

GOOD HEALTH.

A JOURNAL OF HYGIENE.

MENS SANA IN CORPORE SANO.

VOL. 20.

BATTLE CREEK, MICH., APRIL, 1885.

NO. 4.

SOME OBSERVATIONS UPON FOOD AND EATING.

MRS. DIAZ, in her pithy little volume, entitled the "Schoolmaster's Trunk," makes one of the characters inquire of the schoolmaster why he harps so much on the rather trivial subject of eating.

The answer contains so many plain and practical truths, we quote it for our readers. After observing that pies, cakes, preserves, and the like have come to be firmly established as "must haves" in most families, he continues:—

Indeed, all classes, poor as well as rich, seem to agree that the earning and compounding of these and similar articles rank among the chief objects of life. The very phrase, "good living," shows this, since it implies that to live well is to eat well. A man said to me the other day, "When I can't eat and drink what I want to, then I want to die."

Now, if we were created only a *little* lower than the angels, there certainly should be a wider space between us and the inferior animals than such a state of gormandism denotes. Not that the pleasures of eating are to be wholly despised. There is, after all, a relationship between us and the brutes; and we need not be ashamed to own our kindred, or to share their enjoyments. Besides, these grains, fruits, vegetables, etc., which we are called to meet three times a day, are all our relations on the mother's side (Mother Nature's), and should by no means be regarded with contempt, especially as it is their destiny to be worked up into human beings, actually made "bone of our bone, and flesh of our flesh."

I believe in festival days with all my heart, which is the very best way of believing. I think we should sometimes call our friends together, and gratify the whole of them (not meaning all of them, but the whole nature of each one),—give them bright thoughts for the intellect, friendliness for the heart, and good things for the palate, keeping, as regards the last, within bounds of common sense and healthfulness.

The palate craves enjoyment; and that craving being a natural one, must be recognized as such. But what I insist upon is this; namely, that gratifying the palate shall not rank among the chief occupations or the chief enjoyments of life; for it has usurped those positions long enough. And not only is it an usurper, crowding out better and more ennobling aims, but it makes slaves of women, and seriously affects their peace of mind. I have a bright-eyed young cousin, whose one idea during the first half of the day, at least, is to prepare a dinner which shall please the fastidious taste of her husband. For this end she works, plans, ponders, experiments, contrives, invents, and consults cook-books and cooks; and, this end attained, she is happy. But I have seen her at meal-time, when he has criticised unfavorably a dish on which she had spent much labor and more anxiety,—have seen her flush up, leave the table on some pretended errand, and brush tears from those bright eyes of hers. Another case: An elderly woman of this village died recently, the chief end and aim of whose whole married life had been, so people say who know, to cook in such a manner as exactly to please her husband. These may be exceptional cases; I trust they are. But that this state of things

does prevail more or less generally, cannot be denied. If, then, the trivial matter of eating be sufficiently important to take so very prominent a position among our enjoyments, why not harp on it? It should be harped on, likewise, because it affects the condition of almost everybody. Simplify cookery, thus reducing the cost of living, and how many longing individuals would thereby be enabled to afford themselves the pleasures of culture, of travel, of social intercourse, of tasteful dwellings!

Social intercourse in a special manner would be affected by the change. People "can't have company, 'tis such hard work." And no wonder! A young woman of this village the other day set before her company three kinds of cake, two of pie, three of preserves, besides Washington pie, cookies, and hot and cold bread.

Every woman who sat at the table, when her turn of inviting the company comes round, will feel obliged to make a similar display.

When this barbarous practice of stuffing one's guests shall have been abolished, a social gathering will not necessarily imply hard labor and dyspepsia.

Perhaps when that time arrives, we shall be sufficiently civilized to demand pleasures of a higher sort. True, the entertainments will then, in one sense, be more costly, as culture is harder to come by than cake. The profusion of viands now heaped upon the table, betrays poverty of the worst sort. Having nothing better to offer, we offer victuals; and this we do with something of that complacent, satisfied air with which some more Northern tribes present their tidbits of whale and walrus.

When we have changed all this, it will then be given us to know the real pleasure of eating. At present our appetites are so vitiated by overeating, that the keen edge of this pleasure is dulled. Whoever would enjoy it sharpened at both edges, let him labor hard enough to feel actual hunger, and then take—why, take any simple thing, a baked potato or a piece of bread. The dishes that make the work and cost the money are usually eaten after hunger is satisfied, and do harm rather than good.

We often hear people remark, "Oh! we do n't want to be thinking of what does harm, and what does good. The best way is to eat what's on the table." I know a mother who gives her only child,

a little girl three years old, hot biscuits, mince pie, rich cake, and the like, believing, she says, that "a child's stomach should get used to everything." For her part, she believes in living the natural way, not in picking and choosing. Why not, on the same principle, let the child get used to all kinds of reading, and all kinds of companions?

It is curious, the way people assume that because the present system of cooking and serving meals is customary, it is therefore natural; as if the courses of a dinner, each with its central dish, and that with its revolving lesser dishes, were, equally with the solar system, an established order of nature.

Meal-providers have sought out many inventions, and call these the "natural way." They give us at one sitting fish, flesh, flour, butter, salt, milk, eggs, raisins, spices, corn, potatoes, squash, coffee, sugar, saleratus, pickles, onions, lard, pepper, fruits, tomatoes, essences, all variously combined, and say, "Here, eat, eat in the natural way." Why natural? The men and women it helps to produce are, to some extent, its natural consequences; but are they natural men and women? Hear them: "Oh, my head!" "Oh, my back!" "Oh, my side!" "Oh, my liver!" "Oh, my stomach!" "Oh, my nerves!" On every side resounds the mournful chorus. Seldom do we hear break in even one jubilant voice, chanting in response, "I am in perfect health. I feel no ache, no pain." Is this, then, the natural way? But the system speaks for itself, or rather the innumerable host of invalids speak for it. So does the grand army of doctors. So do proprietors of patent medicines, rolling in wealth. Why, people take ill health for granted. "No use telling your aches; everybody has 'em," is a remark often heard.

Occasionally an individual rebels, and insists on eating really simple and natural food. Such individual is straightway called odd. He is jeered at, ridiculed, accused of thinking about his stomach, and about what merely goes to sustain the body, as if such thinking were not worth while.

Now these bodies are nearer and dearer to us than any other earthly possession. And, what is more, they will cling to us. We are joined to them for better or worse; and from this union there is no divorce till death do us part. Why, then, scoff at them? Why not, on the contrary, seri-

ously consider how we may build them up as pure, as strong, and as perfect as may be? Not worth while to think about one's stomach? Why? The stomach is not an obscure party, doing business in a small way on its own account. It is a leading partner in an important and influential firm,—“Stomach, Brains, and Co.” There is nothing vulgar about brains, oh no! They have always been respectable. Well, in this great firm each member is liable for all, and all for each. If one runs in debt, the others have to pay. It is well known that the condition of the brains and other organs is affected by the quality of the blood, and the quality of the blood by the quality of the food. The change of food into blood is a chemical process; and why is not human chemistry as well worth studying as any other kind? for instance, that by which the manufacturer selects the best chemicals for his various dye-stuffs, and the gardner those best adapted to his various soils. The time may come when this chemistry of eating shall rank with other scientific studies. People shall then be allowed to “pick and choose” the diet best calculated to make healthy nerves, blood, and bones, and they shall not suffer ridicule for so doing.

HINTS ABOUT NURSING THE SICK.

BY KATE LINDSAY, M. D.

THE services of a trained nurse can be obtained by but few families, even among the intelligent middle classes, who compose the greater part of our national population. Especially is this true of the country and village, where, save for the traditional “natural nurse,” who may be a woman of some native intelligence and common sense, but, unfortunately, is quite as often a compound of ignorance, obstinacy, and superstition, the nursing of the sick usually devolves on the wives, mothers, sisters, and daughters, who may be educated and intelligent about other matters, but sadly lacking in the needful knowledge of how to properly care for their sick and suffering friends.

The mother has a heart full of love for her child, is willing to lay down her life to save the little one from suffering; and yet how very often, through ignorance, does she compel it to endure untold agony, and sacrifice even life itself. This is equally true of other women intrusted with the lives of dearly loved friends. They have the best of intentions for their

comfort and welfare, yet sacrifice both because they lack the knowledge needed for the sick-room. It is true now as of old that “for lack of knowledge the people are destroyed.”

What is the knowledge most essential to the nurse? In what does good nursing consist? Florence Nightingale says that it has been limited to signify little more than the administration of medicine, and the application of poultices. It ought to signify the proper use of fresh air, light, warmth, cleanliness, quiet, and the proper selection and administration of diet,—all at the least expense of vital power to the patient. It has been written again and again that woman is by intuition a good nurse; yet when we see the grave and almost universal mistakes made by so many well-meaning and intelligent women in relation to the proper use of these, nature's most powerful remedial agencies, we must come to the conclusion that intuition, as an instructor in the science of nursing the sick, is a failure. Seriously speaking, what parent would expect a daughter to become proficient in music, painting, or any other accomplishment, without the best of instruction, no matter how much natural talent she may manifest for it? Yet to become a good nurse,—one of the most responsible of all womanly professions,—all the instruction popular sentiment requires is a blind intuition, good intentions, and a supposed natural adaptation for the work!

Pay a visit to the sick-room of even the well-to-do and refined, breathe its bilious atmosphere, and you will be prepared to appreciate how thoroughly Miss Nightingale's first rule of nursing is violated. “Keep the air the patient breathes as pure as that out-of-doors, without chilling him,” says this woman of intelligence and large experience. Neglect this first rule, and all else that you may do for your patient will be as nothing. In fevers, and all germ diseases especially, the air is rendered foul very rapidly, because of the increase in the exhalations from the lungs and skin, due to the rapid destruction of tissue; and the poison germs mingled with these foul gases render it doubly dangerous to both sick and well. Yet instead of increasing the ordinary means for ventilating the room, how often do we find windows, doors, and shutters closed tight, and every crack stopped up, even to the key-hole! The tossings and delirium of fever are often mainly due to the hunger of the body for fresh air, and the poisoned con-

dition of the blood from carbonic acid gas. Besides the air pollution from the patient's exhalations, the sick-room is often rendered foul by the gases from sinks, closets, kitchens, slop-pails, foul linen on the bed and about the patient, neglect to bathe and keep the patient clean, etc.

It is often difficult to keep the air of the sick-room in a pure, wholesome condition, especially in the crowded tenements of the poor, or the frontier cabin, where sick-room, kitchen, and living-room are all in one; yet a little care and ingenuity can do a great deal to remedy the evils of foul air, even under the most difficult circumstances. How often I have thought what valuable assistance well-meaning people might render their afflicted neighbors, if, instead of visiting them for gossip and tea-drinking, when sickness is in the family, they were to take it upon themselves to do the cooking, washing, and other necessary work, at their own homes, or assist in getting some place where it might be done out of the sick-room.

The sick-room is often dark, close, and small. If possible, remove the patient to one better lighted and larger; if this cannot be done, try to invent some method by means of which a current of outside air may flow freely in, and the foul air escape, without chilling the patient with draughts. Open a window in the room where the patient is and one in an adjoining room; or drop the upper sash and raise the lower a little, and place a wedge between them; or swinging the door back and forth will also produce a current. If the patient is likely to feel chilly, keep up the heat with hot bottles, bricks, etc. Protect the patient from direct draughts by screens; yet use every means to insure a change of air; also dispose of everything tending to render the air of the sick-room impure. Keep the bed-clothing, and the linen used about the patient, clean and sweet by frequent airing and washing. Keep his body clean by bathing; allow no foul linen, slops, or dirty pails to remain an instant in the sick-room. Shut off, as much as possible, all outside pollution from foul drains, cellars, sinks, closets, etc. In fact, think not only about securing a change of air, but also a proper quality, and do away as much as possible with all sources of pollution of the same. Remember, also, that no amount of deodorizers or disinfectants will ever take the place of fresh air; and they are often a source of annoyance to the patient. Remember that cold air

is not necessarily pure, nor warm air foul; that damage may be done by both too high and too low a temperature in the sick-room; that 68°-70° during the day, and 55°-60° during the night, are the most agreeable temperatures. The temperature may be increased a few degrees when the patient is able to sit up, or when taking a bath, or changing bed or linen. Some diseases of the respiratory organs require a moist atmosphere; but purity always should be maintained. In fact, it depends on the nurse whether the air of the sick-room shall prove the breath of life to the patient, or the medium of disease and death.

PROLONGING LIFE.

THE possibility of prolonging human life has undoubtedly, from the most ancient times, afforded a fascinating and extensive field alike for the visionary and the deepest thinkers. Plans for prolonging existence have ever been among the principal allurements held forth by empirics and impostors; and by thus imposing upon the credulity of the public, many notorious charlatans have acquired harvests of ill-gotten gold. Men of science have through all ages devoted their attention to the subject, as one deserving of the most profound investigation; and their researches have been attended with more or less benefit to posterity. We find that Bacon himself attached so much importance to the matter that he prosecuted inquiry in that direction with the utmost assiduity. Although it would be almost impossible to review all the schemes advanced, yet a review of the most notable theories advocated for prolongation of life is certainly deserving of attention. At the same time, an elucidation of their fallacies, as occasion may arise, is of no small moment, in order to ascertain with greater certainty their true value. It is indeed interesting to observe the various and often opposite means advocated by enthusiasts for attaining the same end.

Even as far back as the Egyptian, Greek, and Roman periods, we find the idea of prolonging life prevalent. The Egyptians bestowed considerable attention on the attainment of longevity, and they believed that life could be prolonged through the efficacy of sudorifics and emetics continually used. Instead of saying, "How do you do?" as an ordinary salutation, they inquired of each other, "How do you perspire?" In those days it was a general

custom to take at least two emetics during each month. Hippocrates and his disciples recommended moderation in diet, friction, and well-timed exercise, which was certainly a step in the right direction.

It was during the darkness of the Middle Ages, ripe with fanaticism and superstition, that the most absurd ideas of witchcraft, horoscopes, chiromancy, and empirical panaceas for the prolongation of life first became disseminated. The philosopher's stone and elixir of life were then vaunted by alchemists. Foremost among the prolongers of life we find Paracelsus, an alchemist of great renown, and a man of considerable attainments. He claimed to have discovered the elixir of life. So great was his influence, that even the learned Erasmus did not disdain to consult him. Patients and pupils flocked around him from every quarter of Europe. Notwithstanding his famous "stone of immortality," he died at the age of fifty. His vaunted elixir was a kind of sulphur similar to compound sulphuric ether. Nevertheless, to the researches of Paracelsus we are indebted for our primary knowledge of mercury, which he was the first to use as a medicine.

About this epoch, one Leonard Thurneysser attained world-wide celebrity as an astrologer and nativity-caster. He was a physician, printer, bookseller, and horoscopist all in one. He professed that by the aid of astrology, he could not only predict future events, but likewise prolong life. He published yearly an astrological calendar, describing the nature of the forthcoming year and its chief events. His calendar and other quackeries enabled him to amass the sum of one thousand florins. He declared that every man lay under the influence of a certain star, by which his destiny was ruled. On ascertaining from what planet a person's misfortunes or sickness proceeded, he advised his patient to remove his residence within the control of a more propitious luminary. In short, to escape from the influence of a malignant to a more friendly satellite was the basis of this theory.

Marsilius Ficinus, in his "Treatise on the Prolongation of Life," recommended all prudent persons to consult an astrologer every seven years, thereby to avoid any danger which might threaten them. During the year 1470, an individual named Pansa dedicated to the council of Leipsic a book entitled "The Prolongation of Life," in which he most strongly urged

all persons desirous of longevity to be on their guard every seven years, because Saturn, a hostile planet, ruled at these periods. According to the teachings of astrology, metals were believed to be in intimate connection with the planets. Thus no doubt it was that amulets and talismans originated, as reputed agents for prolonging life. The disciples of this creed had amulets and talismans cast of the proper metal, and under the influence of certain constellations, in order to protect themselves from the evil influence of adverse planets. These absurd conceits were at a later period revived by Cagliostro, of whom we shall have more to say presently. It would indeed appear that the more mysterious and ridiculous the conceptions of fanatics and impostors, the greater was their success.

The example of the renowned Cornaro affords a brilliant instance of the superiority of an abstemious life to the foolish doctrines put forth at that period. Up to forty years of age he was excessively intemperate, both in eating and drinking, so that his health suffered considerably. He then resolved to submit himself to a strictly temperate regimen, and for the remaining sixty years of his life he continued the observance of his rules, with the result given. Although life might be prolonged by exercising greater moderation in eating and drinking than is generally adopted, yet few persons could safely follow so strict a dietary.

Shortly after the death of Louis XIII. of France, who was bled forty-seven times during the last ten months of his existence, a contrary method came into fashion. Transfusion was for a time relied upon as a means for invigorating and prolonging life. The operation was performed by aid of a small pipe conveying blood from the artery of one person to another. In Paris, Drs. Dennis and Riva were enabled to cure a young man who had previously been treated in vain for lethargy. Further experiments not being so satisfactory, this device as a prolonger of life became discarded.

Francis Bacon held somewhat unique ideas regarding the possible prolongation of existence. He regarded life as a flame continually being consumed by the surrounding atmosphere, and he thence concluded that by retarding vital waste and renewing the bodily powers from time to time, life might be lengthened. With the object of preventing undue external vital

waste, he advised cold bathing followed by friction. Tranquillity of mind, cooling food, with the use of opiates, he advocated as the most suitable measures for lessening internal consumption. Furthermore, he proposed to renovate life periodically, first by a spare diet combined with cathartics; subsequently, through choice of a refreshing and succulent diet. With some degree of modification, there seems to be much wisdom in his views, excepting as regards the use of opiates, which are decidedly of a prejudicial nature.

Numerous charlatans have appeared, and still appear at intervals, loud in their asseverations of having discovered the veritable elixir of life—gold, tinctures, and many other nostrums with which they mendaciously promise to prolong life. The most notorious of these empirics was the Count de St. Germain, who with barefaced effrontery protested that he had already existed for centuries by aid of his "Tea of Long Life," which he declared would rejuvenate mankind. On close examination, his miraculous philter was ascertained to consist of a simple infusion of sandal-wood, fennel, and senna leaves.

A great stir was created in 1785 by the occult pretensions of a fanatical physician in France named Mesmer. He vaunted the possession of extraordinary magnetic power, which enabled him forthwith, by its agency, to remove every disease and prolong life. At the king's desire, a commission was instituted to report upon this phenomenon, in which Dr. Franklin took a leading part. The only practical result of this inquiry was the discovery of animal electricity. At one time Mesmer refused three hundred and forty thousand livres for his secret. After Dr. Franklin's investigations, Mesmer lapsed into obscurity.

Last, but not least in the foremost rank of impostors, was Joseph Balsamo, alias Count de Cagliostro. This charlatan appeared just before the first French Revolution. During his remarkable career, Cagliostro made more than one fortune, which he subsequently lost, and died in prison in 1795. The distinguished Cardinal de Rohan was one of his chief dupes. Like St. Germain, Balsamo boasted that he had discovered the elixir of life, and throughout Europe found persons of all degrees eager to possess his panacea. The elixir was a very powerful stomachic, possessed of great stimulating properties, tending to augment vital sensations. It

is a fixed law of nature that everything which increases the vital forces tends to abridge their duration. Concentrated and potent stimulants, which are usually the active principle of most elixirs, although for the time increasing physical strength, are in truth very prejudicial to longevity.

We will now pass on to examine other theories more worthy of attention, before we proceed to establish what at present appears to be the most certain means for promoting longevity. The plan of hardening—based upon a false supposition that by toughening the physical organs they would wear longer—obtained at one time numerous followers. When we reflect that the main principle of life depends upon the pliability of every organ, combined with free circulation, it naturally follows that rigidity must be unfriendly to longevity. Perpetual cold baths, exposure to keen air, and exhausting exercise, were advocated by the "hardening school." Like most enthusiasts, they carried their ideas to excess, a limited use of which would have been beneficial. Later on, a theory well suited to the idle and luxurious gained many adherents, namely, to retard bodily waste by a trance-like sleep. One enthusiast, Maupertuis, went so far as to propound the possibility of completely suspending vital activity. Even Dr. Franklin, having observed the restoration of apparently dead flies by exposure to warmth, was struck with the feasibility of promoting long life by the agency of immobility. The misconception of this theory, from a physiological point of view, is at once self-evident, as want of exercise is simply poisonous to health. Upon a constant metamorphosis of the tissues, physical well-being must depend to a great extent. A destructive plethora would most certainly be induced by attempting "vital suspension."

That celebrated sect of mystical philosophers, the Rosicrucians—famous for their their profound acquaintance with natural phenomena, and the higher branches of physical, chemical, and medical science—considered that human existence might be protracted far beyond its supposed limits. They professed to retard old age by means of certain medicaments, whose action upon the system should curb the progress of natural decay. The means by which they professed to check senile decrepitude, were, like other mysteries of their fraternity, never revealed. The celebrated English Rosicrucian, Dr. Fludd, whose writings

became famous, is said to have lived a century.

The principal disadvantage of the various plans which have been set forth for promoting longevity, appears to be that they are all deficient in this important respect—that they only regard *one object, and neglect the rest*. However beneficial any theory may prove, it must be materially inadequate in fulfilling its purpose, should numerous other matters of the greatest importance bearing upon the human economy be ignored. Hufeland, in his luminous work, "The Art of Prolonging Life," is of opinion that the real art of longevity consists in cultivating those agents which protract existence, and by avoiding all circumstances tending to shorten its duration. This is undoubtedly the most reasonable method for obtaining the end in view. Moderation in all things (avoiding as far as possible every morbid condition), and open air exercise, are far more reliable means of prolonging life than any of the elixirs and panaceas ever advocated. Finally, health and longevity can only be attained by an intimate acquaintance with, and obedience to, those natural laws which govern our physical economy.

—*Truth.*

EXERCISE.

BY ARTHUR NEWSHOLME, M. D.

CONCLUDED.

AFTER prolonged exertion, muscles become *exhausted*. This is associated with an accumulation in the muscles of the products of their action (especially sarcolactic acid), and to a less extent with exhaustion of the supply of oxygen. The rest becomes necessary, in order that the effete products may be removed, and the reserve force of the muscles may be renovated.

Long-continued overexertion produces *chronic exhaustion*, which may, if excessive, result in wasting of muscles. Exhaustion is much more liable to occur when a small group of muscles are exercised out of all proportion to others. Thus, in clerks, we have what is known as the *writer's* or *scrivener's palsy*. The muscles of the hand, and especially of the thumb, cease to respond to the volition of the writer, but are seized with spasms every time writing is attempted; and the muscles of the thumb tend to waste. A similar condition sometimes arises in violinists, tailors, etc. The practical infer-

ence from these facts is, that one group of muscles should not be exercised disproportionately to the muscles of the rest of the body, and that proper intervals of rest should be allowed.

Excessive exercise of the whole muscular system is particularly pernicious when undertaken by those of previously sedentary habits. A walking tour entered on with more zeal than discretion, and not taken by easy stages for the first few days, is often productive of more harm than good. The same evil is seen in the case of volunteers camping out for certain weeks in the year, and subjecting themselves to great exertions and vicissitudes, who have at other times of the year had no preparatory training.

In the intervals of great mental labor, as with students, the amount of exercise should not be *suddenly* increased, but should be regular and moderate in amount.

Competitive exercise is not desirable, as the tendency is for the strength to be over-taxed. The Oxford and Cambridge crews have been said to acquire heart-disease more commonly than the average, but this is not correct. Doubtless hypertrophy of the heart may occur as the result of severe exercise, and this within certain limits is not an abnormal condition. In those who have a weak heart, occasionally dilatation and even rupture of the heart have been produced. The latter is, however, extremely rare, "a broken heart" being much commoner in novels than in actual life. Aneurism, that is, a local dilatation and bulging of a blood vessel (especially affecting the aorta), is more common among soldiers than civilians; but it is doubtful whether this is due solely to the excessive exertions which they occasionally undergo, or to this acting along with their heavy and tight accouterments.

Sudden and severe exertion may cause rupture of some of the air-vesicles of the lung (the condition known as emphysema). A horse suffering from this condition is called "broken-winded," or "roaring," and the cause in this case is probably the same.

AMOUNT OF EXERCISE DESIRABLE.—According to a careful estimate by Dr. Parkes, the average daily work of a man engaged in manual labor in the open air is equivalent to the work involved in lifting 250 to 350 tons 1 foot high; this is a moderate amount, 400 tons being a heavy day's work. The amount of muscular exercise involved in this may be easily known by remembering that a walk of 20 miles on

a level road is equivalent to about 353½ tons lifted 1 foot; and that a walk of 10 miles while carrying 60 pounds is equivalent to 247½ tons lifted 1 foot. (Haughton.)

We may estimate that every healthy man ought to take an amount of exercise represented by 150 tons raised 1 foot, which is equal to the work done in walking 8½ to 9 miles on a level road. A certain amount of this exercise is taken in performing one's daily work; but apart from this, out-door exercise should be taken equivalent in amount to a walk of five or six miles. It is impossible to lay down rules to suit all cases, but a less amount of exercise than that named is probably incompatible with perfect health.

EFFECTS OF DEFICIENT EXERCISE.—The *muscles* themselves become enfeebled and wasted; they respond less readily to one's wishes when called into use. Some wasting of muscle occurs after a few days' confinement in bed; and a limb confined in a splint speedily loses its healthy, rounded contour. The muscles of ladies' arms are usually badly developed; this is partly owing to their tight-sleeved dresses, but more to deficient muscular exercise of the arms. *Oxidation processes* are diminished; less carbonic acid is eliminated, and it tends to accumulate in the system, owing to the diminished activity of respiration. In consequence of the diminished oxidation, the temperature of the body is not well maintained, and the heat is not uniformly distributed. Cold feet are a common complaint of those who lead sedentary lives, though seldom complained of by others.

Along with the other muscles, the *heart* becomes enfeebled and the circulation less perfect. *Digestion* is enfeebled; the appetite is poor. The *nervous system* also suffers; nervous irritability is a common result; while sleeplessness—a thing almost unknown among those who live by the sweat of their brow—is becoming much more common among the worried and ill-exercised inhabitants of our towns. As Maclaren has said, "Scholarships, examinations, speculations, excitements, stimulations, long hours of work, jaded frames, weary brains, jarring nerves, all intensified, seek in modern times for the antidote to be found alone in physical action."

There is no doubt that many diseases are favored by deficient exercise, and can be averted by systematic exercise and the concomitant increased supply of pure air. It is often difficult to appraise the relative

merits of exercise and pure air; but there can be no doubt that both are of extreme importance.

Consumption, even in those with a strong hereditary tendency, may be averted by systematic exercises, especially those directed to the expansion of the chest cavity. In most cases of consumption there is a history of deficient exercise or some constrained position, as well as of living in an impure air and on a damp soil.

Various deformities are induced by defective exercise of particular groups of muscles. Thus drooping shoulders result from shoulder-straps confining the action of the shoulder muscles in the earlier years of life. Stooping is commonly due to sitting in cramped positions in school, and to the use of desks not inclined at the proper angle. Lateral curvature of the spine is also due to weakness of the muscles of the back, and is best treated in its earlier stages by gymnastic exercises specially directed to strengthening these muscles. The tendency to such curvatures is greatly increased in girls by the fact that their trunks are imprisoned in corsets as if in splints, and so exercise of the trunk muscles is reduced to a minimum.

RULES RESPECTING EXERCISE.—1. *The clothing during exercise should not be excessive*, and should not interfere with the free play of the limbs, nor with full expansion of the chest. Flannel is the best material to wear next the skin, in case of perspiration.

2. *Avoid chill after any exercise.* Muscular rheumatism, or still graver evils, not uncommonly result from neglect of this rule. To prevent these, it is well, if there has been any perspiration during exercise, to strip, and scrub the skin, particularly about the chest and arm-pits, with a rough towel.

3. *Exercise should be systematic and regular*, not by fits and spurts. It is very important to avoid sudden, violent, and competitive exercise. No severe exercise ought to be undertaken without a gradual training.

4. *The amount of exercise must be regulated by individual fitness.* A chain is no stronger than its weakest link. The muscles may be stronger than the heart or lungs, and the latter may be fatally injured by an amount of exercise which the muscles can well bear. Hence the importance of ascertaining the condition of

the vital organs before entering upon a course of training.

Another important bearing of this rule is in relation to the exercise of growing boys and girls. When we remember that a boy at school will sometimes grow six to eight inches in a year, it is evident that all the available force is being expended in this direction, and that *excessive* gymnastic exercise can only do harm. Between the ages of fifteen and seventeen there is usually the greatest amount of physical development, and if there is great muscular strain at this period, growth is interfered with, or the seeds of constitutional disease are laid.

5. *Every part of the body ought to be exercised.* This is done spontaneously by the infant. Every muscle of his body acts in sheer delight. His limbs are thrown about, and so he educates the muscles attached to them, while his crouching and crying serve to exercise the muscles of respiration and speech. The evils of exercise confined to particular groups of muscles have been already described. Many of our national games exercise chiefly the muscles of the trunk and legs, while the arms are comparatively little used. Lawn tennis is very valuable as affording exercise for both limb and trunk muscles, and still more so as it is a form of exercise which ladies adopt.

6. *Exercise should not be taken immediately after meals,* as thus digestion is interfered with.

7. *Exercise should be taken, as far as possible, in the open air.* A small amount of exercise out-of-doors is much more invigorating than a larger amount in-doors. The benefit of gymnastics for girls is greatly diminished by their being commonly taken in closed rooms. This is a fact commonly lost sight of, though its importance is very great.

THE FORMS OF EXERCISE taken may be divided into *recreative* and *educational*, though both of course may be recreative under many circumstances.

The primarily recreative exercises, such as rowing, cricket, foot-ball, etc., chiefly exercise the lower half of the body, with sometimes the addition of the muscles of the right arm. Educational gymnastics can be applied to exercise the muscles of any part of the body, and can be exactly graduated to individual requirements. Both forms of exercise are valuable, and should be encouraged.

Singing, speaking, and reading aloud

are forms of muscular exercise very much neglected, and they are particularly important, as the lungs and voice are by these means greatly strengthened, and rendered much less liable to the inroads of disease.—*Health.*

HOW NOT TO BREATHE.

FEW are aware of the evils which may result from so simple an error as habitual breathing through the mouth. We commend to the attention of our readers the following extracts from an able paper on this subject, by Dr. G. W. Major, which recently appeared in the *Medical Record* :—

The professional trainer insists upon the athlete's breathing with closed mouth. The fireman entering a burning building carefully avoids speaking, or the parting of his lips. It is recorded that one may breathe mephitic air for a short time through the nose if the lips are firmly sealed. The army surgeon requires the raw recruit to undergo, in his examination, physical fatigue with closed lips.

All these decisions have been arrived at as the result of observation ; though, no doubt, to many of those who insist that under certain circumstances nasal respiration should be strictly observed, the true reason for this precaution may be quite obscure, or perhaps entirely unknown. Nine out of every ten persons will tell you that the nose is the organ of the sense of smell, quite oblivious of the more important function of respiration. . . .

In the human economy, the nose performs several important functions, the chief being that of a respirator. It purifies, moderates the temperature of, and moistens, the air before it reaches the sensitive larynx and lungs. It purifies the air by arresting foreign and irritating particles in their passage through the cavities of the nose. It moderates the temperature of the air by rendering it as nearly that of the human body as possible. It moistens the air by virtue of the secreting power of its lining membrane and glands.

An example of its first influence may be seen in the fact that in oral respiration dust will lodge in the pharynx and larynx that under otherwise normal conditions would scarcely, if at all, gain an entrance to these organs. Of the second, when on going into the cold outer air of winter, a single breath through the mouth will, by

its impact, provoke cough and a sensation of coldness, which, if taken through the nostrils, would be so moderated that on reaching the lower border of the palate, it would give to one's sensation no appreciable difference of temperature, and could be breathed with comfort and impunity. Of the third, if from any cause nasal respiration is impeded, say during the night, and we rise with dry, harsh palate, tongue, and throat, the secretion of the buccal mucus is neither so constituted nor sufficient to moisten the air, and keep the parts themselves in a healthy state. . . .

Certain physical deformities result from this habit, aggravated in the same proportion as that in which this hurtful method is practiced. Among these may be mentioned general debility; malnutrition, as shown in spare habit of body and undersize; deformed chest, with prominent sternum, sunken sides, retraction at the line of attachment of the diaphragm, and rounded shoulders. The upper lip is more or less shortened, the mouth open to a greater or less degree, the upper central incisors generally prominent, with irregular development of the symphysis of the upper jaw. The *alae* of the nose are thin and flattened, and the muscles of the nose and its neighborhood wasted. These conditions are always more marked on the side of greatest obstruction. The face presents a pinched expression. We also find an expression of stupidity in aggravated cases, with loss of memory occasionally; these two latter possibly the result more of internasal pressure than of mouth-breathing directly. . . .

It is also worthy of passing comment to note the frequency with which we encounter decay of the upper teeth. According to my idea, this is largely dependent upon mouth-breathing. I do not think the prevalent opinion, that the cause lies in the escape of corroding gases from the stomach, is altogether a correct one. An offensive breath, in my experience, arising from the stomach, is somewhat infrequent. The odor, if not of decayed teeth, is most probably that of decomposed nasal or pharyngeal secretions, the tendency to change being manifest in disordered constitutional conditions, especially if accompanied by an elevation of temperature. The injury to the upper teeth may be regarded as the result of dryness caused by the passage of air between and around them, facilitating decomposition of any food present, and favoring the formation

of acids capable of reacting vigorously. The lower teeth are protected by the lip and tongue, and moistened by the saliva, and are therefore free from the evil influences exerted above.

The injury to digestion, as a direct result of impairment of the power of mastication, at once suggests itself. It is not during the day only that the subject of oral respiration suffers; at night the aggravation is intensified. The position of the body during sleep favoring, as it does, increased flow of blood to the head, the result is increased difficulty, as shown by the open mouth, snoring, and general restlessness, the latter being the direct result of deficient oxygenation, assisted, without doubt, by the fact that during sleep the voluntary respiratory muscles used during that day are no longer available. . . .

As the habit of mouth-breathing is usually developed in early childhood, its prevention must largely depend upon the recognition, by those in charge, of the formation of an unnatural and hurtful method of respiration. In order to do this, mothers and nurses must first know that the nose is the proper channel by which air enters and leaves the lungs. . . .

In conclusion, I may say that the best means possible for preserving a healthy chest and throat are to be found in nasal respiration. In fact, a being who breathes as nature intended, should not suffer from any throat affection, or, at all events, should enjoy considerable immunity therefrom. Bronchial asthma is most common in mouth-breathers, and mouth-breathing is as hereditary as asthma. I do not go too far when I assert boldly that a healthy state of the lining of the pharynx, larynx, and lungs is incompatible with any form of respiration but the nasal.—*Hygiene.*

DUST AND DUSTERS.

"A PECK of March dust," according to the old saw, "is worth a king's ransom."

Dusting, as a domestic operation, seems to be in danger of becoming one of the "lost arts." The time was when the human "duster" used the cloth "duster" as a contrivance for the careful wiping up of dust from furniture, etc., a fresh part of the cloth being folded over that which had been used, until it could be taken to the open air and there well shaken, the process being pursued with calm deliberation until the entire room and its belongings had been properly cleansed. That,

we say, was the ancient practice, and it was one which good housewives did not disdain to do with their own hands. The modern practice seems to be an altogether different one. Dust is not to be *carried* out of the room, but in some magical way is to be *whisked* out somewhat after the same fashion as flies are. The duster is waved here and there by the servant, who looks like some shipwrecked damsel flourishing a signal of distress; and shelves, and tables, and chairs are flogged as if the dust had somehow got into the grain and must be beaten out of it. Or, perchance, the old-fashioned "duster" is banished altogether, and the commotion is caused by a dainty feather-broom, which just removes the dust from one spot to settle presently in a fresh one. What possible end can be served by such a process passes our comprehension. When all is over, there is just as much dust in the room as before. All that has been gained has been to effect a re-arrangement of the noxious particles; except, indeed, that the lighter dust-motes remain for a considerable time floating in the air, to find their way into the lungs of such mortals as are unfortunate enough to come near them.

The injurious effect upon the health is, in itself, a sufficient reason for condemning the present senseless custom. Wall-papers often contain poisonous colors, while infinitesimal portions of animal matter are also added to the miscellaneous cloud of loose atoms floating in the atmosphere. There is quite risk enough of getting these things into the blood under ordinary circumstances, without turning the duster into a means of increasing our perils; and hence we protest, briefly but emphatically, against modern methods that are no improvement on the old.—*House and Home.*

CARPET-BEATING.

We have no wish to decry this periodic purification, but merely to point out rules for its better conduct and efficiency. The usual process in households which cannot afford to have it carried out by special agency, is first to take up the carpets and sweep the walls and ceilings, and then to wash the floors. While the latter are drying, work must be found for idle hands, and they cannot be better employed than in beating the carpets in the court-yard or back garden, a work attended with a

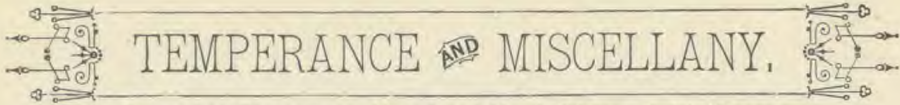
horrid din and cloud of dust. It will be unavailing, we know, to complain of the noise—no appeal in this direction will gain a moment's sympathy; but we hope more attention will be paid to the other nuisance. When we reflect on the nature of the dust thus raised, we are surprised that sane persons allow to be thus stirred up under their noses all the nauseous accumulations of dining-room, bedroom, and stair carpets, to say nothing of door-mats, etc., into a fine dust, which, thus dispersed, finds its way again into our houses in a form most readily accessible to our respiratory organs. Indeed, it is fortunate if the dust thus roused is only nauseous, and not infective; since the desquamated cuticle of scarlet fever, the scabs of small-pox, the dried sputa of consumptive or whooping-cough patients, living parasites, and hairs from mangy cats and dogs may thus invade our rooms.—*The Sanitarian.*

Temperance among the Saracens.—The Western Saracens abstained not only from wine, but from all fermented and distilled drinks whatsoever, were as innocent of coffee as of tea and tobacco, knew opium only as a soporific medicine, and were inclined to abstemiousness in the use of animal food. Yet six millions of these truest sons of temperance held their own for seven centuries against great odds of heavy-armed Giaours, excelled all Christendom in astronomy, medicine, agriculture, chemistry, and linguistics, as well as in the abstract sciences, and could boast of a whole galaxy of philosophers and inspired poets.—*International Review.*

Mechanical Medicine.—I cannot help thinking that most of our fashionable diseases might be cured *mechanically instead of chemically*, by climbing a bitter-wood tree, or chopping it down, if you like, rather than swallowing a decoction of its disgusting leaves.—*Boerhaave.*

—A quack doctor who was giving testimony in a San Francisco Court, was asked if he had ever performed the operation of decapitation. "Oh, yes," he said, "I have done that often, often." "Always successfully?" "Never lost a patient under it."

—Districts habitually preferred by epidemics are insalubrious at all times.



TEMPERANCE AND MISCELLANY.

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

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

THREE WORDS OF STRENGTH.

THERE are three lessons I would write,
Three words as with a burning pen,
In tracings of eternal light
Upon the hearts of men.

Have Hope. Though clouds environ round,
And gladness hides her face in scorn,
Put off the shadow from thy brow—
No night but hath its morn.

Have Faith. Where'er thy bark is driven,
The calm's disport, the tempest's mirth,
Know this: God rules the hosts of heaven,
The inhabitants of earth.

Have Love. Not love alone for one,
But man, as man, thy brother call,
And scatter, like the circling sun,
Thy charities on all.

Thus grave these lessons on thy soul,
Hope, Faith, and Love, and thou shalt find
Strength when life's surges rudest roll,
Light when thou else wert blind.

—Schiller.

WINTER RAMBLES IN THE LAND OF SUMMER.

BY MRS. E. E. KELLOGG.

A DAY AT ST. AUGUSTINE.

We left Jacksonville early one bright morning in January, for a day at St. Augustine, the "Newport" of Florida. Our route, for the most part, lay through the woodland portion of the country, with openings here and there through which we could catch glimpses of the winding St. Johns, and the thriving little villages along its shores. At Tekoi a transfer steamer took us across the beautiful river, which at this point is quite as broad as a lake, and a few moments more found us at the city of our destination.

Fifty-five years before the landing of the Pilgrims at Plymouth Rock, a band of Spanish soldiers, under the leadership of Pedro Menendez de Aviles, landed on the Atlantic coast of Florida, planted the banner of King Philip II., of Spain, and founded the city of St. Augustine. The record of the city is an eventful one; and, like much of the world's history, is written in letters of blood and fire. Scarce six months had rolled over the settlement, ere the hands of the inhabitants were stained with one of the most terrible tragedies history has ever recorded. Hundreds of starving Huguenots, whose vessel the cruel sea had wrecked on their shores, were butchered in cold blood, with their hands pinioned behind them, while pleading for mercy, simply because they were

Lutherans. The settlers thought they did God service in thus ridding the world of the enemies of their Catholic faith; and so doubtless did Dominic de Gourgues, a Huguenot commander, who two years later avenged the deed by a similar attack upon the Spaniards. Seven years after, England being at war with Spain, Queen Elizabeth's admiral, Sir Francis Drake, bombarded St. Augustine, plundering and burning the larger portion of the city.

Several times since, it has been visited by the vicissitudes of war, but has withstood them all, and is to-day a quaint, beautiful city, possessing a curious aspect and flavor of antiquity, totally unlike anything else in the United States. It is, as Mrs. Harriet B. Stowe aptly says, "as if some little, old, dead-and-alive Spanish town, with its fort and gateway and Moorish bell towers, had broken loose, floated over here, and got stranded on a sandbank." Here you see the shovel-hats and black gowns of priests; the convent, with gliding figures of nuns; and in the narrow, crooked streets meet dark-browed people with great Spanish eyes and coal-black hair. The older streets are romantic and curious, being very narrow, sometimes not more than seven feet wide, and in the old Spanish times were floored with concrete, or coquina stone. No vehicles were ever permitted to travel over them, and they were kept so cleanly swept that the Spanish belles of old St. Augustine might traverse them with no fear of soiling their dainty satin slippers.

The prevailing style of architecture is old and quaint, many of the houses being built with overhanging balconies from the second story, which frequently almost touch each other across the narrow way, and from which the neighboring dames could enjoy a quiet gossip while attending to their household affairs. Do not, however, think that St. Augustine is wholly built in the Spanish style; there are hundreds of modern residences and beautiful villas, looking out from luxuriant masses of moss-covered and rare tropical trees and shrubs. Here are oranges, lemons, figs, and bananas, with roses, honeysuckles, and manrundias, climbing and blossoming in such profusion that to one coming, as we had, from the icy rigor of a Northern State, it almost seemed as if St. Augustine might be the garden spot of America. A further acquaintance with Florida has taught us to be less partial as to locality. Here we had our first glimpse, outside of a greenhouse, of the date palm, as odd a specimen of a tree as one can well imagine. From the top of a tall trunk, which appears built up of great scales, amid which vines and ferns climb and root themselves, falls a feathery arch of green leaves, sometimes thirty feet or more in length, and crowning the trunk in the center of the green mass are numerous drooping clusters of yellow blossoms or scarlet fruit.

Fort Marion, the oldest fortification in the United States, and which protects the ocean front of the

city, claimed the first attention of our party. On our way thither we passed the ancient city gateway, two square and imposing pillars with Moorish tops, near the ruins of a wall supposed to have once extended around the city.

Old Fort Marion is one of the most picturesque structures in America. It is built of coquina, a conglomerate of fine shells and sand, quarried in the vicinity. Its construction required more than one hundred years, and was only completed in 1756, as is shown by an inscription which, with the Spanish coat-of-arms, is handsomely carved in the stone over the gateway. In form, the structure is a trapezium, inclosing within walls twenty-one feet high and twelve in thickness, an area of about sixty yards square. It is surrounded by a moat, and is considered a fine specimen of military architecture. Its formidable bastions, whose guns command the whole harbor, its imposing sentry towers, its massive arched entrance, its staunch battlements, and moss-grown walls, certainly indicate that it might have been, as it was said to be while in the possession of the British, "the prettiest fort in all the King's dominion."

Within the fort, we were shown an old Romish chapel, with an altar, and niches for holy-water vessels, the Judgment hall, where court martial was held, and several dungeons, vaults, and dark passages, sufficiently gloomy and mysterious in aspect to bring us to ready credence of the stories told of victims of inquisitorial cruelty who suffered here, and of human skeletons found in cages, and underground passages connecting the fort with a neighboring convent.

Doubtless, much is held by tradition which is not authentic; yet enough is true to make the place strangely attractive and interesting. Here "Wild Cat," the distinguished Seminole chieftain, and several other noted Indian warriors, were for a long time confined.

The site of St. Augustine is a low, sandy peninsula, the ocean front being protected for nearly a mile below Fort Marion, by a sea wall ten feet above low-water mark; the top of this wall, capped with granite, is three feet in width, and forms a fine promenade.

We were much interested in the *Plaza de la Constitucion*, an acre of ground in the central portion of the city, ornamented with shrubs, trees, and fountains, in the center of which stands an old monument, twenty feet in height, erected in 1812 in commemoration of the "Spanish Liberal Constitution," and is the only one of the kind now standing.

Opposite this monument stands one erected in 1880 by the Ladies' Memorial Society, in memory of the soldiers of St. Augustine who fell in the war of the Rebellion. Near by is the old slave market, an odd looking structure—a platform covered with a roof supported by square pillars, and surmounted by a cupola in which hung the bell that rung out the clarion notes to announce the sad fact when human beings were to be bought and sold like cattle.

Fronting on the Plaza is the Spanish Cathedral, a very ancient edifice, with its quaint Moorish belfry, the four bells of which, each hung within a separate niche, with the clock below, form a complete cross. Its interior is without especial interest, save an old painting of the first mass in St. Augustine held at the landing of Menendez; and a curious lamp of solid silver, in which the sacred flame has been kept burning, almost without intermission, for nearly one hundred years.

We had not time in our short stay to visit the many places and objects of interest with which this historic city abounds,—the old Spanish graveyard

with its antique tombs, the convents, the Governor's Palace, the island with its famous beach, or the rose-tree with a trunk the size of a man's arm, on which it is said a thousand roses have blossomed in one season; but we drove past the U. S. Barracks, and stopped a moment at the military burying-ground, where under three pyramids are interred the remains of Major Dade and his one hundred and seven comrades, who were massacred by the Indians while on their way from Fort Brooke, Tampa, to reinforce General Clinch at Withlacoochee River, during the Seminole war.

"A TROUBLER IN ISRAEL."

BY ELEANOR KIRK.

CONTINUED.

IN such vacillating and dangerous ways the first six years of little Nellie Westbrook's life were passed. Fortunately, however, her father insisted upon the cool, well ventilated room at night, and profited sufficiently by Mrs. Miller's instructions to also insist on light suppers and early hours. He usually undressed the child himself; and her pleasantest remembrance of this time is the unfastening of the cruel buttons, and the delightful pressure of his loving hand upon the sore little ribs. And then followed the wonderful stories that no one else could tell as he did. But the hours that Mr. Westbrook was engaged in business were sad ones for the little girl. Her elaborately trimmed white dresses were a prolific source of grief to her. To romp and play like other children was to wrinkle or soil her clothes, and either meant a scolding or something worse. These constant restrictions acted upon the child's disposition very much as the continual chafing of a wound would act upon the body. She grew to envy the children who were allowed to wear comfortable rags; and a dirty dress was a synonym for comfort with this forlorn little creature. There was a colored family living in the suburbs of the town, whose clothes were objects of admiration to Nellie, principally because they were so "roomy." Arabella Stout,—a member of this numerous brood, and the eldest daughter of Mr. Jack Stout, a popular and industrious chimney-sweep and ragman,—was in the habit of doing odd jobs for the Westbrooks. On these occasions she was compelled to "tote along" her little sister, who was not far from Nellie's age. Oh, the fun that the child could have had at such times if her mother's tastes had only been a little more plebeian—human, we might say! As might be expected, the little one's wits were occupied in endeavoring to evade the law. She came to be "fertile in expedients;" and but for an indescribable something in the way of an influence which her father exerted over her young life, she would have developed into a first-class liar. Nothing could have saved her. It was not so much anything that Mr. Westbrook said or did; he was not given to preaching, and if he had been, it is doubtful if it would have produced much effect upon this peculiar child. But she knew that he loved her and believed in her, and so without really being aware that such was the case, she was constantly trying to be worthy

of this confidence. The slightest touch of his hand would immediately bring her out of the most desperate "tantrum."

It was a great mystery to the child why her mother had so much to say about her management, and her father so little. She speculated a great deal about this, and finally came to the conclusion that cross people were the ones usually selected to hold the reins of government. She had a most singular idea of God at this time; and heaven was a place where everybody, if fortunate, or unfortunate, enough to attain it, was dressed up in starched clothes several sizes too small for them. Once, in conversation with a Baptist minister to whose church her mother belonged, and whose Sabbath-school Nellie had been compelled most reluctantly to attend, she informed him with perfect frankness that she would much rather go to Jack Stout's than to heaven. Mrs. Westbrook was not at home at this time, but her father was, and immediately proceeded to interrogate her before the horrified minister.

"Who has told you about heaven, Nellie?" inquired Mr. Westbrook, taking the child upon his knee.

"Why, mamma, and my Sabbath-school teacher, and—and—he," pointing to the visitor.

"My dear child," said the latter gentleman, "what can I have said about heaven to give you such an impression? You like to sing, do you not?" he added coaxingly.

"I like to hear a brass band," Nellie replied.

"And you like your Sabbath-school hymns, dear?" the minister predicated.

"No, I don't," said the child. "They're not pretty. I like to hear the man play on the organ when the folks are coming into church. That's why I don't cry when mamma makes me go."

"You see, Mr. Welsh," Mr. Westbrook remarked, with a smile of amusement which he could not repress, "our little girl has not come to the age of sermons yet."

"I should think he'd get tired talking so long," said Nellie, with a sympathetic expression. "My legs do ache awful Sabbaths."

This was too much, and even this minister, who was very solemn and very narrow, and especially hampered by his creed, could not help laughing, though he tried hard to do so.

"You should endeavor, Mr. Westbrook, to disabuse your child's mind of some of the opinions she seems to have formed," the gentleman remarked at parting.

"I doubt if I can ever undo the work that has been done, Mr. Welsh," said the father seriously. "If the impressions she has formed are not lasting, I shall be very thankful."

Nellie was not communicative after this. The ministerial visitor had forced her into frankness; and it was doubtless much easier to be frank than polite; for Mr. Welsh was a great favorite with her mother, and this was reason enough for Nellie to dislike him.

Mr. Westbrook at last grew tired of beating round the bush, and said with some sternness, "But I want you to tell me what you have ever heard about heaven that would cause you to say

that you would rather go to Jack Stout's than there."

"Cause, papa, when I go to Jack's house, I have an awful nice time," said the child. "Arabella gives me hominy and milk, and"—lowering her voice to a whisper—"she unbuttons my dress and waist, and puts on me an old apron of Polly's, and we play like everything. You won't tell mamma, will you?"

Mr. Westbrook had none of his wife's exclusiveness, nor had he the slightest aversion to Jack Stout's family. They had much more natural refinement and decency than some folks he was acquainted with who moved in the best society. But there was something in his little girl's idea of heavenly enjoyment that disturbed him in spite of himself; and he came to the conclusion at this point in his daughter's career that fatherhood was no joke. It occurred to him all of a sudden that this was a desolate little life, and the worst of it was, he did not see any way to brighten it.

As Nellie stepped out of her clothes this evening, she gave them a vicious little kick, and then jumped into her father's arms.

"Why, my child," he remarked, "what would your mother say if she were to see you do such a naughty thing?"

"She'd scold, I guess," was the laughing response.

"Why, there are lots of little girls who would be very glad to have such nice clothes as those," her father continued.

"They can have 'em," was the calm answer. "If I should go to heaven, papa, would mamma make my clothes?"

"Well, I don't know about that, dear," her father replied; "but why do you ask me such a question?"

"Well—because—I think that I should like to go to heaven by myself, and have mamma stay here, and then mebbe God would let me be a boy, and wear coats and things. Why, papa, Harry Miller can take his blouse like this,"—and now the child seized her night-gown and lapped it over several inches in front,—“but I'm just squeezed into my clothes. If I was a girl angel, papa, I never could sing."

The cat was all out of the bag now. In associating with the colored Stouts, Nellie was simply considering her comfort. It was unendurable enough to have to wear tight clothes here, but the idea of an eternity of misfits was more than the child could bear.

When Mrs. Westbrook returned that evening to the bosom of her family, there was an ominous cloud upon her brow. Nellie was still in her father's arms.

"Well," said the lady. "I have just met Mr. Welsh, and he has told me of that child's impertinence and wickedness, and if you have n't punished her—and I confess it do n't look much like it—I shall."

"Mr. Welsh is in excellent business, telling tales of a baby," said Mr. Westbrook, with more heat than he usually displayed on such occasions.

"A baby?" said the lady sneeringly. "When I was six years old, I knew my carechism by heart, and there was n't a Bible story that I

could n't repeat from beginning to end. I did n't have fairy stories and Santa Claus falsehoods read to me."

"More's the pity," said her husband. "You see, my dear," he went on, "Nell spoke her honest thought to Mr. Welsh to-day, and if he'd been half a man, to say nothing about Christian, he would have respected her confidence. But we will continue our controversy in another room, please;" and Mr. Westbrook tucked his little girl up with hands that were as tender as a loving mother's, kissed her half a dozen times, and then followed his wife to her apartment. She had not even said good-night to the child; but Nellie was quite satisfied.

"You spoke of punishment, Louise," Mr. Westbrook continued, "and I should like to inquire what kind of a penalty you thought of?"

"I did n't know whether I should whip her or shut her up."

"There are some subjects that had better be dropped forever," Mr. Westbrook remarked after a moment spent in putting the brakes on his temper. "And this is one of them. Our child has in some way received a very disagreeable impression of another state of existence, which we are pleased to call heaven. She prefers the liberty which she imagines she would enjoy as a member of Mr. Jack Stout's family, to the restrictions which she thinks she would be called upon to put up with as an angel, and she was honest enough to say so. No child of mine, Louise, is ever going to be punished for honesty; never mind to what lengths they may go in truth-telling."

"You'll see some of these days what a mistake you are making," said Mrs. Westbrook, bursting into tears. "That child is going to grow up a godless, faithless, skeptical woman, just because you do not know enough now to deal with her pertness, her incipient wickedness. You always laugh at her sharp answers, and it is quite like you to be willing to have her show off before my minister."

"The fact of the business is, Louise," said Mr. Westbrook pleasantly, "you expected a chicken, and you have got a duck, but you may depend upon it that she isn't 'going to drown.'"

"You are humoring the young one to her ruin," said Mrs. Westbrook; "I have known it for a long time, and one day you'll find it out. Just to think that I should have lived to see the time when a child could come between us, who have been so much to each other!"

"It isn't Nell this time," said Mr. Westbrook, trying to speak lightly, "but the minister. If he had minded his own business, I should n't have had to be disagreeable, so we'll 'blame it all on to him,' as the children say, and think no more about it."

It would not do to add any more fuel to this fire at present, and so it happened that poor little Nellie went on wearing her elaborately trimmed strait-jackets to her great and lasting detriment.

—There is no dearth of charity in the world in giving, but there is comparatively little exercised in thinking and speaking.

A WORD TO THE BOYS.

WATER is the strongest drink. It drives mills; it is the drink of lions and horses, and Samson never drank anything else. Let young men be teetotalers, if only for economy's sake. The beer money will soon build a house. If what goes into the mash-tub went into the kneading-trough, families would be better fed and better taught. If what is spent in waste were only saved against a rainy day, work-houses would never be built. The man who spends his money with the publican, and thinks the landlord's bow and "How do ye do, my good fellow?" mean true respect, is a perfect simpleton. We don't light fires for the herring's comfort, but to roast him. Men do not keep pot-houses for laborers' good; if they do, they certainly miss their aim. Why, then, should people drink "for the good of the house"? If I spend money for the good of any house, let it be my own, and not the landlord's. It is a bad well into which you must put water; and the beer-house is a bad friend, because it takes your all, and leaves you nothing but headaches. He who calls those his friends who let him sit and drink by the hour together, is ignorant, very ignorant. Why, Red Lions, and Tigers, and Eagles, and Vultures are all creatures of prey; and why do so many put themselves within the power of their jaws and talons? Such as drink and live riotously, and wonder why their faces are so blotchy and their pockets so bare, would leave off wondering if they had two grains of wisdom. They might as well ask an elm-tree for pears, as look to loose habits for health and wealth. Those who go to the public house for happiness, climb a tree to find fish.—*Rev. C. H. Spurgeon.*

A CALIFORNIAN EDITOR ON TEMPERANCE DRINKS.

"A COMMITTEE of prominent English temperance reformers are now offering first and second prizes of \$3,500 and \$1,500 respectively for the two best temperance drinks, to take the place of the cheap intoxicating liquors to which the British public have so long been accustomed."—*Ev.*

The *Patriot* claims the first prize for the best substitute for intoxicating drinks. It is the most wholesome, invigorating, and inexpensive drink ever used. It is the invention of the greatest chemist, scientist, physician, discoverer, and inventor

of this or any other world. In chemist language it is spelled H_2O ; editorial dudes call it "aqueous fluid," and ignorant people frequently speak of it as "cold water."

The second prize is also claimed for the second best substitute, which is, beyond all dispute, tepid water. Both these drinks are universally good in all kinds of health and all kinds of sickness, for rich and poor, internally and externally. The committee will please send the two prizes to this office by draft on the Pacific Bank.

To introduce any other drinks but these as substitutes for intoxicants, will create or continue a bad habit, lead to extravagant and useless waste, and produce no benefit whatever.—*The Patriot*.

WORK.

WE are all of us workers in one way or another; but how many of us are possessed with an earnest desire that the work we put forth from our hands shall be a thorough, honest, faithful performance that shall fulfill its purpose, and withstand the ravages of time? The great difference in labor is, not in what is done, not in the kind of work we perform, but in the spirit we put into it. From the cleansing of a room to the purification of a government, from the clearing of a forest to the chiseling of a statue, from the humblest work of the hands to the noblest work of heart and brain, it is the determination to make it of the best quality that places it in the front rank. The work that is performed only for the sake of what it will bring, not for what it is to carry forth, is like cloth of shoddy, which may please the eye, but will not wear. It is cheap, flimsy stuff, woven with no nobler purpose than to hold together long enough to be bought and paid for.—*Sel.*

A Papier Mache Floor Covering.—A new *papier mâché* process for covering floors is described as follows: The floor is thoroughly cleaned. The holes and cracks are then filled with paper putty, made by soaking newspaper in a paste made of wheat flour, water, and ground alum, as follows: To one pound of flour add three quarts of water and a tablespoonful of ground alum, and mix this thoroughly. The floor is then coated with this paste, and a thickness of Manilla or hardware paper is next put on. If two layers are desired, a second covering of Manilla paper is put on. This is allowed to dry

thoroughly. The Manilla paper is then covered with paste, and a layer of wall-paper of any style or design desired is put on. After allowing this to thoroughly dry, it is covered with two or more coats of sizing, made by dissolving one-half pound of white glue in two quarts of hot water. After this is dry, the surface is given one coat of "hard oil-finish varnish." Allow this to dry thoroughly, when the floor is ready for use. The process is durable and cheap, and, besides taking the place of matting, carpet, oil-cloths, etc., a floor thus treated is rendered air-tight, and can be washed or scrubbed.

Labor.—None so little enjoy life, and are such burdens to themselves, as those who have nothing to do. The active only have the true relish of life. He who knows not what it is to labor, knows not what it is to enjoy. Recreation is only valuable as it unbends us; the idle know nothing of it. It is exertion that renders rest delightful, and sleep sweet and undisturbed. That the happiness of life depends on the regular prosecution of some laudable purpose, or lawful calling, which engages, helps, and enlivens all our powers, let those bear witness who, after spending years in active usefulness, retire to enjoy themselves; they then find leisure a burden rather than a pleasure.—*Sel.*

Choosing an Occupation.—Here is a word from Lydia Maria Child, for those who are undecided as to what avocation to choose:—

"As to the rank which the world assigns to one avocation over another, I can hardly find words insignificant enough to express the low estimate I put upon it. The lawyer who feels above the bookseller seems to me just as ridiculous as the orange woman who objected to selling Hannah More's tracts. 'I sell ballads!' she exclaimed. 'Why, I don't even sell apples.' How absurdly we poor blundering mortals lose sight of the reality of things under the evil of appearances! In choosing our employment, the only question to be asked is, What are we best fitted for; and what do we most enjoy doing?"

—Although men are accused for not knowing their own weakness, yet perhaps as few know their strength. It is in men as in soils, where sometimes there is a vein of gold which the owner knows not of.—*Swift*.

Popular Science.

—The decomposition of animal and vegetable matter in the soil, formerly supposed to be due to oxidation, is really due to the action of certain ferments, allied to the yeast plant.

—The natives of Tahite, when found by Capt. Cook, used wooden nails. They supposed the iron nails which they saw used by the sailors to be some kind of wood, and planted some of them.

—A paper by Mr. F. Cope Whitehouse, stating his reasons for believing P'ingal's Cave in the Island of Staffa to be of artificial construction, was recently presented to the French Academy of Sciences, by M. Daubrey, the geologist.

—A recently constructed freight steamer utilizes coal so efficiently that it is able to carry one ton of cargo one mile with each $\frac{1}{2}$ oz. of coal consumed. It seems scarcely credible that so small an amount of fuel as an ordinary letter can accomplish so much work.

—Gerhardt, Diedert, Soltman, and other distinguished authorities, at the late congress held in Salzburg to consider the subject, unanimously declared that the so-called infant foods manufactured from wheat, barley, etc., etc., are all deleterious, and their use should be discouraged by medical practitioners everywhere.

—Rubber, or gutta-percha, may be united firmly to metal by the following method: Dissolve finely powdered shellac in ten times its weight of pure spirits of ammonia. In three days the cement will have the necessary consistency. The ammonia penetrates the rubber, and enables the shellac to take a firm hold. When all the ammonia is evaporated, the joint withstands the penetration of gas and water.—*Chicago Journal.*

—During the summer of 1884 a geologist of Iceland, Mr. Thoroddsen, systematically explored a considerable portion of that country under a commission from the Government. In the peninsula of Reykjanes and its upland connections he determined the existence and site of no less than 30 volcanoes and at least 700 craters, although up to the time of his visit it was supposed that there were only two volcanoes in these parts which had been active within historic times. In other localities, volcanoes of colossal size are found in addition to many hot springs, solfataras, and boiling clay pits. Mr. Thoroddsen believes this peninsula to be one of the most thoroughly burnt spots on the face of the globe.

—Daylight and sunlight are not proportional or synonymous, according to Prof. S. P. Langley. He estimates from a series of measurements, that we receive as much light from the sky as we do from the sun itself, getting more light from the sun at midday, but more in the morning and afternoon from the sky than from the sun direct. He thinks that the absorption of light by the atmosphere, and the effect of fine

dust particles, both near the earth and at great distances, have a much larger effect upon daylight than is generally supposed. To obtain the actual light of the sun or a star, at least 40 per cent must be added to the observed value. He also thinks that the atmosphere exerts a selective influence upon the kind of light which reaches us from the sun.—*Ex.*

A Mammoth Brain.—A Swiss has constructed a model of the brain four by two and one-half feet in size, showing the minutest details of the brain structure. The model is for an American museum.

A Chinese Farm-House.—An exchange thus describes the dwelling of a Chinese farmer:—

“A recent traveler remarks that a Chinese farm-house is a curious-looking abode. Usually it is sheltered with groves of feathery bamboo and thick-spreading banyans. The walls are of clay or wood; and the interior of the house consists of one main room extending from the floor to the tiled roof, with closet-like apartments in the corners for sleeping-rooms. There is a sliding window on the roof, made of cut oyster shells arranged in rows; while the side windows are mere wooden shutters. The floor is the bare earth, where at night there often gather together a miscellaneous family of dirty children, fowls, ducks, pigeons, and a litter of pigs, all living together in delightful harmony. In some districts infested by marauding bands, houses are strongly fortified with high walls, containing apertures for fire-arms, and protected by a moat crossed by a rude drawbridge.”

False Teeth in Japan.—Our “boasted civilization” is constantly being surprised by the discovery that some of its most valuable acquisitions, supposed to be quite new, are really old, having been long possessed by semi-civilized nations, in some instances for centuries. A Japanese gentleman applying to an English dentist for a set of teeth remarked, that though the foreign teeth were more natural in appearance, those of home manufacture were quite as good from a practical point of view; and in proof of this, he took up a piece of hard “rock-candy,” and crunched it between his false teeth. These dentures were made on wooden bases. The front teeth were made from quartz pebbles ground down, but the process of mastication was performed by copper nails, which occupied the place of the molars. It was an interesting fact, also, that the fixing of dentures by means of suction had been known to the Japanese for at least two hundred years. The base-plates were carved by hand, the process being as follows: An impression of the mouth was taken in wax, and from this a model was made, also in wax. The model was then coated all over with red pigment, and the plate, after being roughly shaped, was placed on the model thus colored. The red patches on the under surface of the plate were then carefully cut away until at last it fitted the model exactly. It was then tried in the mouth, in the same way, the gums being covered with the pigment, and any inaccuracy was readily detected.



GOOD HEALTH.

BATTLE CREEK, MICH., APRIL, 1885.

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

TERMS, \$1.00 A YEAR.

A SOUTHERN TOWN.

JESSUP; this is the name of a little town in Southern Georgia where we were obliged to endure a few hours of impatient waiting, the connecting train having left just as we were alighting, satchel in hand, from the "Mann boudoir" car which had just brought us from Chattanooga on our way to Jacksonville, Florida. The place seems to present such a model picture of a certain class of Southern towns that we are tempted to describe it, feeling sure we have solved the mysteries of Southern "biliousness" and "yellow fever," and found ample reason to predict a speedy out-break of cholera, unless some sanitarian with superhuman skill and some all-potent disinfectant shall be found able to cope with the emergency, and prevent the impending catastrophe.

As soon as we had sufficiently recovered from our vexation of being just two seconds too late to catch the outgoing train which was to have borne us on our journey, we began to glance about us. The first thing that attracted our attention was an overpowering smell,—indeed, a conglomeration of smells, which, like the darkness of Egypt, could be *felt*. The air seemed thick, and we hastened by the neighboring hog-wallow, hoping thereby to at least diminish the intensity of the vile odor which saluted us; but in vain. The hog-wallow was everywhere, and the vile beast itself, with a numerous progeny, was everywhere as well, making himself as much at home as though monarch of all he surveyed, mingling with the darky

loafers on the street corners as though equal to the best of them, and certainly expecting "no one to molest or make him afraid."

A dusky rag-a-muffin called out to us, "Want a hotel, mister?" but we looked in vain for any building sufficiently pretentious to lay claim to such a title. Knowing we had several hours to wait, we allowed a coal black urchin to seize our somewhat bulky valise, and conduct us to a dilapidated wooden structure, which bore the romantic name of "Altamaha House," where we deposited our luggage in a small, dingy room, set apart as the ladies' sitting-room.

The blackened walls bore a few antiquated pictures, chief among which was an engraving of a prominent rebel general. A little, ancient, Chickering piano, with rusty wires, and half its keys minus their ivory coverings, occupied one side of the room, and the other was taken up by a huge fire-place, capacious enough to sit in comfortably, had it not been half filled with ashes, the only really comfortable looking thing in the room. A few rickety chairs, and a round table with a filthy, ragged table-cloth, completed the inventory of the room. The place was too dismal to stay in, and we sallied out for a stroll in the warm Southern sunshine, which contrasted strongly with the wintry weather and three or four feet of snow which we had left behind forty-eight hours before. Our last glimpse of snow was in Old Kentucky, where the blue grass was already beginning to peep out from beneath its mantle of white. Here the grass was suf-

ficiently grown to afford ample pasturage for flocks of goats and kids that industriously nibbled the tender blades, utterly disregarding the troops of young darkies who played hide-and-peek among them; and the palmetto and banana trees had put on their bright summer dresses, and all nature seemed alive and active,—quite in contrast with the sluggish population.

A dozen stores, and twice as many huts and houses, constituted the buildings of the town. And such stores, and such houses! With the exception of three or four, which were probably inhabited by the nabobs of the town, the houses were shanties, many of them with but two apertures, one the door the other the chimney, mostly built of logs, with the wide cracks chinked with clay, which in many places was broken out, and the passer-by could easily perceive here and there a pair of black eyes peering at him from these convenient peep-holes.

Troops of ragged negro children romped about the streets, and their older brothers and sisters loafed in scores about the corners. At least sixteen black faces appeared to one white one. Here comes a hand-car down the railroad track propelled by half a dozen darkies, each provided with a long pole which he thrusts against the ground after the fashion of a river boatman. Close by another gang of young negroes are repairing the railroad track. A slovenly white man, with his hands in his pockets, looks listlessly on, now and then making a dull suggestion to justify his position as overseer. Not a single white man is to be seen at work.

There are undoubtedly some whites who are not ashamed to labor, or are obliged to do so, but none happen to be in sight.

We stroll back to the crazy structure which the inhabitants style the hotel, and having bribed a colored servant to bring us a chair and table out upon a side porch, we sit down to dash off a few letters, edit manuscript, and otherwise occupy ourself to hasten the sluggish hours.

We have telegraphed to the manager of the road for permission to finish our journey to Jacksonville on a freight train, so we may catch the morning boat; but the telegraph lines seem to be as slow as the people in this sleepy town, which appears to be *Jes-up*, or just waking up, from the stolid stupidity of a longer than Rip-Van-Winkle slumber; and we have been unable to get any reply, so must take our chances on the next passenger train that may arrive.

Now as we write, a big fire of pine sticks is blazing in the mammoth fireplace, a young woman is seated at the ancient piano, and torturing out of it a variety of brass-kettle and tin-pan melodies, and we are anxiously waiting for the train to come, which will bear us out of this desolate, dirty African settlement, and take us once more where we may assure ourselves that we have not gotten out of our own and into a foreign land, beyond the pale of modern culture and civilization.

Hold! we must tell you what we had for dinner. Here's the list: Two lard biscuits, one rasher of bacon, a tough beefsteak, three inches of sausage, a glass of condensed milk well diluted, a boiled egg, and a piece of toast. How could we eat such stuff, do you ask? Remember, kind reader, we were very hungry; had eaten only a piece of bread and drunk a glass of milk in two days. What would you have done under the same circumstances? But we did n't eat any of the abominable stuff. We took only the last three articles named, and would needs fast many days before the others would constitute anything of a temptation.

There! the train whistles, and we must be off. Good bye, Jessup. Three woes are in store for you, unless you repent of your sloth and filthiness,—an ever-present woe of malaria, the intermittent woe of yellow fever, and a devastating woe of cholera.

Every morsel to a satisfied hunger is only a new labor to a tired digestion.—*South.*

INVENTORY OF A CELLAR.

GIVE us a candle, and let us take a peep into the regions below. Susie has had a sore throat, and Jamie is just over an attack of cerebro-spinal fever, as the doctor called it, and the hired girl had a run of typhoid fever a month ago; and now spring is coming on, the whole family are expecting to have their annual visitation of "spring-sickness" and other maladies, which experience has told them is pretty sure to come with the first indications of approaching spring. Somehow we have a suspicion that some of the family sickness may be the result of causes nearer home than most people would imagine, and we are going to make a sanitary survey of the premises. To-day we are to take a peep into the cellar. We must have a light, as no ray of sunlight ever enters into this subterranean store-house.

We open the door to descend. Whew! what a "smell!"—Mr. Henry Grant White would insist that we should say "odor," but under the circumstances a more vigorous word is needed. A "smell" did we say? Not one, but many smells. A conglomeration of vile odors of every variety and degree. Let us descend. Take care of your nose, friend; if it is not used to such explorations, you had better protect it a little with your handkerchief. As we grope about, the air seems thick, and the candle burns dimly. A suffocating sensation tells of carbonic-acid gas, and a stinging sensation in the nose suggests ammonia, while a smart headache setting up betrays the presence of that deadly gas, sulphuretted hydrogen.

Where do they come from, these pestilential gases? Sources are abundant. No witch-hazel charm or clairvoyant art is needed to locate them. Here is a bin of potatoes, laid away for winter's use. The warm, close air of the unventilated cellar has hastened their decay, and the peculiar penetrating odor which arises is evidence that we have located at least one "smell." Here is a barrel which emits a moldy, vinegar-like odor, and a

close inspection shows it to be half filled with rotting apples. Each day the cook picks the sounder ones, and leaves the balance to decay and mold.

A peculiarly offensive odor attracts us to a corner in which has been stored a heap of cabbages and other products of the vegetable garden. The insufferable stench arising, assures us that sulphuretted hydrogen and its allies have here a stronghold. Half-decomposed cabbages and turnips contribute their share to the general stench. Overhead hang sundry stubs of moldy bacon, a smoked ham covered with a green coat, and a half-rotten cod-fish which has been forgotten. A glance around shows mold and mildew everywhere. A student of fungi would here find a rich field for specimens, and numerous species are represented.

An unmistakable odor of sewer gas attracts us to a depression in the floor which proves to be a half-stopped drain communicating with a cess-pool in the back yard. From it issues a constant stream of mephitic gases as deadly as those which were said to arise in ancient times from the deadly Lake Avernus.

But still there is one smell which is unaccounted for—a sickening odor of animal decay, which would delight the nostrils of a turkey-buzzard. We rummage about among the boxes and barrels, disturbing myriads of ants and centipeds, and at last discover, in an out-of-the-way corner, the decaying carcass of a rat, which suddenly fell sick from eating a slice of poisoned bread and butter which Biddy had slyly substituted for the choice bits of cheese and other dainties on which he had regaled himself.

There are sundry suspicious looking barrels and boxes into which we have not looked, some of them having smells strongly suggestive of soft soap and soap-grease; but we dare not longer risk our lives amid these death-dealing stenches and hasten to depart.

Many a time have we visited just this sort of a cellar. Is it any wonder that a

house with such a "pit of corruption" under it, has always some one sick in it? If the United States were an absolute monarchy, and we the monarch, an edict should be issued prohibiting the construction of vegetable cellars under dwellings. They are undoubtedly a cause of much disease and many deaths.

A CHAPTER ON MALARIA.

Of all the causes of disease which are operative independent of human instrumentality, perhaps none is so universal as malaria. The word literally signifies *bad air*; but its proper application is to a particular sort of bad air. The term "marsh miasm," frequently used for this cause of disease, is not a proper name for it, as it implies the idea that this "bad air" originates only in marshes, which is by no means the case, notwithstanding the popular belief to that effect.

Many people suppose that because they have no marsh, pond, or swamp adjacent to their premises, they are exempt from malaria. This is by no means the case. This baleful poison exerts its insidious influence often where its presence has been unsuspected. Even the oases of the sandy desert of Sahara, and the ragged sides of the Rocky Mountains are not exempt from this pernicious poison.

Says Dr. Dickson, in speaking of malarial fevers, "We find these fevers on the cold fens of Holland and Lincolnshire, as well as on the rich rice-fields of the sunny South; on the smiling hills which overlook the Hudson, as well as among the swamps and marshes; on the lime-rock of Kentucky and Tennessee, the clay of Alabama and South Carolina, the sandy barrens of her Northern sister, and the granite and sienite of the Empire State; on the volcanic tufa of Civita Castellano and the Roman Campagna, and in the very crater and on the sides of extinct volcanoes, as at Balsina and Milo."

A writer in Ziemssen's *Cyclopedia* cites as proof that malarial fevers may originate on a dry soil and in mountainous re-

gions, the fact that malaria is found on the Tuscan Apennines at a height of eleven hundred feet, on the Pyrenees at five thousand feet, on the island of Ceylon at six thousand five hundred feet, and in Peru at an altitude of over ten thousand feet. The same writer also states that malaria may even be developed in mild winters as well as in the summer season. An average temperature of 59° or 60°, which will produce vegetation, will also produce malaria, if other necessary conditions are present. It is well known that malarial poison may arise from lakes as well as stagnant ponds, from sluggish streams, from meadows, from newly cleared land or the turning up of the soil by plowing or ditching, from bilge water, from the water stored on ships for drinking purposes, and from a great variety of other sources. We have seen cases in which we were satisfied that the malarial poison arose from a foul cistern, or from damp, unaired spaces under the house.

With reference to the nature of the poison, the expressed opinions and suggestions have been very numerous. Sulphurous or saline vapor, sulphuretted, phosphoretted, and carburetted hydrogen gas, carbon di-oxide, ozone, exhalations from volcanic soil, diminished atmospheric pressure, exhalations of living or decaying plants, heat, moisture, electricity, changes of temperature, foreign elements in the soil, lack of taurine in the blood, influence of the dog-star, animalculæ, and microscopic vegetable organisms, have each in turn been advocated as the cause of malarial disorders. Exactly what malaria is, cannot at present be affirmed with positiveness; but we strongly incline to the supposition of Dr. Salisbury, of Ohio, that it consists of the germs, or spores, of certain cryptogamic plants, which his observations, published some years ago, would seem to prove.

A fact well worth bearing in mind is that malaria seems to have a particular fondness for people with inactive livers;

and doubtless a torpid state of this important organ is one of the greatest predisposing causes of the disease; consequently there is no better preventive of the disease than a careful dietary—avoidance of fat meats, rich gravies, fried food of all sorts, condiments, excess of sweets, and all kinds of highly seasoned food.

MILLIONS IN IT.

IN what? In good health; millions of happiness, usefulness, even of wealth. A man without health, even if his burglar-proof safe contains the wealth of a Rothschild or a Vanderbilt, is poorer than the ragged news-boy whose clarion voice resounds with robust health, and whose rosy cheeks tell of the richness of the vital fluid in his veins; or the Italian peasant boy whose daily toil gives him a vigorous appetite for the handful of chestnuts upon which he dines.

The millionaire is rich in cash, but often poor in comfort. He has a heavy pocket-book, and a heavier heart; a table spread with costly dainties, but no appetite; a palatial abode, and a pain-racked body in it. The hydra-headed monster, dyspepsia, glares at him from every savory viand at the dinner table. When he ventures out to walk over his domains, a vexatious rheumatism causes him to make wry faces at every step. If in his magnificent turnout he seeks invigoration in the morning air, a veritable fiend, which the doctors have named *tic-douloureux*, drives him back to his overheated chamber, writhing with pain. When he lies down upon his luxurious couch, he sleeps not the sleep of health and physical soundness, but rolls and tosses restlessly about until a horrid nightmare settles down upon him, and holds him in its deathly grip. The glorious morning sun beams not with joy and gladness upon such an one. He rises languidly from his couch of torture, and begins another wretched day. The wood-chopper, with his brawny arm, his magnificent digestion, his sound rest, and ignorance of "nerves," nightmares, and neuralgias, is

the envy of the millionaire, and justly so,—he is the richer man of the two. The one has golden wealth, the other glorious health, and finds millions in it, though his pocket-book is thin, and his bill of fare a crust.

General Grant's Cancer.—It is now generally known that the disease from which Gen. Grant has been suffering, is one of the most hopeless forms of cancer of the mouth. It first made its appearance more than six months ago. Courtesy toward a great man, suffering with so distressing and fatal a malady, bids us keep silence as to the cause; but we have known of so many similar cases in which the use of tobacco has given rise to the disease, that we do not hesitate to improve every fitting opportunity to utter a warning against the use of the weed. The *Medical Record* made the following statement of the General's condition two or three weeks ago, since which time the malady has made much progress:—

"It is a matter of deep regret that the grave suspicions entertained of the serious nature of Gen. Grant's disease, are confirmed by a diagnosis of epithelioma of the tongue and fauces. This disease, the name of which is now, perhaps, heard of for the first time by the general public, assumes an importance as to study which it could never otherwise obtain. Consequently the daily papers are educating the people with regard to it, so that the terms epithelioma, malignancy, and infiltration will be as well understood as in former times were those of suppuration, pus track, and bullet-cysts.

"The disease is by no means as extensive as is generally believed. In fact, the ulcerations, small in extent, are limited to the right pillars of the fauces, the anterior one being perforated at its base. The adjoining right side of the root of the tongue is indurated to a slight extent, as is also a neighboring gland under the angle of the jaw on the right side of the neck. The roof of the mouth, along the line of the hard palate and to the right of

the median line, contains three small, warty-like excrescences, which show a tendency toward cell proliferation. The epiglottis is free from any abnormality, as are all other parts of the throat."

Cologne Drunkards.—A lady newspaper correspondent writes from New York that she has lately made the discovery that cologne is largely used by ladies for its intoxicating effects. The favorite method of taking it is by saturating lumps of loaf sugar with the spirit and eating them. Intoxication is readily produced in this way.

We long ago made the discovery that many persons, even those who consider themselves most exemplary temperance people, are addicted to the use of alcohol by inhalation, in the form of cologne and bay-rum. Intoxication may be produced by inhalation as readily as in any other manner. The insensibility resulting from the inhalation of ether is a sort of intoxication. An animal immersed in an atmosphere of alcoholic vapor quickly exhibits its poisonous effects.

We hope our temperance workers will give this matter the attention which it deserves.

Sidney Smith on Melancholy.—Among the many good things written by this eminent and witty author, must be ranked the following, published since his death:—

"When you are in a melancholy fit, first suspect the body. A little bit of gristle sticking in the wrong place, an untimely consumption of custard, excessive gooseberries, often cover the mind with clouds, and bring on the most distressing views of human life. I start up at two o'clock in the morning, after my first sleep, in an agony of terror, and feel all the weight of life upon my soul. It is impossible that I can bring up such a family of children. My sons and daughters will be beggars; I shall live to see those whom I love exposed to the scorn and contumely of the world!—But stop, thou child of


sorrow and humble imitator of Job, and tell me on what you dined. Was not there soup and salmon, and then a plate of beef, and then duck, blanc-mange, cream, cheese diluted with beer, claret, champagne, hock, tea, coffee, and *noyau*? And after all this, you talk of the *mind* and the evils of life."

Polluted Milk.—The necessity of looking well to the milk supply is very forcibly shown by the fact recently stated by Dr. J. S. Billings, "that fifty-three diphtheria epidemics, seven scarlet fever epidemics, and twelve typhoid epidemics in England had been directly traced to the milk supply."


All who make use of milk as food should see to it that the cows furnishing it are provided with proper food, and have suitable care. A cow, as well as a horse, needs grooming, proper exercise, and well ventilated quarters. When not properly fed and cared for, milk often becomes a very grave source of disease.

Vanilla Poisonous.—It is not generally known that vanilla, familiar to all as the extract of the vanilla bean, a plant native to Mexico, is really poisonous, although usually employed in such small quantities that no alarming symptoms result. It is stated by those familiar with the subject that the workmen who handle the beans in the manufacture of the extract are subject to sore eyes, headache, nervousness, and serious eruptions of the skin, with swelling of the face and arms. The use of such an article as a flavor must certainly be unwholesome.

Cigar-Stumps.—The propagation of most painful and horrible diseases through the medium of cigar-stumps, which are gathered and made into cigarettes in large cities, has become such a notorious evil that the civil authorities of New York have enacted a law making it a crime to gather cigar-stumps, and boys who are seen engaged in the business are arrested; but even yet the business is prosecuted with sufficient vigor to enable several establishments to carry on a flourishing business in cigarettes made from these polluted and doubly-poisoned stumps.



DOMESTIC MEDICINE.



PERSIAN METHOD OF TREATING FEVER.

THE *British Medical Journal* some years ago published the following interesting account of how the Persian doctors treat cases of fever. There are still a good many civilized doctors who might learn wholesome lessons from the heathen:—

“Sir John Chardin, the celebrated traveler, says the Persian physicians (devoted followers of the Galenical school) had frequent recourse to bathing, in febrile diseases. His own case particularly is a remarkable example of their practice. He had with him a French surgeon, who gave him every assistance in his power during the violent remittent fever with which Sir John was attacked; but on arriving at Laar, they concluded to send for the Governor’s physician. The latter, on his arrival, stated the nature of the disease (the fever of Bender, or bilious remittent), and, contrary to the gloomy prognostics of Sir John and his professional friend, promised a speedy cure. Chardin called out, ‘I am dying of heat!’ ‘I know it,’ said the physician, ‘but you shall soon be cooled.’ Chardin says: ‘The apothecary, who paid me the most constant attention, then procured two buckets of water, and having placed me on a chair where I was supported by two men, poured the water over my body, little by little, from the haunches downward; and then, taking a large bottle of rose-water, bathed in the same manner my head, face, arms, and breast. I blessed, in my heart, the Persian practice of medicine, which treated sick persons so voluptuously.

“‘But our French surgeon, who was always by me, could not contain his indignation. ‘The man is killing you, sir,’ said he to me, in a compassionate tone. ‘What! bathe you with cold water in the heat of a malignant fever, with a pint of emulsion, two pints of decoction, and a pound of confection in your belly, with I do not know how many draughts of snow water! Depend upon it,’ he continued, ‘that, instead of being very soon without fever, as he has promised you, your death will be the end of the business.’ ‘I do not know what will happen,’ I answered; ‘but, at any rate, I do

not feel as if I were about to die, as you suppose.’ Indeed, at that moment, I felt the heat within me diminish, and my senses return, upon which my apothecary, having felt my pulse, said, ‘Your fever is abating.’ It went off from that time so quickly, that by one o’clock in the afternoon I was quite free from it, even in the opinion of the French surgeon. He was quite astonished, and I was transported with joy.”

Brood-Eggs Unwholesome.—The following paragraph is worthy of attention, as many persons are in the habit of eating eggs which have been sat upon for a few days without giving signs of fertility. Just how long a time is required to develop the poisonous properties is not known.

“The *Paris Médicale* reports that an omelette having been prepared of one goose brood-egg which had been sat on with negative result, six hen’s eggs, and a handful of sorrel, all who partook of it had a violent attack of cholera morbus, first, vomiting of alimentary matter, then bilious, choleric stools, with cramps in the calves of the leg, general prostration, and some delirium. They gradually recovered, the younger members first, but the older ones had a long siege of it. Were the eggs or the sorrel the cause of this gastric disorder? It is reasonable to think that half-hatched eggs are deleterious as food, and should never be used.”

Chloral a Bad Medicine.—Some years ago the writer was considered quite a heretic for condemning the use of chloral and bromide of potash as sleep-producing agents; but now the injury resulting from these drugs is quite often recognized by able medical men, one of whom writes to the *London Medical Record* as follows:—

“In the *Lancet*, April, 1884, p. 721, an article appears condemning the use of chloral or bromide of potassium as a cure for sleeplessness. The recourse to chloral and bromide is precisely the same thing as a recourse to alcohol; the essential elements of the nerve tissue are blighted by the stupefying poison, as by alcohol in habitual drunkenness. The man or woman who is sent to “sleep” by either of

these narcotics is simply *intoxicated*. Persistence in recourse to them has no better excuse than unwillingness to take the trouble to search out the cause of the wakefulness which prevents natural sleep."

Stocking-Supporters and Knock-Knee.—

The following paragraph contains a new idea, but one which must commend itself to the reader. It is obvious that in a child, whose limbs are still so flexible that a slight irregularity in muscular action may suffice to produce serious deformity of the limbs, the constant action of the stocking-supporters on one side only might result as stated. We quote from the *N. Y. Medical Record* :—

"Professor Lücke calls attention to the action of children's stocking-holders in causing in-deviation of the knees. They are usually of elastic webbing, and are fastened to the outer side of the stocking, acting thus as artificial muscles. The effect is more marked when socks are worn. Dr. Malthe recognizes also the action of the stocking-holders in such cases, but deprecates equally the use of garters above the knee, as advised by Lücke. These cause local atrophy of the muscles, and when very tight, may even interfere with the nutrition of all the parts below their point of application. The stockings should reach above the knees, and should be attached to the drawers by buttons on both the inner and outer sides of the leg.

Itch Ointments.—The best remedy for *scabies* is sulphur, and hence most itch ointments contain this ingredient. Its only faults are its marked and unpleasant odor and its irritating properties. The first may in some considerable degree be obviated by such perfumes as bergamot and sandal-wood oil, and the second by using the finest precipitated sulphur instead of ordinary powdered brimstone. The following are some of the most reliable ointments in use :—

No. 1. Flowers of sulphur, a tablespoonful ; lard or vaseline, three tablespoonfuls ; fifteen drops of oil of bergamot, or a sufficient amount of oil of sandal-wood.

No. 2. Add to each tablespoonful of the above mixture, half a teaspoonful of finely powdered iodide of potash.

No. 3. Flowers of sulphur, a teaspoonful ; balsam of Peru, a teaspoonful ; vaseline or lard, two tablespoonfuls. This is a milder ointment, and hence better adapted to children and persons with sensitive skins.

No. 4. Liquid styrax, a tablespoonful ; vase-

line or lard, two tablespoonfuls ; melt and strain. A very mild ointment, the smell of which is not at all unpleasant.

No. 5. A favorite preparation at one of the Paris hospitals is the following : Carbonate of potash (*saleratus*), a teaspoonful ; flowers of sulphur, two teaspoonfuls ; vaseline, three tablespoonfuls. This is said to cure with one application after a thorough bath.

Feeding Babies.—We quite heartily agree with Dr. Clark, of Oswego, New York, who, in denouncing the common practice of feeding babies who are reared on other than natural food, remarks :—

"Infants should never be fed from a bottle, but always from a spoon or cup. This is the only way to keep them from being overfed, which, with the refusal to them of a free supply of water that idiots still practice, kills three-fourths of the hand-fed children that die. Water should always be offered before milk is given ; otherwise—to quench thirst and not from hunger—they will drink more of the latter than they can digest, and a bellyful of trouble will ensue."

The right way is very troublesome, but if babies are worth raising, it will pay to raise them well. And taken altogether, the trouble will not be increased, as what time is spent in feeding will be compensated for in better night's rests and fewer doctor's bills.

Adhesive Plasters.—There are many cases in which adhesive plasters are of very great service, especially in surgery, in which they are most often used for holding cut or wounded parts together until they are knit together by the repairing efforts of nature. Plasters are also useful for confining a part which is the seat of disease, as in pleurisy, in which the extreme suffering of the patient will often be relieved by the application of strips of adhesive plaster to the affected side. Great relief is often received in lumbago and neuralgia by wearing plasters over the affected parts, by which means the action of the muscles is, to a great degree, restrained, thus preventing irritation. Isinglass plaster is one of the most commonly employed in surgery, though a newly invented rubber plaster is rapidly taking its place on account of its much greater strength and durability. We employ the latter almost altogether for surgical purposes. Plaster made from pitch is very often used for the relief of lumbago. Burgundy pitch is often used in the form of plaster as a mild counter-irritant.

Infants' Food and Scurvy.—To one who is acquainted with the composition of the various preparations offered in the market as substitutes for mother's milk, the wonder will be, **not that** the disease described in the following paragraph occasionally makes its appearance, but that it is not almost universal among children fed on these mixtures, which as a rule are composed almost wholly of starch.

According to an English medical journal, "a child, aged one year, was brought to see Mr. Lake. The mother stated that for seven months the child seemed very healthy, but since then he seemed to be in pain whenever the legs were moved or touched. Up to the age of three months the child was nursed by his mother; since then it had been brought up entirely on Nestle's milk-food. There was very great anæmia, and the legs were both swollen from the upper third of the tibia downward. The skin of both was tense and shiny. In the skin over the sternum were several hemorrhagic spots. The gums around the upper incisors were swollen, spongy, rounded at the edges, and bled at the slightest touch."

All of the above symptoms disappeared when the child was placed upon a healthful diet of cow's milk.

Lime.—It is not, of course, possible to vaporize lime for purposes of inhalation, but in slaking freshly burned lime by pouring hot water upon it a very violent action will ensue, by means of which the vapor thrown off will be laden with very fine particles of lime, which may thus be inhaled and brought in immediate contact with the mucous membrane of the throat. Used in this way, lime is a most excellent agent for dissolving false membranes which are formed in the throat and larynx in diphtheria and croup. The method of using is very simple. The lime may be slacked in a copper pot, and inhaled from the spout; or it may be placed in a saucer, and held near the patient's nose, while both head and saucer are covered with a blanket. The better plan is to cover the vessel containing the lime with a funnel made of stiff paper, the nose of the patient being placed at the upper end of the funnel. A stiff paper bag answers a very good purpose. The mouth of the bag should be placed over the vessel containing lime, and the patient's nose and mouth be placed within the opening made by cutting off one of the corners of the diagonal. Dr. Austin Flint, of New York, in cases of croup

places the patient in a small room, taking care to secure good ventilation of course, and places beside the bed, as near the patient as possible, a large tub in which lime is kept constantly slacking. By this means the air of the room is continually filled with warm vapor, and is also charged with lime particles. Cures have been effected by this means where all other remedies had proven ineffectual and the case was considered hopeless. Lime-water may be also used with the atomizer. The proper strength to employ is one part saturated lime-water to one or two parts of water. This remedy is especially useful in the treatment of diphtheria for the purpose of facilitating separation of the false membrane.

For Burning Feet.—Bathe the feet night and morning with tepid water, to which a little soap has been added. When nearly dry, dust freely over them a powder composed of one part of salicylic acid and sixteen parts of powdered alum. If the burning is especially troublesome at night, dip in hot water for fifteen minutes before applying the powder at night. A jug filled with cold water is a good palliative.

Dangers of the Use of Arnica.—The common use of this article gives importance to the following warning from an eminent English medical writer, Dr. Farquharson:—

"Of all the occasional offenders of this sort against comfort, and even life, is-arnica, which is commonly resorted to by the ignorant public as a sovereign remedy for sprains. It is pretty generally recognized among medical men, no doubt, that it now and then produces erysipelatous inflammation of the skin; but book knowledge of this sort makes little impression in comparison with the observation even of a simple case. Prof. Hebra is one of the most persistent and strenuous opponents of arnica, and I well remember his vigorous denunciation of its evil effects, from the text of a very acute inflammation of both hands, for which it was responsible, and where the skin was covered with large blisters, and almost running into gangrene. A year or two ago I had the opportunity of seeing a typical case in the person of an old lady to whose sprained arm a non-professional nurse had applied a weak solution of arnica, contrary to my advice. A true erysipelas started from the point of application, and slowly spread all over the body, causing much irritation, discomfort, and depression, and greatly retarding her recovery from what would have been otherwise a comparatively trifling injury. . . . My advice to you is to let this drug take its rightful place among those substances of extinct reputation which still continue to sleep peacefully in the Pharmacopœia."

Medicated Fomentations.—When an intense effect is desired through the application of fomentations, the ordinary effects may be increased by the addition of mustard to the water in which the flannels are wet. Turpentine is also somewhat used, but we have never found reason for applying it. The usual plan is to wring out the cloths and sprinkle on a few drops of turpentine just before applying to the skin. Salt water is frequently used for fomentations with the idea of increasing the stimulating effect, which it may do to some degree.

Alcohol Wash.—Mix alcohol and water in the proportion of one part of alcohol to three of water. Often of service in restraining the exhausting night-sweats of the advanced stage of consumption. Also in night-sweats from other causes. The trunk of the body should be bathed with the solution night and morning. Brandy or whisky may be used instead of alcohol.

Vinegar Wash.—Use one part of strong cider vinegar and three parts of water. As vinegar evaporates more readily than pure water, this is an excellent cooling lotion for use in sponging fever patients. Vinegar and water in equal parts makes an excellent lotion for use in cleansing the feet, armpits, and other parts of the body in which the perspiration has a fetid odor.

Tooth Powders.—Every person should keep constantly on hand a supply of powder for cleansing the teeth. Great care, however, should be taken in purchasing the powders which are sold at the drug-stores, as many of them contain deleterious substances. One of these is powdered pumice-stone, which cleanses the teeth very rapidly at the expense of the enamel. No powder should be used which contains any gritty substance. Even powdered charcoal, which has been much employed in cleansing teeth, has been objected to by experienced dentists, who claim that the fine particles of charcoal work down between the teeth and gums, and cause separation of the gums from the teeth. As good a powder for practical purposes as can be produced anywhere can be made by mixing precipitated chalk and carbonate of magnesia in the proportion of two tablespoonfuls of the chalk to a heaping teaspoonful of magnesia. Flavor with cinnamon, winter-green, peppermint, or any other agreeable flavor. Pulverized chalk should not be used, as it is

gritty. Care should also be taken to avoid purchasing the prepared chalk which is sold by druggists as a cosmetic. An excellent powder may also be made by mixing precipitate of chalk with oris root and other harmless substances. None, however, are especially superior to that made by the formula given.

Question Box.

Dyspepsia.—I have a few questions to ask of you, whose answering will be worth many times the subscription price of GOOD HEALTH to me. I am a dyspeptic of that class to whom food is a stimulant. When my stomach becomes empty, I feel lack of both mental and corporeal vigor. I always have a voracious appetite, and can more easily abstain than be temperate. My occupation is such that I can eat within-doors only at morning and night, so I must eat my heartier meal at either the one or the other of those times. Now I want to know—

1. Which is the better time for one who eats but one meal a day, in the early morning or at night?
2. Is one meal a day sufficient for a person following an out-of-doors occupation?
3. What weight of graham flour, or any other food of this class, is sufficient for a laboring man?
4. Which way is the preferable for preparing the cereals for food; in the form of mush, or in that of bread?

DON QUIXOTE.

Ans. 1. The old Greeks ate their one meal about three p. m.; and if we may judge by the general practice of most nations, we should say that the best time for a hearty meal is after the heaviest work of the day has been accomplished, although food should not be eaten when the body is exhausted. A dyspeptic, however, would hardly enjoy waiting until the middle of the afternoon for his breakfast, and it is probable that by that time he would be so exhausted as to be unable to digest his meal when he ate, much less to be able to do any more work without seriously interfering with digestion, such as it may be. So we would recommend, on the whole, if a person wishes to confine himself to one meal a day, whose condition is that of the questioner, that he should take the one meal at about 9 to 10 a. m. He should remember, also, that no active labor should be engaged in for at least an hour after the meal.

2. Whether it is best for our friend to adopt the plan of eating but one meal a day is another question. We are inclined to believe that the average laboring man will do more and better

work on two meals a day than on one. This seems to be the general experience of the world, at any rate. The ancients all ate two meals a day, after the most primitive times when but one meal was taken, and the custom was almost universal to within a few centuries of the present time. Even at the present day the French, Germans, and Italians, all hard working nations, practically eat but twice a day. The breakfast is only a cup of coffee, which not only affords no nourishment, according to Dr. Smith, but really increases tissue waste. Spain has latterly adopted the two-meal plan, according to a recent traveler in that country. Our idea of the true way of eating, as regards meals, is that a light meal should be taken at about 9 A. M., and the hearty meal of the day at about 4 or 5 P. M. A man whose digestion is feeble is less able to digest a large amount of food than one with a healthy stomach.

3. The amount of dry graham flour necessary to supply the proper amount of nutriment to the body is probably from eighteen to twenty-four ounces, according to the amount of work done.

4. Bread is a much better form of food than mush, as it requires more mastication. Graham bread is indeed, when well made, a perfect food.

Two Meals a Day.—L. C. W. writes: "I am reading *GOOD HEALTH* for the first year with much interest. I have followed the two-meal plan for a number of years, and although myself and family have enjoyed excellent health, my friends and neighbors look upon it as a very new and dangerous innovation. If this subject is as interesting to other readers as to myself, I hope you will favor us with an article on those countries in which one or two meals a day is, or has been, the prevailing custom."

Ans. The fact that our correspondent and his family are enjoying good health ought to be sufficient evidence to his neighbors that there is nothing fatal about the practice of eating but twice a day. Good health is not generally considered dangerous; and we doubt not that there is plenty of evidence among his neighbors that people who eat three times a day or all the time are sometimes sick. For a few facts about the two-meal-a-day plan, see answer to queries from a dyspeptic in this department.

Lye-Hominy.—Mrs. F. C. wishes to know whether corn hulled by the use of concentrated lye is wholesome food.

Ans. If the lye is wholly removed, we know of no objection to the article named; but we have never seen a specimen which did not possess a very distinct flavor of alkali. Whether or not there is any means of complete removal we are not prepared to say, but should think that the process might be so conducted as to accomplish the desired end without leaving any unwholesome residue. Corn hulled by machinery is preferable.

Choryza.—C. G. B. complains of sensitiveness of the nerves of the head, making slight jars painful, and a continual watery dropping from the nose when out in the cold air. Wants advice.

Ans. Your suffering may be the result of a chronic irritation of the nasal mucous membrane, or a congestion of the head. Very likely there is a disturbed circulation or a dyspepsia, or some other cause lying back of the prominent symptoms. A saline sponge bath, followed by an oiling every morning, being careful to keep the extremities warm, will probably bring you relief if proper care is taken to secure improvement of the health in every way possible. Fomentations applied over the sensitive spots, or hot sponging of the head, are effective in relieving the pain, but are apt to increase the sensibility to cold.

Itching.—An "old veteran" who has suffered many years from an itching about the rectum, which is sometimes attended by moisture of the surface, wants to know the cause.

Ans. Probably eczema. Bathe with hot water, and apply zinc ointment.

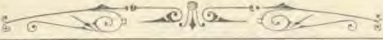
Injured Eye.—G. W. P., of Ind., asks: "What can we do for eyes that were injured last summer by an insect, supposed to be a fly, flying into one of them? They were very much inflamed at the time, and since then the sight has not been good. Will a wash of any kind be beneficial to them?"

Ans. It would be impossible to make an intelligent prescription for such a case without the opportunity for a personal examination. We would advise that the patient be taken to a physician who makes a speciality of treating eyes—not a traveling quack—and that his advice be followed.

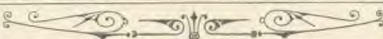
Hot and Cold Hand-Bath.—Mrs. J. A. H., of Dakota, a housekeeper doing her own work, wishes to know how to take a hot and cold hand-bath, also how much exercise she ought to take.

Ans. Have two basins, hot water in one and cold in the other. Dip the hands in the hot water a half minute, then in cold water for the same length of time, and thus alternate for ten or fifteen minutes. You probably have exercise enough in caring for your family. An hour's recreation out-of-doors daily will probably be beneficial.

Morning Sickness.—Mrs. H. is referred to the "Ladies' Guide" for an answer to her question, which cannot be well answered here. Circulars of the work may be obtained by addressing the Health Publishing Co.



SCIENCE IN THE HOUSEHOLD.



CONDUCTED BY MRS. E. E. KELLOGG.

SOME WAYS TO USE FRAGMENTS.

ECONOMY, one of the cardinal principles of success in the various details of housekeeping, as in all other occupations in life, consists not alone in making advantageous use of fresh material, but in carefully preserving and using the "left over" bits and fragments that accrue in every household. The general source for fragmentary accumulations in most households is from the food supply. Few cooks can make such perfect calculation respecting the desires and needs of their families as to provide just enough and no more, and the improvident waste of the surplus food thus prepared and "left over," is in many homes fully equal to one-half the first cost of the meal. Scarcely anything need ever be wasted, certainly nothing which was at first well cooked. There are ways and means of preparing almost every kind of cooked food so that it will be quite as appetizing and nutritious as when first prepared, many of which we might enumerate had we space; but for the present we can only speak of some of the ways to use the fragments of that most common of all foods, "the staff of life."

Not a crumb of good bread should ever be wasted; for while, if properly made of wholesome and nutritious material, it is in itself the most perfect of foods, there are few other articles of food which can be combined into more varied and palatable dishes than good bread. We refer especially to bread made of the whole grain, since there can be no economy in preparing bread in the first place from material that contains so small an amount of nutritive elements as does common superfine flour, and quite as little in preparing other dishes from its fragments.

Bits of food of any kind, to be suitable for use for culinary purposes, must be well preserved. Sour or moldy fragments are not fit for food, and the use of puddings made from scraps of moldy bread have been known to occasion very serious illness. The first step toward insuring the preservation of bread fragments is good care of the loaf itself. Perfectly sweet, light, well-baked bread has not the same propensity to mold as has a poorer loaf; but even this proper preparation will not prevent its becoming musty if its surroundings are not perfectly wholesome. Musty wooden boxes, and indeed any wooden box, should never be used for storage. Scarcely better is a stone or earthen-ware crock, as it is likely to collect moisture. The best receptacle for bread is some covered tin utensil, which should be frequently washed in soapsuds, and afterward scalded with hot water.

If cloths are used to wrap or cover the bread, they, too, should be washed and scalded every week, and oftener if at any time the loaf about which they were wrapped becomes moldy or musty.

Whole or half slices of bread left over, which have become too dry to be palatable, may be utilized for making dry toast and fruit and vegetable toasts, recipes for some of which were given in the October number of last year. Scarcely any breakfast dish is more easily made or more generally liked by the children than milk or cream toast, and a good way to prepare it is as follows:—

Cream Toast.—Heat a quart of milk to boiling. When hot, stir into it three scant tablespoonfuls of flour, which has been rubbed to a smooth paste in a little cold milk, add a little salt, if it is considered essential, and a cup of sweet cream. Remove this sauce to the back of the stove where it will keep hot, and dip the hot, browned slices as fast as toasted into it. The toast should be hot enough to hiss when it touches the cream. Serve as soon as done. Cream toast is far better when the sauce is thus prepared first, than when the bread is first toasted and allowed to grow cold before adding the sauce; however, if one desires, the bread may be toasted at the same time the sauce is in preparation, and facilitate matters still more. The bread to be used for this purpose is best if stale, and should be arranged in slices of uniform thickness (not more than a quarter of an inch thick). For toasting a large quantity there is nothing more serviceable than a wire double broiler or toaster, one of which should be in every household. The fire should be clear, red (not blazing) coals, and the bread toasted on both sides to a rich brown.

Cream Toast, No. 2.—Put slices of stale, whole-wheat bread, which have been prepared so as to be of uniform thickness, on the top grate of a warm oven, and dry them slowly until crisp and nicely browned, but not scorched or burnt. Have a pint of *thin* sweet cream scalding hot, salt it a little if desired, and moisten each slice of toast separately with a spoonful or two of the hot liquid, packing them as fast as moistened into a hot dish; cover the dish tightly so that the toast may steam, and serve at once. The slices should be thoroughly moistened, but not soft and mushy nor swimming in gravy; indeed, we think they are best if a very little of the crispness still remains, and they are far sweeter than the toast which is prepared by only browning on both sides.

Snowflake Toast.—Prepare the gravy by heating to boiling a quart of milk, to which a half cup of cream, and a little salt if desired, has been added. Thicken the milk, when boiling, with a tablespoonful of flour well braided in a little cold milk. Have ready the whites of two eggs, beaten to a stiff froth; and when the flour is well cooked, add the egg to the milk gravy, beating it in lightly. Allow the sauce to boil up once only after the egg is added, just sufficient to coagulate the albumen of the egg, but not to harden it. Pour it over hot, browned toast, and serve at once. If the toast has been prepared by drying in the oven, dip each slice first into a little hot milk before covering with the gravy.

Broken pieces of bread not suitable for toast, crusts, and trimmings of the loaf make excellent *croûtons*, and form a most palatable accompaniment for soups, gruels, hot milk, etc. To prepare the *croûtons* cut the fragments into as nearly uniform size as possible, half-inch cubes are a convenient form, and place them on tins in a warming oven to dry. Let them become crisply dry and lightly browned, but do not scorch. They are far preferable to crackers for use in soups, and require so little work to prepare, and are so economical withal, that one who has once tried them will be likely to keep a supply on hand.

The crumbs, and smaller fragments still, may be utilized for thickening soups, for puddings and various kinds of dressing.

If fragments and stale bits of bread accumulate more rapidly than they can be made use of, they should be carefully kept in a pan by themselves, never in the box with the whole loaves, and dried, not browned, in a warming oven, after which put them in a mortar, and pound; or spread them upon an old bread-board, or fold in a clean cloth, and roll them with a rolling-pin until fine. Prepared thus, and put away in some dry place, they will keep almost indefinitely, and can be used when needed. For preparing scalloped vegetables of all kinds these prepared crumbs are most excellent. They give a fine nutty flavor to the dish that fresh crumbs do not possess.

Fragments and crumbs of bread can be utilized for an innumerable variety of puddings and desserts, among which the following are good:—

Apple Dessert.—Take a half dozen nice tart apples, pare and remove all blemishes; dig out the cores from the stem end, and fill up the cavities with sugar, mixed with a very little grated lemon peel. Place the apples with a half cup of water, in the bottom of a shallow saucepan over the fire; cover closely, and steam until the apples are quite tender. Have ready some rounds of stale bread, one for each apple, a little larger than the apple in circumference, and a half inch in thickness; place the apples upon the rounds of bread, first moistening them lightly with some of the juice in the saucepan, and place all in a moderate oven until the bread is lightly browned. Serve cold with whipped cream and sugar.

Plain Fruit Pudding.—Chop together equal parts of tart, easily cooked apples and seeded raisins. Put a layer of this mixture in the bottom of an oiled pudding dish, cover with a layer of bread crumbs, then more of the apple mixture. In this order of alternation fill the dish, having the top layer of bread crumbs; if the apples are not very tart nor very juicy, moisten the whole with a little lemon juice, diluted with cold water, a cupful for a dish holding about three pints will do. Cover, place the pudding dish in a pan of hot water, and steam nearly an hour in a moderate oven; then remove from the pan, and brown nicely. Serve warm with cream and sugar. Seeded cherries may be used in the place of the apple and raisins. Each layer of fruit should then be sprinkled with sugar, and the water omitted.

Stewed Fruit Pudding.—Take a deep, narrow, granite-ware cake mold (a tin one will do with sub-acid fruits), and cut strips of stale bread long enough to go across it the narrow way. Cut the strips of uniform thickness and width,—an inch in width and three-fourths in thickness,—and place them in the mold with spaces between them equal to their width. Have ready some hot, freshly stewed, or canned fruit, sweetened to taste; apricots, cherries, plums, peaches, cranberries, currants, and gooseberries are all good. Have a small strainer through which the juice may be run off the fruit into another dish, and fill up the interstices between the slices of bread with hot fruit only. Add another layer of bread strips, this time placing each strip of bread over the space filled with fruit in the lower layer, so that the interstices for fruit will come above the bread of the lower layer. Fill up the spaces as before, and continue to add more layers of bread and fruit until the mold is full, then turn over all the hot juice of the fruit; place a weight upon the pudding, turn off all juice which does not become absorbed, and press the whole till cold. Serve with whipped cream and sugar.

Bread Custard Pudding.—Take one cup of finely powdered bread crumbs, one-half cup of sugar, one quart of milk, and the beaten yolks of three eggs, and whites of two. Beat all together thoroughly, season with a little lemon peel; place the pudding dish in the oven in a pan of hot water, and bake till the whole is firm and lightly brown. Take from the oven, cover the top with a layer of apple butter, made without sugar, or some tart fruit jelly; cover this with a meringue made of the whites of the remaining eggs and a tablespoonful of sugar, beaten to a stiff froth, and place in the oven just a moment to brown lightly. Fresh fruit, strawberries, raspberries, chopped peaches, currants, cherries, or shredded oranges are equally as good as the fruit butter or jelly for the top dressing, and may be used to vary this pudding in a number of different ways. Canned fruits, if well drained from juice, especially apricots and peaches, are excellent for this purpose. A coconut custard pudding may be made of the above by flavoring the milk before using, by simmering in it for a little time two tablespoonfuls

of desiccated cocoanut. Another variety still may be made by adding to the first recipe a half cup of zante currants and the same of seedless raisins, or a half cup of finely-shredded, tender citron.

Boiled Custard Bread Pudding.—Crumble lightly with the hands, enough of the soft portion of some stale, whole-wheat bread to fill a pint bowl. Do not press the crumbs into the bowl, but let them fall loosely and lightly. Heat a pint of milk to boiling. Stir into it as soon as it boils, two well beaten eggs, yolks and whites beaten separately, two heaping tablespoonfuls of sugar, a little grated lemon rind, and the light bread crumbs; stir swiftly till the whole thickens, pour into a deep dish, and when cold, dot the top with bits of currant or cranberry jelly.

Baked Apple Pudding.—Pour boiling water over bread crumbs; when soft, squeeze all the water out, and line the bottom and sides of an oiled pudding dish (an earthen one is best) with the moist bread crumbs. Fill the interior with sliced apples, and cover with a layer of bread crumbs. Bake with the pudding dish covered and set in a pan of boiling water, until the apples are tender, then remove the cover and brown. Loosen the pudding with a knife, invert on a plate, and it will turn out whole. Serve with sugar and cream. E. E. K.

Literary Notices.

THE April issue of *OUTING* indicates the purpose of its publishers to place it in the foremost rank of American magazines. It is enlarged to nearly double its former size, and its compound title is wisely simplified to the expressive *Outing*. A leading feature of the number is a strong group of letters on the preservation of the Adirondack forests, by a score of eminent public men, including Charles Dudley Warner, Prof. Charles S. Sargent of the Harvard chair of arboriculture, Gen. Francis A. Walker, President Andrew D. White of Cornell, John Burroughs, Dr. Howard Crosby, Abram S. Hewitt, Sunset Cox, E. P. Roe, Lyman Abbott, and J. T. Trowbridge.

The many contributions and departments are full of interest, teeming throughout with that out-of-doors vigor and freshness, which has always been a characteristic of the magazine.

The price of *Outing* is 25 cents a copy, or \$3.00 a year. Published by the Wheelman Company, 175 Tremont St., Boston.

BAByHOOD: Published at 18 Spruce St., New York City.

We have received the February issue of this new monthly, which, as its name indicates, is devoted to such articles concerning the care of infants and young children, and their physical, mental, and moral well-being, as will be most helpful to parents in the nurture and training

of their children. The editor of this unique journal is Leroy M. Fale, M. D., assisted by the well known authoress, Marion Harland, whose "Familiar Talks with Mothers" in each number are full of excellent advice and valuable information. If the succeeding numbers of this new enterprise equal in value the number before us, it must certainly prove a most desirable assistant to every person intrusted with the care of children.

THE POPULAR SCIENCE MONTHLY: Published by D. Appleton & Co., New York. Terms \$5.00 per annum.

This journal for March is in no way behind its predecessors. Each number of this, the leading scientific magazine of the age, is always more than worth its yearly subscription price.

The April issue of this superb monthly has just been laid upon our table, and its pages are brimful of the most entertaining information.

HEALTHY LIFE AND HYDROPATHIC NEWS: Published at The Limes, Bold St., Southport, England.

This is the title of a bright little sheet which comes to us from across the water, the aim of which, to quote from the prospectus of the number before us, is "to dissipate popular errors on health matters, and aid in moral elevation and mental enlightenment." Its columns are filled with valuable articles on health. It has just begun upon its second volume, and we trust will meet with the success it deserves in aiding to spread abroad the gospel of health.

MIND IN NATURE is the name of a new enterprise just started by the Cosmic Pub. Co., of Chicago, the object of which, as stated by the prospectus of the first issue, is to furnish, in a popular manner, information regarding psychical questions, the relation of mind to the body and their reciprocal action, with special reference to their bearings in health and disease, and to give the most interesting of scientific facts and discoveries. It is published monthly, and sent post-paid on receipt of \$1.00.

DORCAS: 872 Broadway, New York City.

The April number of *Dorcas* is an admirable one. The article on "Tile Carving from Colorado Marble" opens the way for a new industry for women. This magazine takes special pains to bring forward anything new, which may in any way help women to new and better means of self-support. Subscription price, \$1.00 per year. Send ten cents for sample copy.

ORD WEEKLY QUIZ is the name of a paper, the third Annual Review of which has been sent us. It is published in Ord, Nebraska, and devoted to the interests of Valley County of that State. It presents considerable reading matter of general interest, besides which it contains much of particular interest to persons intending to locate in the State.

Publisher's Page.

Will all our readers please look over the assortment of good things set before them this month, and see if they do not feel as though they would like to have their friends partake with them? We hope to set a table as good or better for you every month. The excitement of the election is now over; the new administration is duly installed; the victors are done with their rejoicing; and the defeated are reconciled to the inevitable. The excitement is over, and now when your friends are beginning to look around for something new, perhaps quite disgusted with politics, and ready for almost anything foreign, just supply them with a few copies of GOOD HEALTH, explain its objects and present its merits, and see how quickly they will subscribe.

The subscriptions still continue to come in at a lively rate, and we trust our friends who have not been deterred by the almost unprecedented severity of the weather from working so nobly in behalf of the journal, will now, with the opening of spring and the general waking up of business, be able to report still larger results from their labor. We want 5,000 more names before the first of June. Are there not one hundred persons interested in spreading the "gospel of health" to secure for us fifty subscriptions each in the next few weeks? The task would not be a large one for any one of the most ordinary ability who had a little zeal for the cause of sanitary reform.

The ventilating system of the Sanitarium old main building, which has not been wholly satisfactory, owing to defects in the construction, and particularly in the material employed, with other causes, has been thoroughly overhauled, so that now every room of the old part is provided with a separate ventilating duct, as are those of the new part. The system of ventilation of the entire building may now be considered as complete as could be desired, and as art and ingenuity can make it. There is probably no building in the country of equal size and complexity of construction which is so thoroughly ventilated as this. The fresh air supply is sufficient to provide every person with more than four thousand cubic feet of well-warmed air per hour.

Mrs. Kellogg expects to hold a "Health Normal" at Greensboro, North Carolina, April 14 and 15, on her way home from the South. Urgent invitations have been extended to her to visit Washington, D. C., and other Southern cities, some of which she may be able to reach. The temperance workers of the South are just getting hold of the health question a little, and the ideas presented seem to be almost novel to them. They are evidently anxious to hear and investigate, and will undoubtedly show a commendable zeal in putting into practice the new ideas as fast as they are convinced of their practical merit.

"The world moves;" even the South is moving toward a more modern style of civilization. The description of a Southern town in another page was written on the spot, and is accurate; but the observer has seen other Southern towns since, some as bad or worse, but most, on the whole, better, and some almost equal to Northern towns. As fast as Northern people settle in the South, things begin to put on a different aspect. The "poor white," apparently ashamed of the contrast, sinks back into the primeval forests,—which are still plenty enough,—and only on special occasions, when a circus comes to town, or a new supply of bacon and "store-stuff" must be laid in, does the typical "cracker" put in an appearance with his two-wheeled cart, drawn by an

ancient horse or a single ox, carrying a doleful looking woman, while the ancient inhabitant himself rides astride the slow beast, industriously working his passage with a stout raw-hide or a palmetto stalk.

It is now confidently expected that the new edition of the HOME HANDBOOK OF DOMESTIC HYGIENE AND RATIONAL MEDICINE, the thirteenth thousand, will be ready in two or three weeks. The last edition is wholly exhausted, and has been practically so for some time. The author has delayed the publication of the work for several months to enable him to make the many important additions and emendations which additional years of experience and research would naturally suggest.

The new edition, thirteenth thousand, is both larger and smaller than the preceding. It contains more matter, a larger number of pages, nearly 1700, and yet is less bulky, being printed on finer paper, which occupies less space than that used in the former edition. The book is improved in many ways, and the publishers trust that those who have so generously commended the work in the past will be still more highly pleased with it in its more perfected form.

Prospectus books are now ready. Agents are wanted in all parts of the United States. A good commission given.
Address, HEALTH PUB. COMPANY, Battle Creek, Mich.

Mrs. Kellogg, Superintendent of the Department of Hygiene for the N. W. C. T. U., and Secretary of the American Health and Temperance Association, is preparing a series of HEALTH READINGS for the use of Unions and Clubs. These readings will be published in numbers of about 100 pp. each, and will be published in attractive form. Each will contain a choice assortment of readings on one or two subjects, which together will thoroughly present the subjects under consideration. It is believed that these READINGS will really meet a "long-felt want." Suggestions as to subjects and subject-matter from active workers will be gratefully received. The first number will be issued in a few weeks.

"Get the Best!" TEMPERANCE AND GOSPEL SONGS, for the Use of Temperance Clubs and Gospel Temperance Meetings, by J. E. White, and published by the American Health and Temperance Association, Battle Creek, Mich., is by all odds the best temperance singing book now before the people. Its pages are not lumbered down with stale words and tunes which were worn thread-bare a score of years since; but with a few exceptions both words and music are NEW, WRITTEN ESPECIALLY FOR THIS BOOK, by the best musical talent in the country. It is a pleasure to call attention to TEMPERANCE AND GOSPEL SONGS, for it is believed that no other singing book so fully meets the demand of the temperance work in its various branches. 100 pages, bound in boards, price per copy, post-paid, 30 cts. SPECIAL DISCOUNT by the quantity. Address, REVIEW AND HERALD, Battle Creek, Mich.

The temporary absence of the Editor from home when the last number went to press prevented his revision of the proof sheets, in consequence of which a number of rather conical errors were overlooked. Fortunately, they were so obvious in character the reader undoubtedly corrected them at once, and we need not call attention to them more particularly.

WHAT TO WEAR FOR HEALTH.

The most eminent physicians declare that every lady knows to be true, that at least nine-tenths of all the maladies peculiar to their sex may be fairly attributed to unhealthful dressing. In order to supply the growing demand for healthful clothing for women and children, we have made arrangements which enable us to furnish healthful and tasty clothing of every description, from a stocking-supporter to a full suit of underclothing, with patterns for healthful dresses. For illustrated circular,

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