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PHYSICAL CAUSES OF DRUNKENNESS.

[THE following excellent paragraphs are from the pen of Rev. Chas. Kingsley, in his admirable work, "Health and Education."—ED.]

It is said by some that drunkenness is on the increase in this island. I have no trusty proof of it; but I can believe it possible; for every cause of drunkenness seems on the increase. Overwork of body and mind; circumstances which depress health; temptation to drink, and drink again, at every corner of the streets; and finally, money, and ever more money, in the hands of uneducated people, who have not the desire, and too often not the means, of spending it in any save the lowest pleasures,—these, it seems to me, are the true causes of drunkenness, increasing or not. And if we wish to become a more temperate nation, we must lessen them, if we cannot eradicate them.

First, overwork. We all live too fast and work too hard. "All things are full of labor, man cannot utter it." In the heavy struggle for existence which goes on all around us, each man is tasked more and more,—if he be really worth buying and using,—to the utmost of his powers all day long. The weak have to compete on equal terms with the strong, and crave, in consequence, for artificial strength. How we shall stop that, I know not, while every man is "making haste to be rich, and piercing himself through with many sorrows, and falling into foolish and hurtful lusts, which drown men in destruction and perdition." How we shall stop that, I say, I know not. The old prophet may have been right when he said, "Surely it is not of the Lord that the people shall labor in the very fire, and weary themselves for very vanity;" and in some juster, wiser, more sober system of society,—somewhat more like the kingdom of the Father come on earth,—it may be that poor human beings will not need to toil so hard, and to keep themselves up to their work by stimulants, but will have time to sit down, and look around them, and think of God, and of God's quiet universe, with something of quiet in themselves; something of rational leisure, and manful soriety of mind, as well as of body.

But it seems to me, also, that in such a state of society, when, as it was once well put, "every one has stopped running about like rats," that those who work hard, whether with muscle or with brain, would not be surrounded, as now, with every circumstance which tempts toward drink; by every circumstance which depresses the vital energies, and leaves them an easy prey to pesti ence itself; by bad light, bad air, bad food, bad water, bad smells, bad occupations, which weaken the muscles, cramp the chest, disorder the digestion. Let any rational man, fresh from the country,—in which I presume God, having made it, mean all men, more or less, to live,—go through the back streets of any city, or through whole districts of the "black countr es" of England, and then ask himself, Is it the will of God that his human children should live and toil in such dens, such deserts, such dark places of the earth? Let him ask himself, Can they live and toil there without contracting a probably diseased habit of body; without contracting a certainly weary, dull, sordid habit of mind, which craves for any pleasure, however brutal, o escape from its own stupidity and empti-

ness? When I run through, by rail, certain parts of the iron-producing country, streets of furnaces, collieries, slag heaps, mud, slop, brick house-rows, smoke, dirt, and that is all; and when I am told, whether truly or falsely, that the main thing which the well-paid and well-fed men of those abominable wastes care for is good fighting-dogs, I can only answer that I am not surprised.

I say, as I have said elsewhere, and shall do my best to say again, that the craving for drink and narcotics, especially that engendered in our great cities, is not a disease, but a symptom of disease; of a far deeper disease than any which drunkenness can produce; namely, of the growing degeneracy of a population striving in vain by stimulants and narcotics to fight against those slow poisons with which our greedy barbarism, miscalled civilization, has surrounded them from the cradle to the grave. I may be answered that the old German, Angle, Dane, drank heavily. I know it; but why did they drink, save for the same reason that the fenman drank, and his wife took opium, at least till the fens were drained? why but to keep off the depressing effects of the malaria of swamps and new clearings, which told on them—who always settled in the lowest grounds—in the shape of fever and ague? Here it may be answered again, that stimulants have been, during the memory of man, the destruction of the Red Indian race in America. I reply boldly, that I do not believe it. There is evidence enough in Jaques Cartier's "Voyages to the Rivers of Canada," and evidence more than enough in Strachey's "Travaile in Virginia,"—to quote only two authorities out of many,—to prove that the Red Indians, when the white man first met with them, were, in North and South alike, a diseased, decaying, and, as all their traditions confess, decreasing race. Such a race would naturally crave for "the water of life," the "usque-bagh," or whisky, as we have contracted the old name now. But I should have thought that the white man, by introducing among these poor creatures iron, fire-arms, blankets, and above all, horses wherewith to follow the buffalo-herds which they could never follow on foot, must have done ten times more towards keeping them alive, than he has done towards destroying them by giving them the chance of a week's drunkenness twice a year, when they came in to his forts to sell the skins which, without his gifts, they would never have got.

Such a race would, of course, if wanting vitality, crave for stimulants. But if the stimulants, and not the original want of vitality, combined with morals utterly detestable, and worthy only of the gallows, —and here I know what I say, and dare not tell what I know, from eye-witnesses, —have been the cause of the Red Indians' extinction, then how is it, let me ask, that the Irishman and the Scotsman have, often to their great harm, been drinking as much whisky, and usually very bad whisky, not merely twice a year, but as often as they could get it, during the whole "iron age;" and, for aught any one can tell, during the "bronze age," and the "stone age" before that, and yet are still the most healthy, able, valiant, and prolific races in Europe? Had they drunk less whisky, they would doubtless have been more healthy, able, valiant, and perhaps even more prolific than they are now. They show no sign, however, as yet, of going the way of the Red Indian.

But if the craving for stimulants and narcotics is a token of deficient vitality, then the deadliest foe of that craving, and all its miserable results, is surely the Sanatory Reformer; the man who preaches, and, as far as ignorance and vested interests will allow him, procures for the masses pure air, pure sunlight, pure water, pure dwelling-houses, pure food. Not merely every fresh drinking-fountain, but every fresh public bath and wash-house, every fresh open space, every fresh growing tree, every fresh open window, every fresh flower in that window,—each of these is so much, as the old Persians would have said, conquered for Ormuzd, the god of light and life, out of the dominion of Ahriman, the king of darkness and of death; so much taken from the causes of drunkenness and disease, and added to the causes of sobriety and health.

HOUSE WARMING.

[THE following excellent suggestions on a timely topic we extract from the *Sanitarian*, the leading sanitary magazine published in this country.—ED.]

The different modes of warming may be divided into three classes: open fire-places, stoves (including furnaces), and steam and hot water. The most universal of all mistakes in regard to warming in cold climates, no matter what the mode adopted, is to estimate the amount of fuel and

heat-producing capacity solely with reference to warming. Ventilation is equally, ay, more essential; and it cannot be effected without expenditure of fuel. The smaller the space to be warmed,—the relative capacity to the number of occupants,—the larger the proportion of heat required for ventilation, for the manifest reason that the air has to be changed more frequently.

1. Open fire-places are adapted to only mild climates. The heated air from the open fire-place or chimney grates is available to the apartment for only about 12 per cent of the total amount of heat produced; all the rest passes up the chimney. Hence in cold weather the amount of heat available from this means, for warming the floors and walls, or reaching the remote corners of rooms, is wholly insufficient. And as Rumford put it many years ago: "While the draughts chill one part of the body, the rest is roasted by the fire in the fire-place, and this cannot but be injurious to health."

The special merit of the open fire-place is good ventilation. The heated chimney, from its use, is the most effectual of all exhaust shafts for carrying off impure air. Some recent inventions in open fire-place grates, by which the grate sets well out into the room, and combines with a radiating surface and fresh-air supply at the back, are great improvements in the economy of heat, and fulfill in a remarkable degree the best conditions for ventilation, either alone, when the weather will admit of it, or as adjuncts to furnaces.

2. Close stoves utilize from eighty-five to ninety per cent of the heat produced, and lose through the smoke-pipe only about as much as the open fire-place saves—ten to fifteen per cent. Herein lies the striking difference between the relative healthiness of the atmosphere heated by a close stove, and an open fire-place. The amount of air which passes through a close stove, heated with a brisk fire, is, on an average, equal to only about one-tenth of the capacity of the room warmed; and consequently such stoves require, if unaided, ten hours to effect a change of atmosphere in every such apartment. Thus stagnant and heated, the air becomes filled with the impurities of respiration and cutaneous transpiration.

Moisture, too, is an important consideration. The air, whether within doors or without, can only contain a certain proportion of moisture to each cubic foot, and no more, according to its temperature. At eighty degrees it is capable of containing five times as much as at thirty-two degrees. Hence an atmosphere at thirty-two degrees, with its requisite supply of moisture, introduced into a confined place and heated up to eighty degrees, has its capacity for moisture so increased as to dry and wither everything with which it comes in contact: furniture cracks and warps; seams open in the molding, wainscoting, and doors; plants die; ophthalmia, catarrh, and bronchitis are common family complaints, and consumption is not infrequent. But this condition of house air is not peculiar to close stoves. *It is equally true of any overheated and confined atmosphere*,—no less applicable to steam-radiators than to stoves and hot-air furnaces.

The chief advantage is, that warming the air by means of a close stove is more quickly accomplished, more easily and more economically kept up, than by any other means. Sometimes, by the scorching of dust afloat in the atmosphere, an unpleasant odor is evolved, which is erroneously supposed to be a special indication of impurity, caused by burning the air; it is an indication of excessive heat in the stove. The air cannot be said to burn, in any true sense of the word, for it continues to possess its due proportion of elementary constituents, notwithstanding such accidents. Such is the close stove and its dangers under the most unfavorable conditions.

But stoves have been greatly improved in recent years. "Open fire-stoves" combine the advantages of the open fire-place and the close stove, provide for fresh air, and economize heat. The important improvements in stoves of this kind have not only well-nigh supplanted the old open fire-grate in supplying all that was ever claimed for it, but excel it in all the requisites for economy and comfort. These are provided with shafts conveying fresh air from the outside of the house to the bottom of the fire-grate and around a radiating surface of an inner shell.

The most important condition for the protection of health in stove heat is provision for the removal of impure air. This is a much more difficult task than it is to obtain that which is pure.

The experiments of Pettenkofer have shown that under the common conditions of the atmosphere, a very considerable exchange of gases takes place through

dry, plastered walls, brick and stone. But the cold felt by proximity to the walls or windows in a warm room, is never due to this cause; it is due to the loss of heat by radiation from the body toward a colder surface. Yet every observer is aware of the force with which the outer air presses in through all crevices around doors and windows when great differences exist between the temperature of the out-door and in-door air; and the greater, if the in-door air is provided with means of escape with its impurities. The essentials for healthy stove heat are a brick-lined fire-chamber, *exhaust-flue* for foul air, and provision for fresh-air supply.

A brick lining is requisite for the double purpose of preventing overheating, and for retaining heat in the stove. For the supply of moisture, the means is simple and easy of control, but often inadequate.

An efficient air-shaft may be fitted to the commonest of close stoves by simply inclosing the smoke-pipe in a jacket; that is, in a pipe of two or three inches greater diameter. This should be braced around the smoke-pipe, and perforated by it, leaving about an inch opening all around, and carried down to within six inches of the floor, or resting upon the floor in four prongs, left by cutting out the end in four deep notches. At its entry into the chimney, or in its passage through the roof of a railway car, a perforated collar should separate it from the smoke-pipe. For a stove with a short horizontal smoke-pipe passing through a fire-board, the latter should always be raised about three inches from the hearth. A smoke-pipe thus jacketed, or a fire-board so raised, affords an efficient air-shaft for the escape of foul air.

The introduction of fresh air is a comparatively easy matter. In default of special provision in ordinary dwellings and tenements, or in public institutions and dormitories, a strip of board three inches wide under the window-sash, closely fitted, provides for an inlet between the sash at the middle with a direction to the top of the room, and therefore not likely to subject any one to draught, while it promotes a free circulation of air in the room.

3. *Hot-air furnaces* are simply inclosed stoves placed outside the apartments to be warmed, and usually in cellars or basements of the buildings in which they are used. The manner of warming is virtually the same as by *indirect* steam heat, by the passage of air over the surface of the heated furnace or steam-heated pipes, as the case may be, through flues or pipes provided with registers.

The most essential condition of satisfactory warming by a hot-air furnace is a good chimney draught, which should always be stronger than that of the hot-air pipes through which the warmed air is conveyed into the rooms; and this can be measured by the force with which it passes through the registers. A chimney draught thus regulated effectually removes all emanations; for if the chimney draught exceeds that of the hot-air pipes, all the gaseous emanations from the inside of the furnace and from crevices, or if the furnace is of cast-iron and overheated, all the gases around it on the outside will be drawn into the chimney.

Closely connected with this requirement for the chimney draught is the regulation apparatus for governing the combustion of fuel, the draught of the furnace. This should all be below the grate; there should be no dampers in the smoke-pipe or chimney, and all joints below and about the grate should be air-tight. The fire-pot should be lined with brick, and entirely within the furnace, but separate from it, so that the fresh air to be warmed cannot come in contact with the fuel chamber. A large heating surface of the furnace is a well-recognized condition of both economy and efficiency, and absolutely essential for effectual ventilation. As a rule, the calculation should be ten square feet of surface to every pound of coal consumed per hour when in active combustion; and the grate area should be about one-fiftieth that of the heating surface. For the deficiency of heat, or the failure of some of the hot-air pipes in certain winds and weathers in large houses, or for specially exposed rooms, the best addendum is an open fire-grate.

But with a view to the best means of distributing the heat, regulating the temperature and purity of the atmosphere, it is requisite that certain proportions be observed between the size of the shaft or shafts for the inlet of fresh air and the hot-air pipes for the distribution of the warmed air. The area of the smallest part of the inlet (or inlets, for it is sometimes better to have more than one) should be about one-sixth of a square foot for every pound of coal estimated to be burned hourly in cold weather; and to prevent in a measure the inconvenience of one hot-air pipe drawing from another, the collective area of the hot-air pipes should not

be more than one-sixth greater than the cold-air inlet. These proportions will admit the hot air at a temperature of about 120° when at zero outside, and the velocity through the registers will not exceed five feet per second.

A GOOD DRUGGIST.

A MAN who kept a store
Once wrote upon his door :—

"Oh, I can make a pill
That shall ease ev'ry ill!
I keep here a plaster
To prevent disaster;
Also some good ointment
To soothe disappointment."

When customers applied,
These words are what he cried :—

"Now *Patience* is the pill
That eases ev'ry ill;
Take care is a plaster
Which prevents disaster;
Good-humor, an ointment
Soothing disappointment."

—*Mary Lang, in St. Nicholas.*

HYGIENE OF THE SKIN.*

BY CHARLES S. SHELDON, A. M., M. D.

I HAVE selected for my subject the care of the skin, because I think it is a vitally important matter to every human being. I have less hesitation, since, so far as I know, this subject has not been discussed at any previous sanitary convention held under the auspices of our State Board of Health. We have talked about dirt in its generic sense, in our houses, our back yards, in our alleys and streets, and in the water we drink, and have urged the propriety and necessity of cleaning it all out, and keeping it clean. I ask in all candor and earnestness if we should be sensitive about bringing this matter one step nearer home, and applying these sound hygienic principles to these temples of the spirit in which we live. Isn't it really the right end to begin at? Given a thoroughly and consciously clean man or woman, and I would almost be willing to risk the rest of the cleaning up, especially since knowledge about such matters is sown broadcast now-a-days in such profusion that a man, though a fool, need not err therein.

In treating the subject I will first briefly describe the anatomy and physiology of the skin, then speak of the influence of our clothing, bathing, etc., in promoting its health, and suggest reasons why a certain amount of care and attention should be devoted to its management. I fear the first part of our subject may be considered a little dry, but it seems proper to go over it, that we may be the better fortified with reasons for the faith that is in us. As you all know, this soft, pliant investment of our bodies, which we call our skin, consists of two layers—the outside scarf-skin, or epidermis, which is readily seen when raised up by the application of a blister, and the inside true skin, or derma. These two layers, though closely adherent, perform very different offices, and are widely different in structure. The scarf-skin is horny and insensible, and serves as a protection to the true skin beneath, which is extremely sensitive. It is composed of several layers of cells, which undergo a constant process of formation and growth from its under side, to make up for the continual casting off and wear which is taking place on its surface from friction, washing, etc.,—an action which we find necessary, not only for the health of the skin, but of the entire body as well. The amount of material disposed of in this skin-shedding process would surprise you, being as much as three and one-half drams per day, or nearly one pound per month, which, light as it is, would make a large pile, could we see it all together. Every washing with soap removes the old face of the scarf-skin, with the dirt upon it, and leaves a new one; whereas, if washing be infrequent, and there be but little exercise taken, the scales multiply in such numbers as effectually to interfere with all the natural functions of the skin. The true skin, or *derma*, which makes up most of the thickness of the skin, serves the double purpose of an organ of sensation, and one of defense of the deeper parts of the body. It is formed of firm and elastic fibers so interlaced as to form a tissue extremely tough, but yet so elastic as to yield to every movement. Here we find an abundant supply of blood-vessels and nerves, together with the perspiratory apparatus and oil glands.

The sweat glands, or tubes by which perspiration is carried on, are of sufficient importance to be described. They traverse the whole thickness of the skin, and open on the surface of the scarf-skin by as many little apertures, which we call pores. They are very numerous, and consist of minute tubes twisted in a spiral

*A paper read at Sanitary Convention held at Pontiac, Mich., 1883.

fashion as they pass through the skin. Although each tube is very *small*, when we consider their immense *number*, we are led to form some notion of their probable influence on the health and comfort of the individual. Wilson estimates the number in the whole skin at about 7,000,000, and as each tube is about one-fourth of an inch in length, it would make the amount of drainage from this source some 28 miles—enough sewerage for a large town, and all of it in our skins. With such a capacity for relieving the system of its impurities, the thought naturally suggests itself, What if this drainage should be obstructed? And we need no stronger argument for enforcing the necessity of attention to the skin. One of the ways in which excess of *water* is removed from the system is by these little tubes. It is in the form either of sensible or insensible perspiration. The latter is constantly taking place in health, in the shape of an imperceptible vapor, and becomes apparent, or sensible, only when the body becomes heated by exercise or some other means. The total amount of perspiration varies, of course, with exercise, the temperature and moisture of the air, and other conditions; but the average amount given off by a person in health is about two pounds, or pints, daily, a quantity almost equal to that disposed of by the kidneys. If this excretion were water simply, it would not be of so great importance; but we know that it contains, in common with the other excretions, substances which, if retained, are extremely harmful, one per cent being solid matter, made up of various salts and organic matter. We rightly regard the skin, therefore, as one of the great emunctory or excretory organs of the body, and it does its full share in removing waste products from the system. Another point worth considering in this connection is the vicarious or compensatory action of the skin, by which I mean its ability to get rid of waste products usually disposed of by the other organs of elimination; viz., the lungs, liver, kidneys, and bowels. For example, one of the most important functions of the skin is to give off, or eliminate, carbonic acid and absorb oxygen, thus assisting the lungs as a respiratory organ. When, however, the lungs are disabled from any cause, the skin is called upon to dispose of a still greater amount of carbonic acid, thus preventing the blood-poisoning which would otherwise ensue. In the same way, when the liver removes an insufficient quantity of bile, or the kidneys are deficient in their action in eliminating the urea or other poisonous products, the skin, by its vicarious action, gives relief to the system. And this is uniformly the case, provided, always, if from its previous care it be in a proper condition to do so. On the other hand, this same law of the vicarious action of the different eliminating organs is seen to effect the most *disastrous* results when the action of the skin is arrested from any cause, whether it be exposure to cold, deficient care, or otherwise. We may say truthfully that there is no disease to which flesh is heir that may not be caused or aggravated by this means.

As showing the vital importance of this action of the skin, we know that when animals have been completely covered by some impermeable coating, as varnish, death always takes place. Likewise, when the function of the skin has been abolished over a large surface by a severe burn, there is the same result; and physiologists relate that a child who was covered with gold leaf to represent an angel at the coronation of Pope Leo X., died in a few hours after the coating had been applied.

Connected with this part of our subject is the function of the skin as affecting the temperature of the body,—a most important and interesting point. The temperature of the interior of the body in health is about the same at all seasons and in all climates, the loss of heat by radiation from the *surface* being made up by the production of fresh heat *within*, as the result of chemical action. Any considerable deviation from the normal temperature, about 98½°, is incompatible with health. This uniform temperature, although affected much, of course, by exercise, external heat, clothing, etc., is still largely maintained by the action of the skin. The means by which the heat is lost is by the minute capillaries which are so numerous throughout the skin. When the body is exposed to a high temperature, or vigorously exercised, thus increasing the body-heat, these vessels are filled with blood, and present a large radiating surface to the air, by which heat is removed, and the heat balance maintained. *Perspiration* is also induced by the same means, and the evaporation of the *moisture* is another way of getting rid of the heat. On the other hand, when the weather is *cold*, or there is *insufficient clothing*, the skin protects the body against loss of heat by becoming

cold and shrunken, with but little blood circulating in its capillaries. This principle explains the well-recognized fact that a person exposed to extreme cold is much more likely to freeze after having taken freely of alcohol, and this in spite of the sensation of warmth and stimulation produced by it. The explanation is this: the alcohol increases the action of the heart, and thus drives the warm blood from the interior to the surface and extremities of the body. Thus we feel warmer for the time, but the dilated vessels of the skin expose the warm blood to the cold atmosphere, whereby heat is lost. And since alcohol has no power of adding to the real heat production, the result is a lowering of body temperature.

Closely connected with this subject is the very interesting phenomenon which we call "taking cold." Some persons take cold on every occasion, while others do so rarely. Now let us inquire into the nature of this action, and why it is so. The constant element and cause of this accident. produced by any means whatever, is a lowering of the temperature of the body, the heat being lost quickly in excess of its production. Take for example the familiar case of a person passing into the cold air from a heated room after violent exercise, as after a ball. The blood-vessels of the skin are full, and ready to part with their heat; as a result, the surface of the body is suddenly cooled, the perspiration checked, and soon the whole body becomes chilled. The blood is driven away from the surface, and the skin becomes pale and bloodless; but if the blood cannot circulate in the surface, it is of necessity thrown violently, cooled as it is, upon the internal membranes and organs of the body, producing a congestion or inflammation of that part which offers the least resistance,—the weak spot in the system. In one case the lungs receive the brunt, causing pneumonia; in another, the mucous membranes of the nose or throat, causing the symptoms of an ordinary cold or sore throat; and so through a long catalogue, all from taking cold, as we say. We take cold when we sit down in our wet clothes, or with damp feet, or go to sleep under damp bed clothes, because wet clothing is a good conductor of heat, just as dry clothing is a poor one, and there is a consequent lowering of temperature. If exercise be continued in our wet clothing, making up the heat loss till we can procure dry, no harm will result.

Now let us inquire how this troublesome and dangerous tendency to take cold may be avoided. We may say briefly that the most important measures of prevention are exercise in the open air, sufficient and well adapted clothing, and systematic bathing; but since all these means are closely connected with the *general* care of the skin, we will consider them in their *general* relation to the subject at the same time. In the first place, then, judicious and systematic exercise in the open air is of prime importance. It is well known that a person accustomed to all kinds of weather comes off unharmed, while a person too much housed up is apt to take cold on the slightest provocation. The system becomes educated to take care of itself, so to speak, and by habit the vessels of the skin are taught to contract on contact with the cold, and so lessen the amount of blood in the cooling area on the surface, and to increase the bulk in the *internal* or *heat-producing* area. So it is not a good plan to be too tender of ourselves or our children for fear of possible exposure. The child whose system becomes inured to moderate changes of temperature, produced by an active and largely out-door existence, can secure a condition of health utterly unattainable by one who is kept largely in-doors, and only permitted to go out in fine weather. Even the old plan of hardening children is better than to go too far in the opposite direction. The benefits of systematic out-door exercise are known to every one. It is not only a most efficient agent in building up the general health, but especially it acts powerfully on the *skin*, by stimulating its functions in every respect. Hufeland considers it an indispensable law of longevity that one should exercise at least an hour every day in the open air. This is perhaps not too much; but be it more or less, it should be taken regularly, with zest, and not too near a meal. *Walking* offers perhaps as many advantages as *any* form of exercise, and is available by all. If every woman, in particular, would adopt rational and sensible views on this subject, and carry them out, it would very materially assist her in gaining the genuine beauty of health, a longer and happier life, and very many less calls from her physician. As to our clothing, it should be our aim to produce a constant agreeable temperature of the body, and one least liable to sudden fluctuations. It is apparent to every one that clothing, in itself, has no

property of *bestowing* heat, but is chiefly useful in preventing the *dispersion* of the heat *generated in* the body. Most of our garments are constructed on the principle that they are bad conductors of heat, but, on the contrary, will not only *retain* what they *receive*, but will *confine* a stratum of warm air next the body; and so, when we go out of doors, we increase the number of layers by which we are enveloped. In this matter we must be governed by our own sensations entirely, and put on enough clothes to feel perfectly comfortable. Boerhaave says, "That only fools and beggars suffer from cold, the latter not being able to *procure* sufficient clothes, the former not having the sense to wear them." It follows that within bounds, no matter how low the temperature may be, or how long we may be exposed to it, if the body be properly protected by clothing, no harm will ensue. In this climate, with its rapid variations of temperature, and the almost universal tendency to catarrhal affections, I think some form of woolen garment should be worn next the skin the year round, by children as well as adults.

The matter of women's shoes is important. As a rule, they are made of too light material to serve as a real protection when out of doors. Moreover, the leather is so tanned that it readily absorbs moisture, and so becomes a good conductor of heat instead of a bad one, as it should be. The result is, that fertile cause of no end of discomfort and ill-health, cold feet. Their walking shoes, then, should be made of thicker material, and large enough to admit a cork insole, especially where the soil is clayey. This might not be a popular shoe with the ladies, but the question is, whether health and comfort should be sacrificed to a pretty-looking foot.

(*To be concluded in next number.*)

OUR SLEEPING-ROOMS.

A PHYSICIAN of note says, "We hear a great talk about malaria now-a-days, but there is more malaria to be found in most modern bed-chambers than anywhere else." Persons who are moderately intelligent on other topics, appear to have small thought, or that very perverted, on the subject of hygiene in their sleeping-rooms, and especially those occupied by children. The ventilation of a bed-chamber cannot be too carefully attended to; and, as says Horace Mann, "Seeing the atmosphere is forty miles deep all around the globe, it is a useless piece of economy to breathe it more than once." Yet nine mothers out of ten will carefully close all the windows, "for fear of colds and night air," and leave two or three children to sleep in a stifling atmosphere, and see no connection between the colds and throat troubles they have, and the vitiated air she compels them to breathe night after night. Let the morning air and sunshine into the bedroom as soon as possible after the occupants have risen; and if there is no sunshine, and it is not raining, let in the air. Do not make up beds too soon after they are vacated. You may get your house tidied sooner, but it is neither cleanly nor healthful to snugly pack up bed clothing until the exhalations of the sleepers' bodies have been removed by exposure to the air.

Look carefully after the wash-stand and the various utensils belonging thereto. The soap dishes and tooth-brush mugs cannot be kept too scrupulously clean. All slops and foul water should be emptied very promptly. Wash out and sun all pitchers, glasses, and whatever vessels are used in the sleeping-room. Never allow water or stale bouquets of flowers to stand for days in the spare chamber after the departure of a guest. Towels that have been used should be promptly removed, and no soiled clothing allowed to hang or accumulate about the room. Closets opening into a sleeping apartment are often the receptacles of soiled clothes, shoes, etc., and become fruitful sources of bad air, particularly where there are small children. After such places the housewife should look with a keen eye for objectionable articles, and remove them with an unsparing hand. I have encountered such closets, in which one might find all the odors traditionally belonging to the city of Cologne, any one of which was enough to suggest ideas of disease germs.

Even so innocent a piece of furniture as the bureau may by carelessness become the recipient of articles which will taint the air of the bed-chamber. Damp and soiled combs and brushes are not only unsightly and disgusting, but lying soiled and unaired from day to day, will certainly contribute to evil air and odors, as will also greasy and highly-scented hair ribbons, etc. Never lay freshly laundried clothes upon the bed, nor air the same in your bedroom, if possible to do so elsewhere. Do not hesitate to light a fire on

cool mornings and evenings; and if so fortunate as to have an open fire-place, you possess a grand means of comfort and ventilation in the bed-chamber.—*American Agriculturist.*

THE USE OF STIMULANTS.

BY HENRY LEFFMAN, M. D.

In addition to the articles constituting food in the usual sense of the term, mankind employs a considerable number of articles, condiments, stimulants, and flavors, concerning the effects of which there is much discussion. Most writers lean to the view that stimulants in some form or other are needed; and they base this view, not so much on observed physiological actions, as upon the frequency of the use.

It is argued that such general use indicates a physiological necessity; but this is a very insecure method of reasoning. It could be made to justify many habits which are known to be injurious to body and mind. It is not likely that we can, at present, find an absolutely demonstrative scientific basis for the use or non-use of stimulants. In spite of the extended researches that have been made on digestion and nutrition, the accepted notions on these subjects, as on many other questions of physiology, are largely dogmatic in character.

The positiveness with which an opinion in dietetics is asserted, and the eminence of the authorities who maintain it, is in itself no proof of the accuracy of such opinion. We have only to look a few years back in the history of medicine to find, perhaps, the opposite doctrine advocated with the same positiveness; certainly we can find many things asserted which are now believed to be erroneous. Thus our ideas in regard to the use of water have undergone great change, and there is no surety that the opinions that are now held are wholly correct.

We may, I think, dismiss, as of but little value, the argument that stimulants are necessary because they are universally used; and while not denying the statements in regard to their physiological action, we may, without invidiousness, seek for the basis of this general use in the incidental relations of the stimulants themselves.

In the first place, it can hardly be denied that, with regard to a great many persons, the use of stimulants *is merely* a *matter of imitation.* They use alcoholic liquors, tea, coffee, etc., not because they crave them, but because they see others use them. As soon as the child begins to partake of the regular food of the family, these accessory articles are placed before it, and it naturally partakes of such articles. In this way an appetite is acquired.

The habit of drinking coffee and tea is with most persons as much a mere imitation as is the use of tobacco. They are all like the German practice of eating raw pork,—habits which are not the expression of any physiological necessity, but merely the result of custom and example.

Secondly, it must be noted that the stimulants in common use are agreeable to the palate, and it is in this property that we have the main cause of their extended use. The tastes and dispositions of men have been nearly similar in all times and places; honey was as sweet in the mouth of Augustus as in our mouths to-day, and wormwood was as bitter. It is not at all to be wondered at, therefore, that the aroma of coffee or tea should have made them the favorites with many nations. Men and women use these articles because they like them, and not because there is a physiological necessity for them. Some recent experiments have shown that raw meat is more digestible than cooked; but it is not likely that the knowledge of that fact will lead us to give up the pleasure which is derived from eating roast beef and gravy.

In a recent number of the *Edinburgh Clinical and Pathological Journal*, Dr. J. W. Fraser gives, as the result of some experiments, that the beverages made by infusion—*e. g.*, tea, coffee, cocoa—retard the digestion of most albuminous articles, and to that extent cause a loss in availability in the nutriment taken. This action is less with coffee than with other beverages. If these results are correct, it is manifest that the favorite theory that such beverages are useful because they retard tissue waste, can be of but little value; for this economical relation will be neutralized by the interference with digestion.

Some light is thrown on the main question by the observed facts in regard to adulteration. If coffee and tea are needed by the system, then it must be admitted that a great many persons have never had this need fully gratified; for the adulteration of these articles has been extensive. In this country, for instance, there have been sold thousands of pounds of so-called *essence* of coffee, which does not contain

any coffee, nor other stimulant, but which is merely an inferior imitation in color and taste. Large numbers of persons use this article, and therefore do not know what a good cup of coffee is. They do not feel the want of a stimulant, simply because they think they are getting it; if deprived of the daily cup of the substitute, many of them would probably complain of the loss; yet in taking it they are getting nothing but an infusion of some charred vegetable matter.

Similarly, in Europe, where ground coffee is sold in packages, adulteration with chicory is very common. Chicory is a substance having no relation to coffee, and is not physiologically a substitute for it; yet, based on a similarity in the color and taste of the infusion, its use has become so general that it appears that many persons are perfectly willing to use it with coffee. During the civil war, on account of the great advance in the price of coffee, many families resorted to the use of rye grains, or mixture of bran and molasses, roasted until they acquired a dark brown color, and then infused. The infusion, when mixed with sugar and milk, had much the appearance and taste of coffee, and its use may be regarded as an evidence that drinking coffee is largely "*a matter of taste.*"—*The Polyclinic.*

MIRTH AS A MEDICINE.

MIRTH has a hygienic value that can hardly be overrated while our social life remains what the slavery of vices and dogmas has made it. Joy has been called the sunshine of the heart; yet the same sun that calls forth the flowers of a plant is also needed to expand its leaves and ripen its fruits; and without the stimulus of exhilarating pastimes, perfect bodily health is as impossible as moral and mental vigor. And as sure as a succession of uniform crops will exhaust the best soil, the daily repetition of a monotonous occupation will wear out the best man. Body and mind require an occasional change of employment, or else a liberal supply of fertilizing recreations; and this requirement is a factor whose omission often foils the arithmetic of our political economists. To the creatures of the wilderness, affliction comes generally in the form of impending danger—famine or persistent persecution; and under such circumstances the modifications of the vital process seem to operate against its long continuance; well-wishing nature sees her purposes defeated, and the vital energy flags, the sap of life runs to seed. On the same principle, an existence of joyless drudgery seems to drain the springs of health, even at an age when they can draw upon the largest inner resources. Hope, too, often baffled, at last withdraws her aid. The tongue may be attuned to canting hymns of consolation, but the heart cannot be deceived; and with its sinking pulse the strength of life ebbs away. Nine-tenths of our city children are literally starving for lack of recreation; not the means of life, but its object, civilization has defrauded them of. They feel a want which bread only can aggravate; for only hunger helps them to forget the misery of *ennui*. The pallor is the sallow hue of a cedar plant; they would be healthier if they were happier. I would undertake to cure a sickly child with fun and rye bread, sooner than with tidbits and tedium.—*Sel.*

FOREIGN NOTIONS ABOUT MEDICINES.

AN exchange gives the following facts concerning the notions of various nations about medicines, which are not very different from those entertained by various ignorant persons in this country:—

A Bengal apothecary once made a great reputation by giving all his patients indiscriminately a tablespoonful of Gregory's powder to swallow dry. This made quite a beau ideal dose for a Burman. It was not only exceedingly nasty from the very beginning, but it lasted for a long time, and it did not get any more pleasant in the interval. On the other hand, castor oil is a dismal failure from this point of view. Most Burmans would drink a quart, and smack their lips after it. They would, however, be gravely displeased if such a pleasant beverage were offered them when they were unwell, and longed for something disagreeable. While the robust Burman thus refuses to be cured by anything which does not come up to the traditional idea of medicine in the way of making him feel very uncomfortable, the effeminate Siamese, Cambojans, and Annamese require of their doctors that the prescriptions shall be as little unpleasant as possible. The demand creates a supply, and it is singular how, with their limited experience, the local medicos are able to produce drugs which are ordinarily far

from being disagreeable. It is true that among their remedies, figure crushed spiders, pieces of reptiles, ground serpents' bones, scrapings of the horns of wild goats, stags, and rhinoceroses, and the scales of fishes and insects, which are not altogether alarming to Western nations.

Orientals are, however, not so fastidious; and, judging from the other medicines in their pharmacopœa, these cannot be so repulsive as imagination figures them. The Annamese practitioners refer all sicknesses to a disturbance of an equilibrium in the human economy, caused by an excess either of heat or cold. This greatly simplifies matters for the doctor, whatever may be the result for the patient. In the one case, sedatives, such as opium or Indian hemp, are used; in the other, stimulants of the most extraordinary variety; saffron and cinnamon bark play a very great part, and a species of cardamon, which grows in Upper Camboja, is regarded as a sovereign remedy. When the sick man is irritable, it is considered well to bring him to a proper frame of mind by administering a spoonful of a warm infusion of the leaves of the *Datura Stramonium*. This at once renders him tractable. In doubtful cases, the generally accepted rule seems to be to give the patient the advantage of a hotch-potch of all the contents of the medicine chest. This always has a definite result. If the man is going to get better, there is sure to be something in the mixture which will help him on. If not, he succumbs immediately, and gives no further trouble. Relatives are satisfied that he was fated to die; for if a dose of every known medicine would not set him on his legs again, his case must indeed have been hopeless. Of such a character was the celebrated nostrum exhibited to an astonished English doctor of the Bengal medical service. This was a green powder containing no less than a hundred and sixty different ingredients. It was of very great value in critical cases.

The Deadly Teapot.—The *American*, published at Waterbury, Conn., makes the following vigorous onslaught on the favorite teapot:—

"While good temperance people are decrying liquor," said one of the leading physicians of the city, as he came into his office, erased the information of his previous whereabouts from his slate, and tipped back in his easy chair, "they seldom stop to think how much harm is being done by the abuse of a beverage to which many of them are devoted. I just came from attending the case of a five-year-old babe who is ruined for life by the parents' indulging it in tea-drinking. The child became very nervous and dyspeptic, and they sent for me. I asked them how much tea the child drank. 'About two cups at each meal, and several between meals,' was the reply. You see," continued the doctor, "they let the teapot stand on the stove all day. Thus the tannic acid is extracted, which serves to turn the linings of the stomach into leather, and brings on dyspepsia and kindred diseases. Yes, there are hundreds of women, young girls and aged women, and occasionally a man, who have completely ruined their nervous systems by the excessive use of common tea. It will be a blessing to mankind when a temperance crusade can spare wind from its attack on alcohol to assail tea. Prominent Christian people, and all classes of people, are addicted to the habit, and thousands are languishing to-day in consequence. The very excessive use of tobacco acts somewhat in the same way. But I believe the greater general evil lurks in the tea, because it happens to be in favor with the best of people,—best as regards popular opinion, but among the worst from a medical point of view."

If there is one consideration which, more than another, should be prominently kept in view, it is that which urges that the duty of acquiring information in the art of living healthily and well is an *individual* duty. It is only through individual effort that anything like national interest in health-science can be fostered. There is no royal road to art which places length of days within the right hand of a nation, any more than there exists an easy pathway to full and perfect knowledge in any other branch of inquiry. It is the duty of each individual, as a matter of self interest, if on no higher grounds, to conserve health; and the knowledge which places within the grasp of each man and woman the power of avoiding disease and prolonging life, is one, after all, which must in time repay a thousand-fold the labor expended in its study."—*Dr. Andrew Wilson.*

—The contemplation of vice is a vice.

TEMPERANCE AND MISCELLANY.

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

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

THE BEST ESTATE.

ART thou thine own heart's conqueror?
Strive ever thus to be;
That is the fight that is most sore,
The noblest victory.

Art thou beloved by one true heart?
Oh, prize it! it is rare;
There are so many in the mart,
So many false and fair.

Art thou alone? Oh, say not so!
The world is full, be sure;
There is so much of want and woe,
So much that thou canst cure.

Art thou in poverty thyself?
Thou still canst help a friend;
Kind words are more than any pelf,
Good deeds need never end.

Art thou content in youth or age?
Then let who will be great;
Thou hast the noblest heritage,
Thou hast the best estate!

—*F. E. Weatherly, Cassell's Family Magazine.*

Written for GOOD HEALTH.

AN OLD MAID ON MOTHERS-IN-LAW.

BY "ELEANOR KIRK."

YES, I'm an old maid, and I glory in the title. I am master and mistress. I go where I please, and return when I feel like it. No man can call me mother-in-law, and that is one of the greatest comforts I have in life. I haven't gone to all the trouble and anxiety of nursing a child through colic and teething and whooping-cough and measles, and to all the expense and trouble of educating her, and teaching her how to cook and make her own clothes, for the express purpose of having her gobbled up by some man whose first business will be to separate her from her mother. I don't say that I haven't been lonesome sometimes in my life, and that to have somebody to take care of me, and to take care of, wouldn't have been heartening to soul and body. But that comfort, satisfying as it might have been, would never have paid me for giving a daughter of mine to a stranger.

Some of you remember the widow Manchester, who lived up on the Clove road. Well, I sewed for that family year in and year out, when I was a considerably younger woman than I am now, and it was there I first made up my mind that there were some troubles I would never put myself in the way of bearing. Mrs. Manchester had one son and one daughter. Her husband left her just enough money to scrape along with; but she was a wonderful manager, and the way she brought those children up was a sight to see. She was never very strong, and sometimes I'd take hold in the kitchen when she was kind of poorly, and help her out that way, till finally it got to be a settled thing that I was up to the Clove pretty much all the time. Hastings was a high-spirited, affectionate boy, and very fond of his books. Alice was two years younger than Hastings, and was the most loving and obedient child I ever knew. These children were perfectly devoted to their mother, and she to them.

As I said before, I was there year in and year out, and I never heard a word between them that the whole world might not have listened to. After a while Hastings went away from home to prepare for college. Mrs. Manchester taught Alice everything except music, and she had a fine master for that. That girl would play the tears out of my eyes faster than any funeral I ever attended, and I used to say to myself, as she'd sing for her mother and me between daylight and dark, "that girl's heart is tuned to sorrow, and she'll have more of that than anything else," for it trembled in every tone; and her laugh, though it was the sweetest and the ringingest I ever heard, always seemed to me full of tears. Everything that was sensible Alice Manchester was taught to do; and her mother said to me more than once, "Melissa, there is one thing I am sure of, and that is that Alice will bring her common sense into all the matters of life. If she ever does marry, it will be a man who is in every respect worthy of her."

It did seem as if the poor woman was correct in this feeling, for if Alice Manchester, with all her schooling and training and loving, did n't choose wisely, what girl in the world would be likely to? Mrs. Manchester had an idea like a great many other folks, that because she had done her duty, she would get her reward. I could have told her to the contrary then, young as I was; but it did seem someway as though she would have better luck than most people. Well, there came a time, when Alice was going on eighteen, that I had a long fit of sickness, and did n't go to Mrs. Manchester's for nearly two months. But the first time afterwards that I stepped foot into the house, I knew that something had happened, and something not very pleasant either. Mrs. Manchester looked like a shadow, and Alice, who was usually so glad to see me, was so stiff and formal that I just thought I must have offended her in some way. I did n't ask any questions, but found out where my help was most needed, and went to work.

"We are going to have some company to dinner, Melissa," Mrs. Manchester said to me, "and I wish you would get up something nice."

"How many?" said I.

"Only one," said Mrs. Manchester.

"A gentleman?" I asked. You see I knew the whole story then just as well as if it had been all written out before me.

"Yes, a fifth or sixth cousin," she said, doing her best to speak carelessly. It is a Mr. Keith Reynolds, who is spending his vacation in the village."

"All right," said I, as cheerfully as I could. "You need n't bother a bit about dinner. I'll have everything just as you would like it."

It was all I could do to keep the tears back as that pale, feeble, heart-aching woman walked out of the kitchen. It seemed to me as if she had received her death blow, and I was n't very far out of the way. I had some peas to shell, and it was so warm in the kitchen I took them out in the garden where it was cool and shady. The garden opened into an apple orchard, and I had hardly got settled before I heard the sound of voices on the other side of the wall. That was the first and last time in my life that I ever listened to a conversation which was not intended for my ears; but there was such a strange and—I was going to say—unwholesome quality in the man's voice, that, right or wrong, I determined to hear every word of it. The first thing I heard Alice say was this, and it was plain to me that the trouble was upon her that I always felt was sure to come.

"But, Keith," said she, "I think it would kill mamma to be entirely separated from me."

"But, darling," said the underhanded, deceitful wretch, "I did n't put it as strongly as that. What I meant was, that when I married, I wanted my wife entirely and exclusively to myself. You must not blame me, dearest, if I share the popular aversion to mothers-in-law."

"But mamma, Keith—" Alice commenced to say.

"Is everything that is lovely; I really think you are right." the villain interrupted. "But you know, Alice, love, what the Bible says,—'Forsake father and mother, and cleave only to your husband.'"

"But when there is no necessity of forsaking father and mother," said Alice.

"Oh, well, we'll not borrow trouble," said the man. "I have no doubt but things will fix themselves right. Of course, darling, when a woman is married, her duty is to her husband."

Here it was all out. This is what this loving and conscientious mother had toiled and sacrificed for,—to bring up a daughter in all sweet and sensible ways; and when she was ready to be a stay and a comfort to her, to give her up to a man whose chief object in life was to separate her from her child. My blood boiled in my veins, and it really seemed to me as if I must go and give that villain a piece of my mind. Then I thought I'd have a talk with Alice. But I gave that up also, for among the other things I had learned by experience was not to interfere with a girl's love affairs. What effect would anything I might say be likely to have upon a girl who had grown so wildly in love in the course of a few weeks as to take such talk as this, and not send a man about his business? Throwing straws against a gale of wind would be no comparison to the foolishness of arguing with her.

I got a good look at the fellow before he came in to dinner, and how any girl of good taste, to say nothing of good judgment, could have seen anything to like in him, was beyond me to imagine, —a tall, pompous, masterful young man, who would expect his wife to see with his eyes, and always ask his opinion before she expressed one. This was not all,

but it was the first thing that struck me.

Well, Alice Manchester married, and went away with her husband, and was just about as dead to her mother as though the earth had opened and swallowed her. Hastings married a few months later, and brought his wife home. But she was a frivolous nobody of a woman; and after a little while grew so jealous of her husband's love for his mother that he was obliged to take her away. Not long after this, Mrs. Manchester was taken to her last home, and if ever a human being died of a broken heart, that woman did. Alice's grief at the funeral was terrible to witness. There was something in her face that told me she had found her husband out, and realized to the fullest extent the great wrong she had done.

Now the point I want to make is this: The men who object to mothers-in-law are usually the men who will bear watching,—the men who are in the habit of drinking and carousing, and whose intention is to neglect their wives. They realize that they can't pull the wool over the eyes of a woman who has years and experience on her head. The lies that their trusting wives will swallow wont go down a mother-in-law's throat. The man who means well by the woman he marries, will have a genuine respect for the woman who has succeeded in making her child so desirable and attractive. The judgment and affection that have brought her daughter to so successful a womanhood will be just as valuable after marriage as before.

I don't say that there are not some meddling women who, as mothers-in-law, are not at all desirable; but I do say that a girl's mother is usually her best friend, and the man who endeavors to separate a mother and daughter is an interloper and a renegade. Keith Reynolds turned out a drunkard. I knew he would.

When anybody talks to me about "forsaking father and mother, and cleaving to their wife," quoting, or rather misquoting, scripture to suit their own selfish ends, I almost wish that somebody would put an end to them, and put it out of their power to ruin the lives of others.

—False friends are like our shadows,—keeping close to us while in the sunshine, but leaving us the instant we cross into the shade.

SLAVES OF THE ROLLING-PIN.

PIES again! Always pies! One, two, three, four, this is the fifth time within, say, ten days or a fortnight that to my knowledge pies have stood in the way of better things.

First, my hostess, Mrs. Fennel, could not leave to take a ride with me a few mornings ago, because "we are entirely out of—pies." Mrs. Fennel, poor woman, is far from well; and with husband, grown-up boys, and two small children, not to mention myself as boarder, she has a large family to cook for, and only her daughter Martha to help do the work. That breezy morning ride would have raised her spirits; it would have put new life into her; but—pies (This is one time). Then Miss Martha, who is fond of reading, declined the loan of my library book the other day, on account of having to help her mother make—pies (Two times). Last evening she could not run up on the hill to see the sun set, because they were trying to get the meat and apple ready over night for—pies (Three times). When poor Mrs. Fennel was taken from her work the other day by one of her frequent ill turns, Mrs. Melendy came in with offers of assistance.

"Now I can stay just two hours by the clock," said Mrs. Melendy in her sprightly way, "and what shall I take hold of first? Shall I tidy up the room, read to you, bathe your head, make you some gruel? Or shall I take hold of the mending, or see to the dinner, or what?"

Mrs. Fennel raised her languid lids, and faintly murmured, "Out of pies."

"Dear me!" cried breezy Mrs. Melendy, "I know what the feeling is well enough; and 'tis a *dreadful* feeling! Why, I should no more dare to set out a meal's victuals without pie, than I should dare to fly! for my husband, he must have his piece of pie to top off with, whatever's on the table." And the sympathizing sister bared her willing arms, and wrestled womanfully with the rolling-pin, I know not how long.

The fifth time was this morning. While sitting in the room adjoining the kitchen, the doors being open between, I heard Martha ask her mother why they could not take a magazine. "I do long for something to read," she said, "and all we have is just one newspaper a week."

"Oh! we could n't get much reading-time," said Mrs. Fennel. "If it is n't one thing, it's another, and sometimes both.

There's your father, now, coming with the raisins. These pies will take about all the forenoon." Miss Martha afterward spoke to her father about the magazine.

"We can't afford to spend money on readin'," he answered in his usual drawling monotone. "It costs a sight to live. Now if we did n't raise our own pork, we should be hard pushed to get short'nin' for our pies."

Such constant reiteration had made me desperate. I strode to the doorway. "And why must we have pies?" I demanded, in tones of smothered indignation. "Why not bread and butter, with fruits or sauce instead? Why not drop pies out of the work altogether? Yes, drop them out of the world." Miss Martha was the first to recover from the shock of this startling proposition.

"Our men folks could n't get along without pies, Mr. McKimber," she said.

"Pie crust does make a slave of a woman, though," said Mrs. Fennel. "There's nothin' harder than standin' on your feet all the forenoon, rollin' of it out."

"Dunno 'bout doin' without pie," drawled Mr. Fennel. "'Pears as if bread 'nd sarse'd be a mighty poor show for somethin' to eat."

"'Twould take off the heft of the cookin'," said Mrs. Fennel, thoughtfully: "but (with a sigh) you could n't satisfy the men folks."

I rushed to my chamber in despair. Pie, then, is one of the household gods in Tweenit. But what can I do about it? Something must be done. Suppose I write an Appeal to Women, and read it at the sewing circle, pretending it was taken from a newspaper published in—well, in Alaska, or Australia, or the Orkney islands. We gentlemen are expected to help along the entertainment in some way.

Hark, now, to the music of the rolling-pin, sounding from below! That music shall inspire my—

"APPEAL.

"My dear friends, this is an age of inquiry. Can any one tell us who first imprisoned our luscious fruits in a paste of grease and flour, baptized the thing with fire, and named it pie? And why is this pie a necessity? That is what confounds me. Mothers with families, hard pressed with work, consume time and strength in endless struggles with the rolling-pin. Fathers of families lengthen their bills to shorten their pies. And all this to what end?—The destruction of health. Every stroke on the board demands strength which is worse than thrown away. Every flake of pastry is so much food which were better left uneaten. And as for time consumed in this kind of labor, who shall count the hours which are daily rolled away, and chiefly by overburdened women, who complain of 'no time' and 'no constitution'?

"One Saturday forenoon I stood on the hill which commands a view of the village. It was 'baking day.' Being a clairvoyant, I looked through the roofs of the houses, and saw in every kitchen a weary woman, standing on her feet, rolling, rolling, rolling. Close around some, stood their own little children, tugging at their skirts, pleading for that time and attention which rightfully belonged to them. One frail, delicate woman was actually obliged to lie down and rest twice before her task was ended. Another, the mother of an infant of not many months, accomplished hers with one foot on the cradle-rocker.

"We read of despotic countries, where galley-slaves were chained to the oar. They, however, after serving their time, went free. Alas, for poor woman chained to the rolling-pin? Her sentence is for life. We read, too, in ancient story, of powerful *genii*, whose control over their slaves was absolute; but this terrible genius of the household exacts from its slaves an equally prompt obedience. Is there one among them who dares assert her freedom?—No; their doom is inevitable. Woman is fore ordained to roll her life away. Is there no escape?—No escape. The rolling-board is planted squarely in the path of every little daughter; and sooner or later, if her life be spared, she will walk up to it. May we not call it an altar upon which human sacrifices are performed daily?

"I observed, on the morning just mentioned, that in the intervals of pastry-making the genius of the long-handled spoon took control, demanding its customary tribute of eggs, sugar, fat, spices, etc., demanding, also, the usual outlay of time and strength which goes to the compounding of cakes; and thus, with rolling, beating, and stirring, the forenoon wore away, leaving in each house its accumulation of unwholesome food.

"You *do* know, madam, that plain living is better for your children. You would like more time to devote to them, or for books, or for recreation? Then,

pray, why not change all this? Is palate forever to rank above brains? Change your creed. Say, 'I believe in health, in books, in out-doors.' Why don't you rise, slaves? Now is your time. Now, when slaves everywhere are demanding their freedom, demand yours.

"Company? Thanks for teaching me that word. The kind hospitality of this social little village of Tweenit enables me to be 'company' myself very frequently. And I am aware that much time is spent in the preparation of viands to set before me, which, for variety and richness, could not be excelled. Shall I add that whenever, at the bountifully-spread tea-table, I have attempted to start a rational conversation, it usually has been a failure? Books, public men, public measures, new ideas, new inventions, new discoveries, what is doing for the elevation of women,—on none of these subjects had my entertainers a word to offer. Their talk was, almost without exception, trivial, not to say gossipy.

"Therefore, as a member of that institution,—'company,' which, as everybody says, 'makes a sight of work,'—I protest. I petition for less variety in food, and more culture. And your petitioner further prays that some of the spices and good things be left out in cooking, and put into the conversation.

"But the 'men folks'! Ah, to be sure! Perhaps, after all, it is they who need an appeal."—*Mrs. A. M. Diaz.*

TRUE POLITENESS.

A POOR Arab, going through the desert, found a sparkling spring. Accustomed to brackish water, a draught from this sweet well in the wilderness seemed, in his simple mind, a fit present to the caliph. So he filled the leather bottle, and, after a weary tramp, laid his humble gift at his sovereign's feet. The monarch, with a magnanimity that may put many a Christian to blush, called for a cup, and drank freely; and then with a smile thanked the Arab, and presented him with a reward.

The courtiers pressed eagerly around for a draught of the wonderful water, which was regarded as worthy of such a princely acknowledgment. To their surprise, the caliph forbade them to touch a drop. Then, after the simple-hearted giver left the royal presence with a new spring of joy welling up in his heart, the monarch explained his motive for prohibition:—

"During the long journey, the water in his leather bottle had become impure and distasteful; but it was an offering of love, and as such I accepted it with pleasure. I feared, however, that if I allowed another to taste it, he would not conceal his disgust. Therefore it was that I forbade you to partake, lest the heart of the poor man would be wounded."—*Sel.*

THE SECRET OF THE PYRAMIDS.

UP to this time the mystery of the preparation of the bodies of the Egyptian dead for embalming has never been discovered; it is one of the standing marvels of the ages, how the Egyptians were enabled to preserve the bodies of their dead in such a way as to defy the "tooth of time;" but a patent has recently been taken out in Washington, which the inventor claims is a real rediscovery of the Egyptian secret. But the process of embalming has no real utility. The ancient Egyptian believed in the immortality of the body; and he deemed it his religious duty to have his remains so prepared that when resuscitated, its old lineaments would reappear. The soil of Egypt to-day is packed with mummies, so much so as to seriously interfere with the labors of the agriculturist. After all, nature knows best. The perishable character of our frail bodies restores to the soil, elements of fertility which it greatly needs. It is said that every atom of earth for many feet over the surface of all China must literally have passed through hundreds if not thousands of the bodies of Chinamen in the countless ages of the past. The whole earth would be a mausoleum of mummies had the process of embalming been common among all the races of men since the beginning of history.—*Sel.*

—A new kind of cloth is being made in Lyons from the down of hens, ducks, and geese. Seven hundred and fifty grains of feathers make one square metre of light and very warm waterproof cloth, which can be dyed in all shades.

—The darkest cloud which overshadows human life, may often appear the brightest to the angels who watch over us from heaven.

Popular Science.

—The skeleton of a mastodon twelve and one-half feet in height was recently found near Grand Rapids, Mich. It is the largest ever found, except the one discovered by Professor Warren, and is the only skeleton of the kind ever discovered in the drift formation of Western Michigan. It was found in marshy ground, under about two feet of soil, and in quicksand permeated by spring water. Its largest rib was found to measure four feet; and one tooth, the enamel being perfect, weighed three pounds and ten and one-half ounces.

A Curious Source for Fresh Water.—One of the hottest regions on the earth is along the Persian Gulf, where little or no rain falls. It is more uncomfortable from the fact that at Bahrin the arid shore has no fresh water; yet a comparatively numerous population contrive to live there; thanks to the copious springs which break forth from the bottom of the sea. The fresh water is got by diving. The diver, sitting in his boat, winds a great goatskin-bag around his left arm, the hand grasping its mouth; then he takes in his right hand a heavy stone, to which is attached a long line. Thus equipped, he plunges in, and soon reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is then hauled up, and the diver, after taking breath, plunges in again. The source of the copious marine springs is thought to be in the green hills of Osman, some five or six hundred miles distant.—*Popular Science News.*

ANCIENT STATUARY IN YUCATAN.

Dr. Le Plongeon, who, in his extensive researches among the buried cities of Yucatan, has made many important discoveries respecting the customs of the ancient Mayas, recently unearthed a monument erected hundreds of years ago in memory of a noted warrior of that people, the following interesting description of the caryatides supporting which, we quote from the *Scientific American*:—

"The caryatides are very interesting, showing, as they do, the features, ornaments, and dress of the ancient Mayas. The heads are well shaped, disproving the assertion of some writers that these people deformed their skulls.

"All the caryatides have head-dresses, on which are chiseled with great delicacy, various designs, some figuring mosaic work, that those people used to ornament their dresses, made of bone, shell, ivory, and such substances, cut in various shapes, and painted with bright colors. Other head-gears are covered with feathers, the lines exquisitely fine; and the back of each figure is sculptured to imitate a mantle of feathers, but in each the feathers are differently arranged. Their hair is cut short in front, and combed straight, to come partly over the forehead; thus we see that it is a very old fashion to *bang* the hair. The eyes are two-thirds natural size; some are decidedly feminine, and their dress seems to be that of women. The eyes are open, foreheads broad, noses correct in shape according to our present ideas of beauty, some quite small and fine; lips thin and firm. Some have the upper row of teeth visible, and they are small and even, not filed like a saw, so that fashion was evidently not compulsory, though some followed it, as we learn from the Chaacmol statue and others. All have ornaments in their noses, and some of them consist of two small disks, linked by a tiny straight bar. It is very possible that these links were made of some metallic substance. Besides the ornaments fastened on the outside of the nostrils, several have one hanging from the cartilage, down over the lips. As well as disfiguring a pretty face, it must have been most uncomfortable, and shows that people in those times made themselves the foolish slaves of fashion, just as now. One face is so covered that the features can hardly be seen; two serpent heads face each other on the forehead, and their bodies encircle the eyes; other snake bodies surround the mouth, the heads resting on the cheeks.

"It is not easy for the pen to give an exact idea of how these caryatides are formed. The bodies do not correspond to the size of the faces, yet the feet are large, to serve as a firm base for the table they supported. From the knees up to the throat there is very little form, and though we see that the arms are upraised, the hands are not defined, but lose themselves in the flat part of the stone that is above the head, and on which the table rested. As far back as where the ears should be, the faces are completely in the round; but from there the stone extends on each side, and on that stone, in the place where ears should be, are large circular ornaments. One figure has square tablets instead, and on them a finely chased inscription that causes us to exclaim: "They must have had metal to work with!" The large circular ornaments have for center the face of an old man, but not all alike; so they may have been portraits of individuals celebrated among them.

"The toe nails of these figures have fallen out; for the Maya artists made nails and eyes of shell for their statues, which were also painted in vivid colors. The feet are shod with sandals, each fastened with a different bow, knot, or clasp. From their necks are suspended badges, necklaces, and other ornaments. One has an animal carved on the badge. Some have handsome waist belts, and three-cornered aprons, trimmed in divers manners, especially with flat plaiting.

"As so little care has been given to the body, it is not easy to decide upon the shape of the garments, but some certainly have a short tunic folded round their hips, closing in front by one end lapping over the other, the corners being curved from the waist to the bottom of the garment.

"We have reason to suppose that these figures were likenesses of individuals attached to the warrior Coh, and they supported the altar on which offerings were made to the *manes* of that chieftain."

GOOD HEALTH.

BATTLE CREEK, MICH., DECEMBER, 1884.

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

HEART DISEASE.

A LARGE share of the "heart disease," so-called, is really stomach disease. A patient has palpitation of the heart from indigestion. He runs to a doctor, who gravely feels his pulse, puts his ear to his chest, and with a very solemn air says, "My dear sir, it is my painful duty to inform you that you are suffering with an affection of the heart." The poor patient thereupon begins to imagine all sorts of short-comings on the part of his heart, and lives in constant fear that the diseased organ may stop at any minute.

The fact is, as intimated, that, in not one in ten of the cases pronounced "heart disease" is the heart really affected. We may say even more: that in the vast majority of cases in which the heart is really diseased, the patient is in no more danger of sudden death than other people. If he is wise, he will avoid all sorts of violent excitements, and by so doing may prolong his days to the usual limit of human life.

The heart is able to endure far more rough usage than is generally supposed. A certain professor of physiology in a German medical school used to exhibit the action of his own heart to the members of his class by thrusting a long needle into it. The movements of the outer and free end indicated the action of the heart. The experimenter was apparently not in the least injured by the experiment.

"Soldiers wounded in the heart in battle, or other persons injured by sharp instruments, do not always die immediately. Sometimes hours, days, months, and years elapse before death occurs; and again, the wounded may entirely recover. I shall give below a few remarkable but well-authenticated cases of wounds of the heart. A man who was wounded in the heart by a bullet lived forty-eight hours. In this case, hemorrhage was gradual and slow. A curious case is that of a man surviving for twenty days with a skewer in his heart. A surgeon gives us the account of a boy who lived five weeks after being wounded in the heart; another, of a soldier who lived eleven days with a bullet imbedded in the fleshy substance of his heart; and another, of a person who lived with a wound six years, and died from a disease not at all connected with the injury of the heart.

"Even after the heart has been pierced by sharp instruments, recovery has taken place, or death has been delayed for some time. A person died of some obscure disease of the heart under which he had labored for three months. At his death a pin was found sticking in his heart, where it must have been for that length of time."

PARASITES IN DOMESTIC FOWLS.

IN the report of the Department of Agriculture, an account is given of a new parasite which infests the common domestic fowl. The writer, Dr. Thomas Taylor, reports as follows:—

"During the past year I have examined several sick domestic fowls to ascertain the cause of their ailment. The first examined was in a moribund condition when received, and died within an hour after it was brought to my notice. Its comb was

of a deep red color—abnormally so, the tips being somewhat black. On dissection, its general viscera presented nothing peculiar; but on removing those of the thorax and abdomen, the lungs excepted, I observed on the intercostal muscles bordering on the ribs, what resembled a superficial reddish pigment, in streaks, while small specks of various forms covered the lining of the abdominal cavity. These varied in size from the point of a pin to that of a small pin-head. On removing a small portion of this colored matter, and viewing it under a suitable power of the microscope, I found it to consist of living mites *(acari)* in various stages of growth. I next removed a small portion of the lung tissue, and placing it under the microscope, here again discovered several living mites. Another portion was removed from the lungs, not exceeding half a grain in weight, when three more mites were discovered. These last were so lively that it was difficult to keep them long in view without changing the stage.

"This mite closely resembles *Cytoleichus sarcoptoides* (Megnin). Although this species has not hitherto been found in America, it is known in Europe, and has been found in such habitats as above described; and Megnin states that it causes the death of wild and domestic fowls. He says that they are found in the air-passages of the lungs, in the bronchial tubes and their divisions, in the bones with which the air sacs communicate, and in other cavities. They are also found in the bronchi of birds; and when they are extremely numerous, cause titillations of the bronchial mucous membrane, indicated by a slight cough, in some cases causing symptoms of asphyxia and of congestion, to which the birds may succumb. He instances an example in the case of a pheasant which died of an unknown disease, and in which, when dissected, this obstruction of the bronchi was well manifested.

"I think it probable that these mites, after they have effected a lodgment in the lungs, bore through the pleura, and invade the thoracic and abdominal cavities, where they breed in large numbers, producing great irritation, and ultimately the death of the fowl."

OSCAR WILDE AS A DRESS REFORMER.

The famous æsthete has taken up arms in defense of the "dress reform" movement which is just now quite active in England. Among the numerous suggestions made by the promoters of the movement, one of the most practical and sensible is concerning an article of dress which they call the "divided skirt." Mr. Wilde has been writing to the *Pall Mall Gazette* on the subject, and a "Girl Graduate" has retorted by criticisms, which Mr. Wilde answers in the following manner:—

"The 'Girl Graduate' must of course have precedence, not merely for her sex, but for her sanity; her letter is extremely sensible. She makes two points: that high heels are a necessity for any lady who wishes to keep her dress clean from the Stygian mud of our streets; and that without a tight corset 'the ordinary number of petticoats and etceteras' cannot be properly or conveniently held up.

"Now, it is quite true that as long as the lower garments are suspended from the hips, a corset is an absolute necessity; the mistake lies in not suspending all apparel from the shoulders. In the latter case a corset becomes useless, the body is left free and unconfined for respiration and motion; there is more health, and consequently more beauty. Indeed, all the most ungainly and uncomfortable articles of dress that fashion has ever in her folly prescribed, not the tight corset merely, but the farthingale, the vertugadin, the hoop, the crinoline, and that modern monstrosity, the so-called 'dress improver,' —all of them have owed their origin to the same error, the error of not seeing that it is from the shoulders, and from the shoulders only, that all garments should be hung.

"And as regards high heels, I quite admit that some additional height to the shoe or boot is necessary if long gowns are to be worn in the street; but what I object to is that the height should be given to the heel only, and not to the sole of the foot also. The modern high-heeled boot is, in fact, merely the clog of the time of Henry VI., with the front prop left off; and its inevitable effect is to throw the body forward, to shorten the steps, and consequently to produce that want of grace which always follows want of freedom.

"Why should clogs be despised? Much art has been expended on clogs. They have been made of lovely woods, and delicately inlaid with ivory and mother of pearl. A clog might be a dream of beauty, and, if not too high or too heavy, most comfortable also.

"But if there be any who do not like clogs, let them try some adaptation of the trouser of the Turkish lady, which is loose around the limb and tight at the ankle. The 'Girl Graduate,' with a pathos to which I am not insensible, entreats me not to apotheosize 'that awful, befringed, beflounced, and bekilted divided skirt.' Well, I will acknowledge that the fringes, the flounces, and the kilting do certainly defeat the whole object of the dress, which is that of ease and liberty; but I regard these things as mere wicked superfluities, tragic proofs that the divided skirt is ashamed of its own division. The principle of the dress is good, and, though it is not by any means perfection, it is a step toward it."

HOUSE PLANTS AS SANITOMETERS.

We have coined a new word, which has been used as well as the instrument it names. The value of an appliance by which the conditions of a home in relation to health may be made visible to the eye, just as a thermometer indicates the degree of temperature of the air in our living-rooms, or a hygrometer the degree of moisture present, is too obvious to need emphasis. According to the *Sanitary Engineer*, a Boston lady has made the discovery that house plants will not thrive in an atmosphere unwholesome for human beings, and that when they begin to droop, their leaves to turn yellow and fall off, it is time for the inmates of the house to begin to look around for the reason. Here is the account of her experience, as sent to the journal above named:—

"We began housekeeping ten years ago, with plants in two of the rooms for window ornaments, instead of lace and damask curtains. The house was a modern one, lighted by gas, and heated by a furnace, with no open fire-places in any of the rooms. Fortunately, there was a skylight in a slope of the roof over the central hall, which we kept always raised some ten inches (in warm weather twice as much); and since we kept the doors of the rooms open, the hall became a ventilating shaft. The result of this automatic ventilation was so good that visitors exclaimed: 'Why, you have furnace and gas, yet your plants look as thrifty and fresh as if they had grown in a greenhouse. How do you do it?'

"A somewhat careful study of the conditions of successful window-gardening led us to the conclusion that a house in which plants *would not thrive* was a house in which people *ought not to live*. We then allowed our plants to overflow into all the other rooms, and for years pointed with pride to the sanitary indicators, which also served the purpose of keeping the air moist enough, since on a sunny day these growing leaves will pump at least six quarts of water into the atmosphere of the house.

"Some three years since we had another chimney put up, so that three open fires were possible, but we did not see any great increase in the health of the plants, thus showing that the ventilation had been pretty good before. But the past winter the plants seemed to droop unaccountably; one or two nearly died, others lost their leaves, and the whole lot looked like the poor sickly things one so often sees in

houses. So far as we could see, the conditions were the same as in previous years. Suspicion was lulled by the fact that even gardeners complained of so much cloudy weather as affecting the plants. A visit of inspection by the Sanitary Science Club late in the spring called our attention to some defects in the furnace air-box and draught-slides; also an occasional smell of gas, which had not been noticed in previous years, added an incentive to a thorough overhauling of the furnace as soon as the fire was dispensed with. The explanation of the behavior of the plants was found in a large hole in the iron lining of the fire-pot, so that a free communication of the air over the fire with that in the hot-air chamber was inevitable. This hole was caused by the rusting through of the iron, a result of carelessness in filling the water-pan, and finally of a leak in it, which escaped notice for some time. The iron partition must have been a long time in a bad condition, and only the good ventilation effected by the always-open skylight saved the family from serious consequences. They should have taken immediate warning from the plants, and should have searched until the cause of the trouble was found.

"This case illustrates the necessity of watchfulness on the part of the housekeeper, since the furnace has been cleaned and examined each year by men from the shop, who were supposed to know best what was needed, and yet the danger had not been discovered. With the numerous modern conveniences, 'eternal vigilance' is most certainly the price of health; and this vigilance must be exercised by the housekeeper, the one who is at hand, and who can follow out cause and effect as no one else can. Hence the necessity of a knowledge of the construction and working of such important a portion of household machinery as the furnace. When one considers in how many houses the management of this important instrument of comfort is left to ignorant and careless servants, one no longer wonders at the complaints so often heard."

ANIMAL MAGNETISM IN BREAD.

A THEORY which ought to startle every believer in animal magnetism has recently been advanced by a correspondent of the *Commercial Gazette*, who writes to that paper as follows:—

"I have for some time been studying animal electricity in its various phases, and the result of my investigation leads me to believe that it is possible for human beings to impart electricity to their fellowmen in ways that would, at first thought, seem highly improbable. Especially is this possible through the medium of breadstuffs. In fact, it is impossible to eat bread without partaking of the masculine electricity of the baker who kneaded it; and thus in time the customer takes on the disposition of the baker. The theory, of course, is that while shaping the loaves of bread when yet in the dough, by contact with the same, the baker imparts to it a portion of his nature, which lies dormant in the baking process, but makes itself felt in the system of the consumer."

In view of the above facts, it is patent that if in eating a loaf of bread one is partaking of the nature of the baker who made it, it becomes a matter of vast importance that bakers should be men of most superior excellence, and that every bread-consumer should, before tasting a loaf, fully inform himself concerning the character of the man who kneaded it, lest, in satisfying his hunger, he at the same time may imbibe some mental, moral, or physical contagion imparted to it through the medium of the subtle essence which we are told by believers in animal magnetism, is possessed by every human being in varying quantity and quality. Certain it is that no good reason can be shown why bread may not be as good a vehicle for this same subtle essence as the tiny bits of tissue paper, or the small vials of water which various "magnetic healers" send about the country, and in which so many thousands place such implicit confidence.

EDUCATION FOR GIRLS.

Says Dr. Clousten, in an English contemporary, "I more than agree with Hannah More's notion of education for girls. She says:—

"'I call education not that which smothers a woman with accomplishments, but that which tends to consolidate a firm and regular system of character, that which tends to form a friend, a companion, and a wife. I call education not that which is made up of shreds and patches of useless arts, but that which inculcates principles, polishes taste, regulates temper, cultivates reason, subdues the passions, directs the feelings, habituates to reflection, and trains to self-denial,—that which refers all actions, feelings, sentiments, tastes, and passions to the love and fear of God.'

"If to this we add that which hardens the muscles, adds to the fat, quickens and makes graceful the movements, hardens the bones, softens the skin, enriches the blood, promotes but does not over-stimulate the bodily functions, quickens and makes accurate the observation, increases the sense of real beauty of all kinds, promotes the cheerfulness, and develops a sense of universal well-being, we should have, in my opinion, the principles on which an educational system should be founded."

There is a deal of good, sound, hygienic common-sense in the above paragraphs.

Cholera and Macaroni.—A London writer calls attention to the fact that Italian macaroni is one of the most convenient and efficient of all means of conveying cholera germs. Our observations of the macaroni business in Naples a year or two ago enables us to confirm the writer's suggestions on this point. The business is carried on in a part of the city which is, if possible, more dirty and unsanitary than any other, and where the air is constantly filled with vile dust by passing vehicles. The moist macaroni is hung upon long wires to dry in the open air, exposed to all the germs, dust, and gaseous filth with which the air of filthy Naples teems. If there is any truth in the theory of Prof. Koch, that cholera is disseminated by means of germs, macaroni must be a most excellent means by which the seeds of the dread malady may be transported. It would certainly be a wise precaution for those who make use of macaroni as an article of food, to see to it that the article furnished them bears a domestic, rather than a foreign brand.

Washing out the Stomach.—This operation, such a novelty a few years ago, is coming quite in vogue. A Maryland doctor employs the method very extensively in some cases of dyspepsia. The following is the *modus operandi*:—

"A soft, red rubber tube is passed gently down into the stomach quite to the pylorus; with this is connected about a yard of common flexible tubing and a glass funnel, which is held on a level with the patient's breast, and tepid water is poured slowly into the funnel until a sensation of fullness is experienced; the funnel is then depressed to the level of the waist, and the fluid allowed to syphon out. The process is repeated until the water returns quite clear."

Germ Trap.—A Philadelphia doctor claims to have invented a device by means of which he is able to capture germs, just as fly-traps capture these annoying insects. He recently set his trap for bacteria in the gallery of a crowded hall, and claims to have found millions in it.

Deadly Mineral Water.—The unwholesome effects of the continued use of mineral water is well shown by the experience of the mountaineers residing in the Cumberland mountains. Owing to the long drouth their fresh-water wells and springs have dried up, and they have been obliged to resort to the use of water from mineral springs, in consequence of which a bowel disease resembling Asiatic

cholera has broken out, and hundreds of the inhabitants are dying. And yet there are people who imagine that these same mineral waters are the veritable *elixir vitæ* for which the old alchemists sought so earnestly.

Poisoning by Coal Gas.—Last December a mother and daughter were fatally poisoned by coal gas in Cleveland. They retired to bed in a room heated by a coal stove with a damper in the pipe, which was turned so as to cut off the draft,—a very common practice. The gas generated in the stove, being unable to escape through the pipe, filled the room, with the result named.

—A London physician recently died of diphtheria, having contracted the disease by sucking out the tube used in an operation for tracheotomy upon a patient who was suffering with the disease.

—The keeper of the Morgue of New York City states that four thousand out of the five thousand dead brought there annually, have lost their lives through drunkenness.

—A lot of people in Pennsylvania are lying in a critical condition, with millions of trichinæ wandering around among their muscles. It is expected that several will die.

—In Western Africa, male medicine-men carry on the *medical* practice; but the surgery is wholly performed by dusky females, who are said to be very expert at dry cupping with gourd cups and other imitations of civilized procedures.

—The lights of other days were not as good as the lights of the present; but the livers were better.

—A correspondent writes of a man living in an Eastern State, who at the age of 110 years enjoys good health, and bids fair to live half a score of years longer. The centenarian has always been a temperate man.

—The English expedition sent to rescue Gen. Gordon, who has been so long beseiged in Khartoum by the Mahdi, is being conducted by Gen. Wolsley on tee-total principles.

—According to the Talmud, all ass-drivers are wicked, camel-drivers are honest, sailors are pious, physicians are destined for hell, and butchers are company for Amalek.

—A strip of gutta percha placed between the soles of a shoe or boot will prevent the feet from becoming damp and cold when one is obliged to walk upon a wet pavement.

—The *Popular Science News* tells Boston people it is not worth while to cry over spilt milk, as an examination would undoubtedly disclose the fact that it is not milk at all.

—Philadelphia women are said to excel their country-women of other cities in good looks, which is attributed to the fact that they lace less and walk more.

—A new process has recently been discovered by which oxygen, formerly supposed to be a fixed gas, is easily converted into the liquid state.

—New York uses 500,000 quarts of milk daily, of which 200,000 quarts are either skimmed, watered, or otherwise adulterated.

—According to Prof. Huxley, the mackerel is very much subject to parasites. This is also true of other kinds of fish.

—Sir Isaac Newton, when writing his *Principia*, lived on a scanty allowance of bread and water, and a vegetable diet.

DOMESTIC MEDICINE.

QUINSY—TONSILLITIS.

Symptoms.—Chilliness; marked fever; redness and swelling of the tonsils, and soft palate; pain and some difficulty in swallowing; entrance of liquids into the nasal cavity on attempting to swallow; pain behind the angle of the lower jaw and in front of the ear in advanced stage of suppuration.

Tonsillitis, or inflammation of the tonsils, is usually accompanied with a cute inflammation of the pharynx or soft palate, and hence is accompanied with nearly all the symptoms characteristic of the latter affection. On account of the more extensive swelling of the tonsils, there is much greater pain than accompanies pharyngeal catarrh, and the ear is much more liable to be affected by the extension of the disease through the Eustachian tubes. There is usually headache and a very full pulse. The chilliness and febrile action frequently precede the swelling of the tonsils several hours or even a day. The tongue is heavily coated, the patient has very little appetite, and if disposed to eat, would be nearly unable on account of the pain in swallowing. Unless speedily arrested in its early stages, the disease goes on to suppuration, and, if the discharge is not hastened by lancing, usually breaks, and discharges in the mouth while the patient is asleep, or during a fit of coughing. The pus of the discharge is usually swallowed when the discharge occurs during sleep, and the patient awakes from his troubled sleep very greatly relieved.

Treatment.—The treatment should be energetic. During the first stage of the disease, benefit may be derived from holding pieces of ice in the throat, and packing the throat with pounded ice wrapped in a towel. At intervals of from two to three hours, alternate hot and cold applications should be made to the throat. The burning and dryness characteristic of the first stage of the disease may be relieved by mucilaginous gargles and drinks. Packs, tepid sponging, and the use of large compresses about the trunk, are measures which may be advantageously employed to subdue general fever. If suppuration threatens in spite of efforts to abort it, it should be encouraged by the use of inhalations of steam, and hot fomentations applied to the throat, instead of the ice-pack. When the case is taken in time, the measures described will be found the most universally successful in aborting the disease. When suppuration has evidently taken place, and the swelling in the throat has become soft, showing the presence of matter, much time may be saved by lancing the tonsil to evacuate the pus. In most cases, rapid recovery will take place, the tonsil returning to its natural size. Now and then a tonsil remains permanently enlarged. One attack of this disease predisposes to another, so that persons sometimes become so susceptible as to suffer an attack of tonsillitis from the slightest exposure

BALDNESS, ITS PREVENTION AND CURE.

THE mode of formation and growth of the hair is now so well known that there can be no question as to the cause of baldness. It is produced by a failure of normal nutrition in the papillæ at the base of each hair follicle. Imperfect work being done in the capillaries, which are here richly distributed, the cells which constitute a hair shaft are not formed in their due proportion; and the old shaft thus feebly sustained becomes loose, and drops away, leaving nothing in its place. This failure of nutrition may have a sudden cause, of which the effect will be but temporary. For instance, an attack of typhoid fever often leaves the papillæ of the scalp so much enfeebled that rapid baldness ensues. The papillæ, however, still retain their vitality; and as the system regains its strength, they quickly recover their potentiality, and the hair comes again, perhaps thicker than before.

In the same manner certain cutaneous affections may cause the hair to fall by an action on the papillæ, which is but temporary; in such cases, recovery, perhaps with assistance, perhaps without it, is possible. In the great majority of instances, however, where the head is bald, the failure of nutrition of each papilla has come on so gradually, and has continued so long, that the papillæ no longer exists; it has passed away by atrophy; its capillaries have become obliterated, and even the follicle itself no longer constitutes a depression in the cutis, and the scalp has the smooth and shining appearance which we so well recognize.

It is easy, therefore, to see that in such a

condition as this no renewed growth of the hair is to be expected, for the anatomical structure which caused its development and continued it, has ceased to exist, and the countless remedies which are so freely advertised as being able to rejuvenate bald heads are utterly of no avail. They serve only to illustrate the greed and the impudence of the inventors, as well as the credulity of the purchasers. But such is the desire to escape the appearance of "growing old" that no doubt they will hold their ground for all time to come.

But now arises the question, Cannot the application of the various agents to the scalp at the time when the hair is *beginning* to lose its hold, be of service in stimulating the follicles and papillæ into renewed and permanent vigor? To this question it is not possible, on theoretical grounds, to say No, absolutely; but in practical fact that is the only true answer to give in the vast majority of cases. The cause of the falling of the hair has been already stated, and safe reasoning tells us that our only hope can be in that which can restore the failing vitality, and we well know that we should not expect to secure this on any other part of the skin by filthy oils and washes. Proper cleansing of the scalp is as important as it is of all other parts; nothing else should be applied to it but common sense.

There can be little question that the continued close covering of the head with hats and caps is one very constant cause of baldness. Women, in our own communities seldom lose their hair, except from sudden causes; and among those nations where the head is habitually left bare or but slightly covered, baldness is practically unknown. At the same time, the beard, which is of the same class of hair as that of the scalp, but which is always uncovered, does not fail with age. A reform in our style of head gear is very desirable, but it is not at all likely to be accomplished.

The suggestion was some time ago made in our columns that bald heads might perhaps be covered anew with hair by "skin grafting," *i. e.*, applying bits taken from other scalps, and causing them to take root and spread. No doubt such bits might be attached, but the whole matter is merely a wild fancy without practical value. We can make "skin grafts" take hold, but it is only where the skin is destroyed and the surface raw and exposed, commonly rendered so by disease. Assuming that some person (though it is difficult to believe that such a person could be found) would consent to have his scalp peeled away in preparation for the operation, and then assuming that some other person could be found who would consent to appropriate his own scalp to cutting out the proper bits for the work, yet then the very best possible success (even theoretically) must be extremely imperfect. The denuded surface would heal so rapidly between the "grafts" that no extension on their part could take place, and a head with small specks of hair here and there would be the only attainable result. "Crazy patchwork" is fashionable, but perhaps not many would care to wear it in that way.

The result of all seems to be that when baldness has come slowly and naturally, it has come to stay, and our only wisdom is to be content. —*Scientific American.*

Question Box.

Animal Magnetism — Position During Sleep—Blue Glass, etc.—A lady subscriber residing in Illinois inquires as follows:—

1. What is your opinion of animal magnetism as a curative agent?

2. Is sleep more restful and beneficial when the head is toward the north, and the body lying in the "direction of the polar magnetic currents of the earth"?

3. Do you consider "raised" bread unwholesome?

4. Should ladies omit the daily bath during the menstrual period?

5. Is there any other remedy for overworked, weakened, and painful optic nerves besides rest?

6. Are blue glass windows beneficial to health?

7. Should colored glasses, worn as a protection for sensitive eyes, be in the least convex or concave?

8. What is the best plan for making a cistern filter?

Ans.—1. A careful investigation of the subject, theoretically and practically, has convinced us that the so-called animal magnetism is a myth. The cures which are apparently effected by this hypothetical agent, are the result of the influence of the imagination.

2. We have never been able to obtain any evidence that the position of the body during sleep, with relation to the poles, has any effect upon the health. Some time ago we received from a correspondent an article on the subject, in which he attempted to ascribe to all the different positions in relation to the points of the

compass, an important influence upon the body, both physically and mentally. We have no faith in these theories, as they are unsupported by evidence of a reliable character.

3. Raised bread, if well baked, is decidedly preferable to any kind of bread which is not light, porous, and palatable. It cannot be denied that raised bread contains elements which, when the digestive powers of an individual are weak, and the digestion quite slowly performed, frequently become a source of serious trouble. Persons suffering with acid dyspepsia are often unable to digest any kind of fermented bread, though able to take unleavened bread, when well prepared, with impunity.

4. A woman who is accustomed to cold or cool bathing daily, need not interrupt the bath during these periods, but should employ water of a little higher temperature. With these precautions there is usually no occasion for neglecting the usual daily ablution.

5. Rest is one of the essential remedies for the condition of the eye referred to, but is not the sole remedy which can be advantageously employed. Bathing the eyes night and morning for a few minutes, with water as hot as can be borne, is a remedy of great value. Very frequently there is some irritation of the lids which requires attention, and occasionally a careful examination of the eye will disclose the fact that the optical apparatus of the eye, or accommodating power, is in some way deranged. In such a case, of course, it is very important that the condition of the eye should be accurately ascertained, and such measures employed as the condition would indicate.

6. Yes; but not more so than common glass windows.

7. No, unless the condition of the eye is such as to require a convex or concave glass.

8. Cistern filters should not be made in the cistern, but should be placed one side, and so constructed as to admit of being cleaned readily when occasion may require. Charcoal and gravel, used in proportion of three parts of charcoal to one of gravel, makes the best filtering material.

Two Meals a Day—Chapped Skin.—M. A. L. inquires as follows:—

1. Do you think two meals a day ample for vigorous children?

2. My little girl is troubled greatly with chapping of the skin; what can I do for it?

Ans.—1. We have known vigorous children to be reared upon two meals a day, no food being taken except at the regular meals, after the child had attained the age of a few months. It should be remembered, however, that children have more active digestive organs than adults, and that their food, as a rule, is simpler in character, and capable of being digested in shorter time. The child also requires a larger amount of nourishment in proportion to its size and the capacity of its digestive organs, so that it is quite probable that for the majority of children three meals a day during the years of early childhood, or two meals and a light lunch of milk with bread or some simple grain preparation, is preferable to a strict adherence to the two-meal plan.

2. At this season of the year, chapping of those portions of the skin which are exposed to the air is a very great inconvenience with persons whose skins are unusually delicate. For several years we have used for such cases, with excellent results, a preparation of benzoin which we usually prepare according to the following formula:—

℞

Tr. Benzoin Comp.,	dr. 4
Glycerine,	oz. 1
Aquæ,	oz. 2

M

Apply this lotion to the hands two or three times a day after washing, taking care to cleanse the hands, using only some mild soap, such as castile or shaving soap.

Hot Water Drinking.—Can hot water drinking be abused?

Ans.—Certainly. Its use may be continued longer than necessary. It would not be advisable for one to continue its use longer than the conditions requiring it are known to exist. There are various conditions which contra-indicate its use: excessive irritability of the heart, causing palpitations; tendency of blood to head, which is increased when hot fluids are taken into the stomach; and ulceration or extreme irritability of the mucous membrane of the stomach.

Whole-Wheat Flour.—A Syracuse correspondent asks: Is the new preparation of whole-wheat flour always better adapted to the digestive organs than the bran-retained graham flour or even white flour?

Ans.—For the average individual it is probable that the ordinary grain preparation is quite as well adapted to the digestive organs as whole-wheat flour, though its nutritive value is probably slightly less, pound per pound, than finer flour. There are also some cases in which fine flour, as entirely free from wheat particles, is preferable to whole-wheat flour; however, the whole-wheat flour we consider one of the most excellent grain preparations in the market.

Sleepiness after Meals.—What is the cause of sleepiness after meals, and what is the remedy for it?

Ans.—This symptom is usually the result of very slow digestion or excessive eating. If the first condition is the case, it may be corrected by attention to diet, and the employment of fomentations over the stomach every night before retiring, followed up by vigorous manipulation of the stomach, and a tepid bath each morning on arising. If the second condition mentioned is the case, the remedy is obvious.

THE COOKING SCHOOL.

Conducted by MRS. E. E. KELLOGG.

REFRESHING DRINKS AND DELICACIES FOR THE SICK.

In many fevers and acute diseases, but little food is required, and that of a character which merely appeases hunger and quenches thirst, without stimulating and nourishing the system. Preparations from sago, tapioca, and other gelatinous substances are sometimes serviceable for this purpose. Oranges, grapes, and other perfectly ripened and juicy fruits are among the most excellent articles for use when but little nourishment is needed. They are nature's own delicacies, and serve both for food and drink. They should not, however, be kept in the sick-room, but preserved in some cool place, and served when needed as fresh and daintily as possible. Like all food provided for the sick, they should be arranged to please the eye as well as the palate. The capricious appetite of an invalid will often refuse luscious fruit from the *hand* of a nurse, which would have been gladly accepted had it been served in a more tempting manner, on dainty china, with a clean napkin and silver.

The juice of the various small fruits and berries forms a basis from which may be made many refreshing drinks, especially acceptable to the dry, parched mouth of a sick person. Fruit juices can be prepared with but little trouble. They are as easily preserved as any canned fruits, and ought to be as generally provided for in every household.

To Prepare Fruit Juices.—Strawberries, red raspberries, currants, cherries, blackberries, and grapes are all excellent material for fruit juices. After carefully examining the fruit, and removing all dirt and any unsound fruit, put it into a stone jar; set this in a kettle of tepid water, and place over the fire. Cover the jar, and boil until the fruit is well broken; then turn it into a coarse cloth, a few spoonfuls at a time, and strain, pressing and squeezing until all the juice is extracted. To each quart of strawberry, blackberry, and grape juice, add one cup of sugar. For raspberry, currant, and cherry, one and a half cups of sugar should be used. After adding the sugar, heat slowly, just to the boiling point, and can in glass cans, the same as fruit. A mixed juice, of one part currants and two parts red or black raspberry has a very superior flavor. Beverages from these fruit juices are prepared by using a small quantity of the juice, and sufficient cold water to dilute it to the taste. If it is desirable to use such a drink for a sick person in some household where fruit juices have not been put up for the purpose, the juice may be obtained from a can of strawberries, raspberries, or other small fruit, by turning the whole into a coarse cloth and straining off the juice; or a tablespoonful of currant or other jelly may be dissolved in a tumbler of warm water, and allowed to cool. Either will make a good substitute for the prepared fruit juice, though the flavor will be less delicate.

Cranberry Drink.—Take ripe cranberries, look over carefully, rejecting any unsound fruit, mash thoroughly in an earthen dish, and pour boiling water over them. Let the mixture stand until cold, strain off the water, and sweeten to taste. Barberries also, prepared in the same manner, make a nice drink.

Apple Tea.—Roast a couple of large tart apples, cover with boiling water, cool, strain off the water, and sweeten to taste.

Tamarind Water.—Boil two ounces of tamarinds with four ounces of stoned raisins in three pints of water for an hour. Strain through a coarse cloth, cool and use.

Barley Lemonade.—Put a half cup of pearl barley into a quart of cold water, and simmer gently until the water has become mucilaginous and quite thick. This will take from an hour to an hour and a half. The barley will absorb most of the water, but the quantity given should make a teacupful of good, thick barley-water. Add to this two teaspoonfuls of lemon juice and a tablespoonful of sugar. Let it get cold before serving. By returning the barley to the stew-pan with another quart of cold water, and simmering for an hour or an hour and a half longer, a second cup of barley-water may be obtained almost as good as the first.

Barley and Fruit Drink.—Prepare the barley-water as for lemonade, and add to each cupful a tablespoonful or two of cranberry, grape, raspberry, or any tart fruit syrup. The pure juice sweetened will answer just as well; or in case neither are to be had, a little fruit jelly may be dissolved and added.

Apple Water.—Pare and slice very thin into a china bowl, a juicy, tart apple. Turn over it boiling water sufficient to cover the slices. Cover the bowl with a saucer, and allow the water to get cold. Strain and drink. Crab-apples may be used in the same way.

Toast Water.—Toast a pint of whole-wheat or graham bread crusts very brown, but do not allow any burnt portions to be used. Cover with a pint of cold water. Let it stand an hour, strain and use. Sugar and a little cream may be added if allowed.

Gum Arabic Water.—Pour a pint of boiling water over an ounce of clean gum arabic. When dissolved, add the juice of one lemon and a teaspoonful of sugar, and strain.

Slippery Elm Tea.—Pour boiling water over bits of slippery elm bark or slippery elm powder, and cool. Strain, and if desired a little lemon juice and sugar may be added to flavor.

Orangeade.—Peel the yellow rind off one orange very thinly, so as not to get any of the white pith. Put the rind in an earthen dish. Put with the rind, three well-peeled oranges cut into slices, removing carefully all the white pith from them, and taking out all the pips, as their bitterness would make the drink unpalatable; add a table-spoonful of sugar, and pour over all a quart ofboiling water. Cover the dish, and let it remain until the drink is cold.

Parched Grain Coffee.—Parch a cup of perfectly sound wheat, sweet-corn, barley, or rice. Pound or grind it fine. Add a pint of boil ng water, and steep half an hour. Serve warm or cold.

Almond Milk.—Blanch a quarter of a pound of shelled almonds by pouring over them a quart of boiling water, and when the skins soften, rub them off with a coarse towel. Pound the almonds in a mortar, a few at a time, adding four or five drops of milk occasionally, as the almonds are being pounded, to prevent their oiling. About one tablespoonful of milk in all will be sufficient. When finely pounded, mix the almonds with a pint of milk, two tablespoonfuls of sugar, a little piece of lemon-rind, and salt if desired. Place the whole over the fire to simmer for a little time. Strain if preferred, and serve cold.

Chicken Jelly.—Dress a small chicken. Disjoint, break or pound the bones, and cut the meat into half-inch pieces. Remove every particle of fat possible. Cover with cold water, heat very slowly, and simmer gently until the meat is tender. Strain off the liquor, and allow it to cool. When cool, remove all the fat. To make the broth more clear, add the shell and white of an egg, and reheat slowly, stirring all the time until hot. Strain through a fine cloth laid inside of a colander. Salt and a little lemon may be added as seasoning if desired. Pour into small cups and cool.

Tapioca Jelly.—Put one-fourth of a cup of pearl tapioca with a pint of cold water into a double boiler, and cook until the tapioca is entirely dissolved. Then add a tablespoonful of lemon juice, and a heaping tablespoonful of sugar. Two or three tablespoonfuls of currant or red raspberry juice may be used in place of the lemon if preferred. Turn into a mold, and serve cold.

Iceland Moss Jelly.—Wash about four ounces of moss very clean in lukewarm water. Put it on to boil slowly in a quart of cold water. When the moss is quite dissolved, strain it on to a tablespoonful of currant or raspberry jelly, stirring so as to blend the jelly perfectly with the moss. Turn into a mold, and cool.

Iceland Moss Blanc Mange.—Substitute milk for the water, and proceed as in the foregoing. Flavor with lemon or vanilla. Strain through a muslin cloth, and turn into a mold till it is firm and cold.

Oatmeal Drink.—Pour a quart of boiling water over a teacupful of nice oatmeal, stir often, let it cool, add a pint of cold water, strain, and add a pint of milk.

Barley Milk.—Wash four tablespoonfuls of pearl barley in cold water until the water is clear. Put it to cook in a double boiler, with a quart of milk, and boil till the milk is reduced to a pint. Strain off the milk, and sweeten if desired.

Irish Moss Drink.—Soak a half ounce of moss, after first washing well, in a pint of cold water for ten minutes. Add another quart of cold water, a tablespoonful of sugar, a small piece of lemon-rind, and boil until about as thick as cream. Strain, and use warm.

Apple Snow.—Take a small sauce-dish full of cold stewed apples, with as little juice as possible, and beat it perfectly smooth with a fork or spoon. Have ready the white of an egg beaten to a stiff froth. Mix the egg and apple, and beat briskly until stiff. Season with a bit of grated lemon-rind.

Literary Notices.

THE CHILDREN OF THE BIBLE, by Fanny L. Armstrong, with an Introduction by Frances E. Willard, Pres. N. W. C. T. U. 18mo, 275 pp. Extra Cloth. Price $1. Fowler & Wells Co., Publishers, 753 Broadway, New York.

The mind of the modern child is ever hungry for entertainment,—the hunger is impressed at birth,—and writers and publishers everywhere appear to be doing their best to meet its demands and stimulate its further growth. What multitudes of stories are announced each year, and how few of them are suitable for the reading of our bright girls and boys! What they need is lively, entertaining tales that teach them useful truths,—truths so simply illustrated that they can grasp their full meaning, and appreciate their great importance to them if they would live noble, upright, happy lives. Miss Armstrong has drawn on that richest of moral sources, the Bible, for her topics, and with rare tact prepared this volume of stories for children. She knows the kind of setting that is needed to make each beautiful incident attractive to young minds, and she finds something of peculiar interest in every Bible child's life, from Ishmael to Timothy. Miss Willard's testimony is very valuable to the writer, and to the publishers, perhaps; but we think that they who open the book

and read two pages of the story of Ishmael will not be content until they have finished with Timothy and the convenient little Glossary of names at the end. It is just the kind of book for the home table and the Sabbath-school library, and should be in the hands of all Sabbath-school teachers.

"THREE VISITS TO AMERICA" is the title of an interesting book by Emily Faithful, recently published by Fowler & Wells, New York.

Miss Faithful is widely known as a most philanthropic English lady who has done very much to elevate the condition of the poor in London; and her opinion of the workings of society in the United States is of no little interest. The book is written in a pleasant and entertaining style, and we feel sure that all who desire to "see themselves as others see them" will find it a most readable volume.

The danger of incidental harm to the community, or to certain classes of people, from the increased use of machinery, the extension of public works, etc., is greatly diminished when those who make the laws, and especially those whose duty it is to interpret them, recognize that law is a progressive science; that it is a means, not an end; that when a state of things arises for which there is no precedent, a new precedent must be made. How the most enlightened jurists hold this principle constantly in view, and how the common as well as the statute law is thus made to keep pace with the general advance of civilization, is admirably set forth in the leading article in the *North American Review* for December, "Labor and Capital before the Law," by Judge T. M. Cooley, of Michigan. To the same number, William K. Ackerman contributes some suggestive "Notes on Railway Management;" Dr. Schlieman tells what he found in his excavations of the ruins of Tiryns, in Southern Greece; and Principal Shairp supplements his scholarly article on "Friendship in Ancient Poetry" with one on "Friendship in English Poetry." The other articles in the number are, "The British House of Lords," by George Ticknor Curtis, and "Responsibility for State Roguery," by John F. Hume.

JEWISH HYGIENE AND DIET. THE TALMUD AND VARIOUS OTHER JEWISH WRITINGS HERETOFORE UNTRANSLATED, by Carl H. Von Klein, M. D.

This is a reprint in pamphlet form of an address delivered before the American Medical Association at Washington, D. C., in May last. It is an exceedingly interesting article, and shows quite comprehensively the excellent system of sanitary measures practiced by the ancient Jewish nation.

A unique, handsome, and delightfully readable little monthly magazine, containing for the year over 300 pages and many fine pictures, all for 25 cents a year, is a recent characteristic product of *The Literary Revolution*. Each number contains attractive selections from some noted book. The last presents Prescott's famous chapter on the "Spanish Inquisition." What will interest a vast number of book-buyers will be the regular monthly news of the *Revolution's* progress, an enterprise that has wrought wonders in the book world. A specimen copy of THE BOOK WORM will be sent free to any address. John B. Alden, Publisher, 393 Pearl Street, New York.

MAN'S NATURE AND DESTINY. This able volume from the pen of Eld. URIAH SMITH, is a work of deep research and thought. It is a thorough canvass of the great question of Man, Here and Hereafter. The following synoptical arrangement of the work will show the interested reader at a glance the character of the volume:—

1. An Introduction, showing the nature of the subject.
2. A direct inquiry into the Bible use of the terms "mortal," "immortal," and "immortality."
3. An examination of statements supposed to prove man immortal; as, the "image of God," the "living soul," and the "breath of life."
4. An examination of the terms "soul" and "spirit," with their definitions and uses.
5. An examination of every text, consecutively, which uses the word "spirit" in a way which is supposed to prove that it is conscious in death, or is immortal.
6. An examination of every text, consecutively, which uses the word "soul" in a way which is supposed to show that it is conscious in death, or is immortal.
7. An examination of all other statements supposed to prove man conscious in death; as, Matt. 22:32; Luke 16:19–31; 23:43; 2 Cor. 5:8; Phil. 1:23; etc., etc.
8. A positive argument on the nature of death, as illustrated in the death of Adam, and a discussion of the questions of the resurrection of the dead and a future Judgment, as related to the question of man's nature and destiny.
9. The life everlasting, showing what it is and who will be entitled to it.
10. The wages of sin—an examination of every text supposed to prove future unending misery for the lost.
11. A positive argument showing what the end of the wicked will be.
12. A vindication of God's dealings with his creatures.
13. The claims of philosophy, an examination of the metaphysical argument.
14. A historical view of the question.
15. The tendency of the doctrine advocated in this work.

Thus the whole ground is covered in a concise and direct manner. Three indexes are provided, the first giving all the texts of Scripture referred to, in consecutive order; the second giving a list of authors quoted; and the third consisting of a general index of the subject matter of the work. Great pains has been taken to make it a complete text-book on the subject in question; while the arrangement is such that the reader is able to turn to any text or any part of the argument with the greatest facility.

The work contains 432 pages, printed in clear, new type on heavy paper, and handsomely bound in muslin, with gilt side and back title. It is in a form and style to circulate everywhere. Orders can now be filled to any extent. Price, $1.50. Address, REVIEW AND HERALD, Battle Creek, Mich.

Publisher's Page.

☞ With this number closes the nineteenth volume of GOOD HEALTH. The publishers believe that during no previous year of its existence have there appeared so many evidences of appreciation of the value of the journal, and the importance of the subject with which it deals, as during the year just passed. Its ten or twelve thousand readers have shown a growing interest in the subjects treated in its monthly columns during the entire year, and the volume closes with a larger subscription list than for some years previous, with greater evidence of interest, and also with more numerous promises of earnest co-operation in the extension of the usefulness of the journal, through enlargement of its subscription list, than at any previous time during its history. The increased interest is attributable in part to the numerous improvements which have been made during the year, and in part to the growing interest in health subjects which is manifested among intelligent people everywhere. It is probable there never was a time in the history of the world when the subject of health was so freely investigated from every possible standpoint as now. The present is certainly an auspicious moment for the promulgation of the great and ennobling truths of which this journal has for many years been the exponent. The publishers earnestly desire that during the coming year they may receive the same hearty co-operation with which their efforts have been seconded in years past, and may see considerable increase in the efforts of the friends of the journal and of sanitary reform to promote its cause, by introducing it everywhere among those who will appreciate its value, and reap benefit from its teachings.

☞ Reader, have you mailed to us that little envelope containing a postal note or a P. O. order for the small sum of one dollar, to pay your subscription for 1885? The sum demanded is so small, it may have slipped your mind; but it is of consequence to us, as we depend upon the aggregation of these little sums for the payment of paper makers' and printers' bills, which each month make their appearance as regularly as the changes of the moon. We cannot afford to lose your dollar, and should be still more unhappy to lose you. We have done our best during the past year to entertain and instruct you, and trust we have so far succeeded that you feel you cannot afford to get along without us for the year to come.

Now, while you think of it, suppose you hunt up your pocket books, take out a nice silver dollar, or a one dollar bill, and send it to the Post Office, and purchase a postal note or money order, and inclose to us, with your name and address, stating that you wish to renew your subscription for another year. We think that if you have been pleased with the journal for the year past, you will be still more thoroughly pleased with it during the year to come. Do not imagine that you have learned all there is to be learned about hygiene and health culture. We calculate to make each number of next year's volume bright and fresh, and know it will be worth more than ten times the cost to every reader, and we do not want to part company with a single one of you.

Let all whose subscriptions expire with Dec., 1884, renew at once for the coming year. See prospectus for 1885 on another page.

Subscribers will please notice that our terms are, as they have usually been heretofore, strictly pay in advance. It is the purpose of this note, however, to say to those who may be in straitened circumstances, owing to the low prices of produce and labor and the general hard times, that they need not be deprived of the journal in consequence of inability to comply with the letter of our rules. Any one who cannot command the small sum of money necessary to pay subscription price for another year, will be given reasonable time to secure the money. Any such person who will send us an agreement to pay the one dollar of the subscription price at the end of three to six months, and accompany the same by a note from some responsible parties guaranteeing the writer's reliability, will receive the journal until the time agreed upon for the payment of the subscription price, has expired. This offer is not made to all, but only to those whose poverty is so extreme that they must be deprived of the visits of GOOD HEALTH without some indulgence of this sort. We want every one who is interested in the journal, and who is being profited by its perusal, to have the privilege of reading it.

We wish to call especial attention to the prospectus to GOOD HEALTH for 1885, to be found among our advertising pages.

Renew your subscription for 1885 at once.

☞ A subscriber sends us the following cheering commendation of our journal: "I greatly enjoy reading GOOD HEALTH, to which friends have kindly made me a subscriber. It is so practical and interesting I wish it were read and heeded by every household."

☞ A Sanitary Convention will be held at East Saginaw, Mich., Dec. 2 and 3, under the auspices of the State Board of Health. Papers will be read and addresses made by a number of prominent sanitarians, and it is believed that the meeting will be in every way a decided success.

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