the top. Brown lightly in the oven.

Canning Fruit.—This is the most efficient means for preserving fruit in a wholesome condition; but in order to insure success, two things must be carefully attended to:—

1. The fruit must be sufficiently cooked.
2. All air must be excluded, and the can hermetically sealed.

The best fruit should be selected, and that which is not overripe. It should be kept as clean as possible, so that little or no washing will be required, as this is injurious to many fruits. Pick over carefully, and wash quickly, if washing is necessary. Either steam or stew, adding as little water as possible, and as little sugar as will suffice to make the sauce palatable.

While the fruit is cooking, prepare the cans in which it is to be placed. Thoroughly scald them, so that there may be in them nothing which will induce decay. To prevent breaking when the hot fruit is placed in the can, it may be heated by pouring into it hot water, and quickly shaking it, so that all parts may be heated equally; or the can may be placed in cool water and gradually heated to the requisite degree. Dry heat is equally efficient, and may be applied by keeping the cans in a moderately hot oven while the fruit is cooking. Some place the cold can upon a folded towel wet in cold water, which cools the bottom, and so prevents cracking. This method is very convenient.

When the fruit is properly cooked and the cans are in readiness, first place in the can a quantity of juice, so that as the fruit is put in, no vacant places will be left for air, which is sometimes quite troublesome when this precaution is not taken. Then add the fruit itself. If any bubbles of air chance to be left still, work them out with a fork, spoon handle, or straw. Fill the can full to overflowing, using boiling water when there is not enough juice, and immediately put on the cover and screw tightly on. As the fruit cools, the cover can be tightened, and this should be promptly done, so that no air may be allowed to enter. Sometimes the fruit will settle so that a little space will appear at the top. If you are sure the can is tight, do not open to refill, as you will be unable to make the can quite as tight again, unless you reheat the fruit, in which case you would be liable to have the same thing occur again.

To Keep Grapes.—Select such bunches as are perfect, rejecting all upon which there are any bruised grapes, or from which a grape has fallen. Spread them upon shelves in a cool place for a week or two. Then pack them in boxes in sawdust which has recently been thoroughly dried in an oven. Bran which has been well dried may also be used. Dry cotton is employed by some. Keep in a cool place.

The Kitchens of the East.—A gentleman, during his travels in Eastern Asia, had made some observations on the cooking apparatus there in common use. The Japanese largely employ a mere fire-place, over which the vessels containing food are suspended by hooks; they have, however, two or three kinds of regular stoves of different designs. In China, stoves of a definite character are in use; one was found in Canton which was very elaborate; it was long, and had numerous openings. In Singapore there appears to be only one kind of stove, and it is of decidedly primitive construction. In fact, it is little more than a rough trough filled with earth and sand, on which are laid rough stones selected with reference to pots of various sizes; and the fire is built among the stones. The kitchens in which these constructions are found are invariably very dark and dirty. In Northern Java the writer found a stove made of arched clay, as half an earthern pipe would be if cut through the axis of the cylinder. This half-cylinder is set with the open part down, and fire is built under its arch. Holes are cut through the crown of the arch, to hold some of the pots, while others are merely set upon the surface.—*Sel.*

Literary Notices.

THE WEEKLY MEDICAL REVIEW.—This is a weekly medical magazine, the official organ of the St. Louis Medical Society, and is published simultaneously at Chicago and St. Louis. It is a wide-awake journal, containing an epitome of current medical news, with a large amount of original matter on topics of interest to the medical profession. Terms, $3.00 per year. J. H. Chambers & Co., 125 State St., Chicago.

THE anticipation of a possible invasion of this country by the cholera, which an eminent divine aptly calls "God's indignation of filth," begins to call out numerous rules and suggestions for its prevention and restriction from the various Boards of Health throughout the country. We have just received a most excellent document of this kind, recently issued by the Michigan State Board of Health, and obtainable from the Sec., Dr. H. B. Baker, of Lansing; also a similar circular, published by the Iowa State Board of Health, which may be obtained of the Sec., R. J. Farguharson, M. D., Des Moines, Iowa.

THE DIET QUESTION, GIVING THE REASON WHY, is the title of a ninety-nine page pamphlet by Mrs. Dr. Dodds, published by Fowler and Wells, 753 Broadway, N. Y. As the title indicates, the book is a dissertation on the subject of diet in its various phases. It dwells quite largely upon the different articles used as food substances, and their dietetic value; explains why meats, condiments, tea, and coffee should be discarded, and presents in a clear and concise manner the value of a genuine hygienic dietary. It is a work fitted to do much good in the aid of food reform, and ought to have an extended circulation.

WE have received from the author a new and unique temperance chart, entitled, "The Overshadowing Curse." It consists of a diagram comparing the annual expenditure of the United States for intoxicating liquors with that of bread, meat, and other items of expenditure, as based upon the reports of the commissioner of Internal Revenue for 1880. It is a telling representation of appalling facts, which ought to be in the hands of every temperance lecturer throughout the land. It is sufficiently large and plain to be well seen by an entire audience.

Prices: mounted, by express, 50 cts., unmounted, post-paid, 40 cts. Address, C. C. Lewis, Review and Herald Office, Battle Creek, Mich.

THE frontispiece of the September POPULAR SCIENCE MONTHLY is a fine portrait of Professor J. P. Lesley, chief geologist for Pennsylvania, and President of the American Association for the Advancement of Science, of whom a biographical sketch is given. The leading article of the number is by Professor J. P. Cooke, of Harvard University, on "Scientific Culture; its Spirit, its Aim, and its Method," and is perhaps the ablest exposition of this subject which the current educational controversy has called forth. "The Upper Missouri River System," by Lester F. Ward, is an illustrated article describing the action of the Missouri and Yellowstone Rivers in continually cutting away one side of their valleys and building up the other. In "Where and How We Remember," also illustrated, M. Allen Starr, M. D., presents the evidence supporting the view that the various functions of the brain have each their definite location. "The Astronomy of Primitive Peoples" and "Chinese Coroners' Inquests" are interesting as showing the vagaries of minds untutored in science. In "National Health and Work," Sir James Paget strikingly presents an additional reason for sanitary activity in the loss which results to the nation from the sickness and early death of its workers. The "Chemistry of Cookery" and "Morality of Happiness" series are continued, and excellent articles fill up the number.

Publisher's Page.

☞ Mrs. Kellogg will hold a Health Normal at Reed City, Mich., Sept. 2 and 3. There is every prospect of a large attendance of representative workers from northern Michigan.

☞ Constant inquiries are being made about the New Cook-Book, which was announced as in preparation some months ago. Mrs. Kellogg is hard at work preparing recipes for the book, and it is hoped that the manuscript can be put into the printer's hands at no distant date.

☞ The contractors who have been constructing the large addition to the main building of the Sanitarium promise its completion in accordance with the terms of the contract, Oct. 1, or about four weeks from the present time. The plastering is already completed on the upper stories, and the floors are being laid.

It is expected that the New Building will be dedicated some time in October, at which time there will be a reunion of old patients and friends of the institution. The date will be announced, and the invitations sent out as soon as the exact time can be fixed.

☞ The new Gymnasium, a capacious room, 45 by 85 feet, is now occupied as a dining-room, the old dining-rooms being too small to accommodate the large family of patients under treatment at the Sanitarium this summer. The capacious basement will be used for calisthenics until the entire completion of the New Building, when it will be filled with apparatus for mechanical exercises, a larger variety of which is to be found here than in any other institution in this country or Europe. The old dining-rooms have been divided up into eight smaller rooms, to be used for laboratory and offices. The business office has also been enlarged, and numerous other needed improvements made.

☞ The Normal of Hygiene and Heredity recently held at Lake Bluff, was, like all its predecessors, a most interesting and instructive one. The subject of Hygiene occupied the first two days, during which time addresses were given by Dr. Florence Hunt, of Chicago, upon "The Development of the Human Body," explaining in a simple and interesting manner the complex structure of the human organism, and showing the perfect adaptation of each part in forming a symmetrical whole; by Mrs. Kellogg, Nat. Supt. of the Dep't. of Hygiene for the W. C. T. U., upon "Hygiene vs. Intemperance," in which she presented a general view of the relation of hygiene to the temperance work, giving special prominence to the influence of an unwholesome dietary in inducing intemperance, and dwelling upon other physical obstacles to temperance. Dr. Sarah Hackett Stevenson, Professor in the Women's Med. College of Chicago, occupied one session in considering the "Causes of Ill Health in Women," showing that undoubtedly the great augmentation of ill health among the women of the present generation is largely due to the work and worry of this fast age, together with improper clothing, and the use of an impoverished and stimulating dietary. Dr. J. H. Kellogg presented the scientific facts relating to Food and Digestion, making them the basis for numerous practical deductions concerning erroneous dietetic practices, and also considered the subjects of Ventilation and Household Hygiene. The lectures were all eminently practical, and much interest was manifested in the subjects discussed, as was evinced by the numerous questions and lively discussions following each address.

☞ The Annual Catalogue of Battle Creek College made its appearance rather late this year; but the numerous improvements in the school, indicated by the additions made to departments and courses of study, indicate that the managers of the school are wide awake, and are determined to make it in every respect a first-class educational institution. It seems to be their aim to make the school a place where young men and women will receive such culture as will the best fit them for usefulness in life, rather than to follow in the beaten track so long trodden by popular educational institutions.

The attention which is being given to health in this institution is not the least of the advantages which it offers to young men and women who wish to be thoroughly fitted for an earnest life-work. On this point we quote as follows from the Catalogue:—

"The managers of the school confidently expect that the attention which will be given to the conditions requisite for health will result in a marked improvement in the general health and physique of students; a careful observance of and to this end, to the rules of health will be made a part of the general discipline of the school. Young men will be expected to clothe themselves suitably to the season. Young ladies will also be expected to dress in accordance with the laws of health. The underclothing should be suspended from the shoulders by straps or a suitable waist. Corsets, high-heeled and narrow-toed shoes are considered highly detrimental to health; and young ladies who expect to attend this school are requested to omit these objectionable articles from their wardrobes. Those who have not suitable clothing to enable them to comply with this requirement, will be assisted by the matron in making such changes as may be necessary after arriving here."

The above indicates that Battle Creek College has taken a step in advance of other educational institutions in looking after the interests of the body; and those who are acquainted with the school will certainly accredit it with being one in which the advantages for moral and mental culture are second to none. The next term begins Sept. 3. Those who desire further information should send for the Annual Catalogue, which may be obtained by addressing Battle Creek College of this city.

☞ "The Laundry" is a reference book containing hundreds of practical recipes, of which the following are a few:—

A Common Way of Removing Ink Stains, Acids, Vinegar, Sour Wine, Must, and Sour Fruits—A New Water Softening Process—Cleaning Flat-Irons—Cleaning Kid Gloves—How Domestic Washing is Made Easy—How to Ascertain if Water is Hard or Soft—How to Test Starch—How to Waterproof Linen—Rendering Cotton Goods Uninflammable—To Remove Scorching—The Science in Removing Grease Spots—Why Blankets become Hard by Washing.

The work is elegantly bound in cloth, and is sold at $2.50. It is published by Chas. Dowst, 195 Washington St., Chicago, Ill.