The Health Reformer.

NATURE'S LAWS, GOD'S LAWS; OBEY AND LIVE.

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BIBLE HYGIENE.

BY ELD. JAMES WHITE.

THE Bible, from the earliest record of man's creation in Genesis, to the closing Revelation which brings to view his triumphant redemption, exalts man as

THE GLORY OF THE CREATOR.

This is seen in the words of Jehovah to his Son, in the beginning, "Let us make man in our image, after our likeness;" and is no less apparent in the declaration in the last book of the Bible from the four and twenty elders, as they worship at the throne of Heaven, "Thou art worthy, O Lord, to receive glory, and honor, and power; for thou hast created all things, and for thy pleasure they are and were created."

Whether it was man's moral character, his physical form, or both, that was made in the likeness of God, we leave with theologians to discuss. In either case, we behold man as expressed in David's song of praise to the beneficent Creator, "Thou hast crowned him with glory and honor; thou madest him to have dominion over the works of thy hands. O Lord, our Lord, how excellent is thy name in all the earth." The goodness of God in creation, in the gift of his Son for the redemption of fallen man, and in the ministrations of holy angels and the gift of the Holy Spirit, through which his word has been revealed, is feebly expressed in these words of the beloved John, "God is love."

The record of his creation, his ample provisions and glorious surroundings in Eden, fully attest the love of God to man, and the glory he would confer upon him in this life. "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul. And the Lord God planted a garden eastward in Eden, and there he put the man whom he had formed. And out of the ground made the Lord God to grow every tree that is pleasant to the sight, and good for food."

LABOR A BLESSING.

Man was formed for activity. "And the Lord God took the man, and put him in the garden of Eden to dress it and to keep it." It was the design of the Creator that he should derive his chief delights of existence from those pursuits that would demand physical and mental action. Before sin entered happy Eden, the representatives of the race were put into the garden, "to dress it and to keep it," where their minds could trace, in a thousand varied forms, the perfections and power of the divine creative Hand. In the estimation of God, and his Son, and of the holy angels, labor was honorable and for the good of man, even for sinless hands in holy Eden.

After the transgression, God said to Adam, "Cursed be the ground for thy sake." The earth was cursed in consequence of Adam's sin. But the fact that he was to eat his bread by the sweat of his face was not the curse. Increased labor was simply a consequence which was for his best good in his fallen condition.

"God is love." We must not view the curse in the light of retaliation on the part of the gracious Creator. We call in question that lazy theology that makes work the sum of the curse, and looks forward to the time when immaterial spirits shall go to an immaterial Heaven to get rid of work, and sit on the edge of a cloud and sing hallelujahs to all eternity.

But labor, first instituted in holy Eden, is for man's best good in his fallen condition out

of Eden. And as for the future, give us the tangible inheritance of the saints in light, in the earth redeemed from the curse, and happy Eden restored upon it again. There the redeemed, in all the gladness of immortal life, will enjoy the delights of activity of body and mind in a world of inexhaustible variety, bearing the impress of both the creating and the redeeming hand.

GOD IS LOVE.

And in love he created our first parents, and richly endowed them with physical and mental power. This was for the glory of the Creator, and the happiness of the creature man. God is the author of life, health, strength, and true happiness. Death, sickness, sorrow, physical and moral wretchedness, are the legitimate offspring of the transgression of moral and natural law instituted by the divine Author of all good.

"God is love." He is not the author of sickness, sorrow, and death. In a general sense, sickness is no more a necessity than sin. At a funeral, a sensible minister once made the startling assertion that it was a disgrace to die. He did not mean that death was avoidable at a good old age; but that its existence, even in ripe age, was the result of the first great transgression on the part of the representatives of the dying race. And he might have added that premature death, in childhood, youth, or in the strength of middle life, was the result of continued transgression.

"God is love." He is not the author of our woes. And it is a stupid reflection upon the divine character to lay our sicknesses, pains, bereavements, tears, and sorrows, to the mysterious dealings of his providential hand. It may, however, be fashionable, on funeral occasions, for ministers, in their words of condolence with the bereaved, to charge the progress of disease and the ravages of death, in those who should live to bless society, to the wise dealings of the loving Disposer of events. They may gravely state that for very good and wise reasons, he has removed dear friends from us by death. Fashion and custom may dress and decorate corpses of the youth with muslin and flowers. Taste and expense may adorn our cemeteries with the sculpture of art and the glory of nature; yet we hear the voice of revelation and of reason declaring that death is the reward of sin, and is man's dreaded foe. Poets may sing:—

"Why do we mourn for dying friends?
Or shake at death's alarm?
'Tis but the voice that Jesus sends,
To call them to his arms.

"Why should we start, and fear to die?
What tim'rous worms we mortals are!
Death is the gate to endless joy,
And yet we dread to enter there."

And yet the great apostle, when speaking of the resurrection of the just to the joys of eternal life, says, "The last enemy that shall be destroyed is death." 1 Cor. 15:26.

"God is love." And his revealed will relates to man's well-being in this life, as well as to that which is to come. God does not take pleasure in the miseries of this mortal state. He delights in the happiness of obedient intelligences in this world, as well as in the future joys of the redeemed in the world that is to come. The Bible teaches how to live so as to enjoy that health and happiness in this life, favorable to securing eternal life. True godliness does not neglect the laws of our present being, and dimly view only the immortal existence. It is profitable unto all things. It gives promise of the life that now is, and of that which is to come.

The religion of the Bible was not intended simply as a garment to put on, to cover moral and physical impurities. It was designed to convert the entire man, soul, body, and spirit, that he might be pure within and without. That bogus piety which would give license to consecrated gluttony, devoted lust, and sanctified filthiness, is simply a burlesque upon the religion of the Bible.

DURING the progress of a "Union Temperance Conference," held in England a few weeks ago, one of the speakers, Rev. C. Garrett, urged that, even if an occasional glass did not harm some who took it, the example might prove exceedingly harmful to others. No man liveth to himself. He (Mr. Garrett) was fond of climbing. He had pretty strong limbs and a cool head. A few months ago he was climbing a precipice—he thought he could hold on with safety. When at a dangerous point, he heard a voice which almost paralyzed him; it was the voice of his own boy, who had caught sight of him, and who was following not far behind. The voice said, "Papa, take the safe path, for I am following you."

GENERAL ARTICLES.

WE CAN MAKE HOME HAPPY.

THOUGH we may not change the cottage
For a mansion tall and grand,
Or exchange a little grass-plot
For a boundless stretch of land—
Yet there's something brighter, dearer,
Than the wealth we'd thus command.

Though we have no means to purchase
Costly pictures rich and rare—
Though we have no silken hangings
For the walls so cold and bare—
We can hang them o'er with garlands—
Flowers blossom everywhere.

We can always make home cheerful,
If the right course we begin;
We can make its inmates happy,
And their truest blessings win;
It will make the small room brighter
If we let the sunshine in.

We can gather round the fireside
When the evening hours are long;
We can blend our hearts and voices
In a happy, social song;
We can guide some erring brother,
Lead him from the path of wrong.

We may fill our homes with music,
And with sunshine brimming o'er,
If against all dark intruders
We will firmly close the door—
Yet, should evil shadows enter,
We must love each other more.

There are treasures for the lowly
Which the grandest fail to find;
There's a chain of sweet affection
Binding friends of kindred mind—
We may reap the choicest blessings
From the poorest lot assigned.—*Sel.*

Physiology and Hygiene.

CHAPTER I.

WE need not devote any space to the consideration of the importance of this subject, since it is now so generally recognized that the relations of general and personal hygiene, to both individual safety and the general welfare of society, are such as to attach to the subject the most vital interest. The study of the conditions of health and the causes of disease is no longer left exclusively to the medical profession. Public hygiene is becoming a subject which demands and receives attention in legislative halls; and the study of the laws of health is fast coming to be an established requirement in the curriculums of institutions of learning. This general movement is certainly very gratifying, although it is to be regretted that in most instances false principles still maintain a controlling influence in the enactment of sanitary laws, and still hold sway in determining the character of the instruction which is imparted in our schools and colleges. It is, indeed, chiefly owing to the fact that all of the popular text books on the subject contain more or less of error intermingled with important truths, that this series of articles has been commenced. Our aim will be to present all that pertains to the subject which is true, practical, and interesting, while seeking to avoid all errors, no matter how pleasing or popular they may be. We shall of course make no attempt at originality except in manner of presentation, which is about as much as can be done by any writer on a subject which has been so often and so ably handled by the greatest minds of the age.

DEFINITIONS AND GENERAL CONSIDERATIONS.

PHYSIOLOGY is that science which treats of the functions of living beings. The word is derived from two Greek words, φυσις, nature, and λογος, a discourse. HYGIENE (pronounced hy-ji-een') is the science of preserving health. It is derived from the Greek word ὑγιεια, meaning health. It is evident that a knowledge of the functions, the integrity of which must be preserved, is essential to an understanding of the art of preserving the same. Hence, we shall devote no inconsiderable portion of our space to the study of the physiology of the various organs of the body in immediate connection with the hygiene of the same. But the function of an organ is largely dependent upon its structure. So, also, the rules of hygiene are very frequently based upon what is known of the form and composition of a part necessary to insure health. It is then apparent that a certain amount of attention must be given to the form, structure, and composition of the body. This branch of the subject is termed ANATOMY, the word being formed from two Greek words, ανα, through, and τομη, a cutting; literally signifying dissection, the process by which a knowledge of anatomy is acquired.

Physiology deals only with living things. Every plant, and every species of animals, has each its particular and peculiar physiology. Inorganic substances, as gases, minerals, etc., have no physiology. The physiology of plants is called vegetable physiology; that of the lower animals is animal physiology; and that of man, the highest of the animal kingdom, is human physiology. We have the same distinctions respecting hygiene and anatomy.

WHAT IS LIFE?

At the very outset of every investigation of the phenomena of life, we are met by that ever-recurring, yet unsolved problem, What is life itself? We see the outward manifestations of a mysterious something, unknown, unnamed, even, which pervades and animates all living things, from the lowest form of vegetable life, the fungus growing on the surface of a stagnant pool, to the most brilliant example of human genius; common alike to each, and to every varying form and grade of organization between the two extremes, differing only in its manifestation. It is in vain that we seek to invade the secrecy of nature's laboratory, and, by thus surprising her at her work, obtain the key to this vexed problem; for we always meet with total defeat, the very attempt destroying the object which we would scrutinize.

Were we to attempt to notice the various theories which have at different times been offered in answer to the question we are considering, we should be obliged to summarize the views of every philosopher from Aristotle down to Descartes, then omitting the numerous conceits of more modern speculators. This we have neither the inclination nor the ability to attempt, and so will content ourselves with considering the two chief views of the question which are at present before the world.

The great majority of those who entertain any opinion upon the subject hold that the wonderful series of phenomena which we term life are the result of vitality or vital force. However satisfactory this view may be, to those who hold it, a very brief scrutiny of it should be sufficient to convince any one that it is nothing more than a tacit confession of ignorance; it is an attempt to name a thing without describing it, or even determining its existence.

Another class of thinkers, more philosophic, perhaps, certainly more venturesome, have advanced a theory which they term evolution. According to their supposition, for it is no more than this, man is simply the highest, most complicated, of a series of chemical compounds, the complicity of which has been attained by an ascending series of chemical transformation reaching from the lowest inorganic atom up to the present wonderful development. The evolutionist sees no necessity for an independent, vital force, nor for the supervention of any creative agency in the formation of even the most delicate of living organisms. He claims that matter possesses an innate law of progressive development, by means of which every plant and animal, human as well as brute, have been evolved from senseless, lifeless clay.

We cannot here enter into a review of the arguments upon which the theory last mentioned is based. It is certainly very interesting, and well worth the consideration of those who laugh at the mere mention of Darwinism; but to us the hypothesis appears like a huge and very symmetrical pyramid, resting upon its apex instead of the broad base. It is a very significant fact that Mr. Darwin himself is manifestly unwilling to accept the legitimate conclusions from his own premises which Bastian and others have elaborated into a theory popularly known as "spontaneous generation."

As we are evidently unable to do more, we can do nothing less than to confess our ignorance and utter inability to solve this mighty problem from the data afforded by our present knowledge. Notwithstanding, however, our ignorance of the essence of life, we are very well acquainted with the conditions required for its healthy manifestation; and these we may study with interest and profit.

ORGANIC AND INORGANIC SUBSTANCES.

Before entering upon the details of the subject, we wish to call attention to the essential differences between organic and inorganic matters, as the terms organic and inorganic and their synonyms, vitalized and non-vitalized, and organized and unorganized, will be so frequently employed.

1. An organized body is an assemblage or congeries of organs, each of which has its particular function to perform. Thus, a tree has its leaves, bark, and roots, all of which are essentially different from each other, and necessary to constitute a perfect tree. A horse has a head, a stomach, and a pair of lungs, each of which has a special part to act in maintaining the existence of the animal. Unorganized bodies, or inorganic substances, are essentially alike in all their parts. They are simply collections of similar particles. If a rock is broken into small pieces, each will possess essentially the same characteristics as were possessed by the large mass.

2. Organized bodies usually present rounded or curved outlines. Unorganized bodies, when solid are commonly sharp and angular in contour, abounding in straight lines and flattened surfaces.

3. Organized bodies are usually cellular in structure. Unorganized bodies are never cellular, and usually crystalline under favorable circumstances.

4. Organized bodies require nutrition to repair the wastes which their tissues are con-

stantly suffering. Unorganized bodies require no food.

5. Organized bodies grow by assimilation of particles taken into their interior. Unorganized bodies grow by accretion, or the simple mechanical deposition of like particles upon their exterior.

6. Organized bodies are by nature limited in size. Unorganized bodies grow without any other than incidental limit.

7. Organized bodies pass through the several stages of development, growth, decay, and death. Unorganized bodies undergo none of these processes.

8. Organized bodies are capable of reproducing themselves. Unorganized bodies do not possess this power.

The chief distinctions between animals and plants are these :—

1. Animals have nervous sensibility or sensation ; plants have not.

2. Animals possess the power of voluntary motion ; plants do not.

3. Animals require oxygen to support respiration ; plants respire carbonic acid, at least during the day.

4. Animals subsist upon food which has been previously prepared or organized for them by plants ; plants subsist upon inorganic substances.

Although the distinctions between organic and inorganic, or organized and unorganized bodies, are usually very distinct, it is impossible to draw with absolute exactness the dividing line between the organic and the inorganic world. The same is true of the distinction between plants and animals. The character of the food will, however, usually decide the character of even the smallest organisms ; as we shall see in the next chapter.

THE BODY COMPOSED OF LIVING CELLS.

Although the human body is a unit, it is only because of the wonderful harmony which exists between its several parts ; for it is wholly made up of minute cells, each of which possesses an independent life of its own. A small piece of skin appears to the unaided eye to be a truly homogeneous structure ; but when placed under the microscope, it is found to be made up of myriads of minute, rounded bodies, each of which is as truly an animal as though it possessed eyes, ears, a mouth, and organs of locomotion, although it has none of those organs. These microscopical objects are capable of motion, however, and they may often be seen to move and to undergo many curious changes. So great is their vitality that they may be removed from one person to another without destruction ! It was by taking advantage of this fact that a young French physician recently made the remarkable discovery of skin-grafting. He found that large, otherwise incurable, ulcers might be quickly healed by placing in their centers little particles of skin removed from some other part of the body, or from another person. A year or two ago a young lady's scalp was thus replaced by skin from the arms of her physician and her lady friends, the original having been torn away by machinery. It is also a remarkable fact that these wonderful little bodies retain their life for some time after the death of an individual. It is found that skin removed from recently amputated limbs will grow as well as that taken from living persons when applied to an ulcerated or abraded surface.

PROPERTIES OF CELLS.

The cells found in different parts of the body vary greatly in size and form ; but they have certain general characters which are common to all. These are a sac, or investing membrane, a nucleus, often a nucleolus, frequently a number of minute granules, and nearly always a mass of jelly- like matter called protoplasm, which occupies the whole of the interior of the cell which is unoccupied by the nucleus or granules.

Fig. 1.

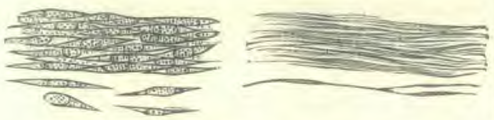
Cells from the Spleen.

In Fig. 1 are seen several cells, all of which are of the same kind, being in different stages of development. The cell which occupies the center possesses the four main characters of cells in general. The dark border represents the cell wall or sac, which is a delicate transparent membrane, readily ruptured by any degree of violence. The inner dark circle is the border of the nucleus of the cell. The white space between the two represents the jelly-like substance, or protoplasm, which is the living matter of the cell. The nucleus is seen to be nearly filled with a dark body, which is the nucleolus. The cell at the right of the central one has two nuclei, each of which contains three small granules. The large cell immediately below the central one has four nuclei, the three larger of which contain each a single nucleolus. The oval cell at the top of the cut has a single nucleus with three nucleoli. Thus they vary in details, exemplifying the well-known law that nature never produces duplicates ; for, notwithstanding the apparent sameness in the operations of nature, she never makes two things exactly alike.

Fig. 2. *Fig. 3.*

Figs. 2 and 3 represent different varieties of cells. The round cells in Fig. 2 are filled with small granular masses, the spaces between the cells being occupied by small particles greatly resembling the granules. These cells have no nuclei or nucleoli. Fig. 3 is a representation of caudated cells which are filled with granules. Most of them are also nucleated.

Fig. 4. *Fig. 5.*



Figs. 4 and 5 exhibit still other forms of cells. In Fig. 4 are seen greatly elongated cells, which are also granular and nucleated. In Fig. 5, the long spindle-shaped cells of Fig. 4 have become still more elongated, and thus converted into fibers.

These wonderful little bodies are in a state of ceaseless activity. By them are wrought all of the many curious vital changes which take place in the body, from the separation from the blood of worn-out material to the elaboration of brain substance, a tissue destined to perform the highest functions possible to mortals.

Every cell, like all other living things, passes through all the stages of birth, development, growth, and final decay and death. They possess the power of reproduction, and exercise it in a wonderful degree, as we shall see presently. But one of their most remarkable properties is that which enables them not only to produce and reproduce themselves, but to manufacture, from the same simple material, an infinite diversity of objects.

Fig. 6.

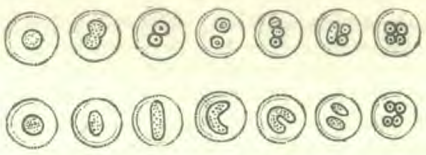
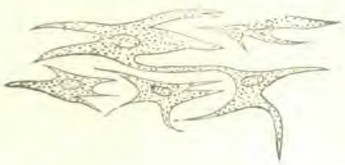


Fig. 6 is intended to show how cells are multiplied or reproduced. By a careful study of the cut, the whole process will be understood. In the upper row of cells the first cell at the left is seen to have a dark nucleus. In the next cell this nucleus has become much elongated, and there is an indentation upon each side. In the third, it will be noticed that a line of separation has formed between the two portions, and now each portion has acquired a nucleus or nucleolus of its own. In the fourth, the separation has become complete. In the fifth, a third nucleus has appeared, and in the sixth, one of these is seen in process of separation; while in the seventh, the original cell is found to possess four nuclei instead of a single one as at first. In a short time, one of these newly formed nuclei escapes from the parent cell and becomes a new cell, in due time repeating the process by which it was produced by its predecessor. The second row of cells illustrates the same process taking place in a somewhat different manner.

Fig. 7.



In Fig. 7 is seen the manner in which the nuclei are formed into new cells. It will be noticed that the two larger cells are joined by a slender band. By a process of gradual contraction, the nucleus seen in the smaller of the two has been crowded off into a compartment by itself; and, presently, the narrow band of connection being broken, the new cell will be cast off as the other three smaller cells seen in the cut have been. The process of cell multiplication sometimes takes place with almost incredible rapidity. In a microscopic plant, known as the protococcus, as many as 100,000 cells have been known to be produced in a single minute.

Fig. 8. *Fig. 9.*

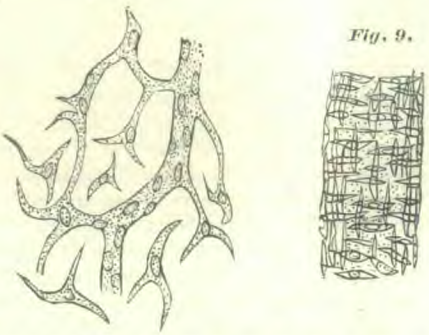


Fig. 8 is an illustration of the manner in which cells unite by their projecting arms, and thus form capillaries. Fig. 9 shows how a blood-vessel is formed by the intimate interlacing of long cells. Some of the nuclei are still visible.

Cell life is common to plants and animals. A plant, like an animal, is simply a mass of living cells. Plants possess a great variety of cells, as do animals. Indeed, every different tissue, animal or vegetable, has its characteristic cells. Some of the cells of certain plants so nearly resemble those of the human body that even the microscope cannot detect any difference. The same is true of the cells of many of the lower animals, though this is less surprising.

Perhaps some of our readers will be sufficiently interested in the study of cell life to obtain a microscope, and devote some time to its use. Any one who will do so will find his time very profitably as well as pleasantly spent. The works of Beale, Frey, and Stricker, will afford all the necessary aid by way of instruction and illustration.

Hygienist Abroad.

BY ELD. J. N. ANDREWS.

FROM LONDON TO PARIS.

WE left London October 12 about 8 P. M. for New Haven on the English Channel. We were about two hours in reaching that port. It was too dark for us to see much of the town or harbor. It seemed, however, to be but a small village, and the harbor itself to be an artificial port, made by dredging out the mouth of a small creek. We had to wait five hours for the tide, so that there could be water enough to enable us to get out to sea. The English Channel has a bad name with travelers as one of the worst places for seasickness. It seems to me, however, that the true ground of complaint is not with respect to the character of the Channel, but of the steamers by which it is crossed. Here is a line of steamers from New Haven to Dieppe on the most direct route between London and Paris that is of so wretched a character that in America it would not be tolerated at all. My party, being weary and sleepy, were able to spend the night in the cabin; but the air was so offensive that I chose to walk the deck. We experienced no other inconvenience than that which was due to the ill accommodations of the boat. We reached Dieppe about 10 A. M., having been seven hours on the way. This is a quaint looking old town. Its outer harbor is at the mouth of a small river, and when the tide is out, the water in it is very shallow; but back of this it has a more capacious harbor, formed by a wall of hewn stone with a lock. When the tide fills the outer harbor, vessels of considerable size can enter and be taken through the lock into the inner harbor, and the lock being closed, the inner harbor remains filled with deep water.

The country from Dieppe to Paris is not in appearance as fertile as England. It is much of the way highly cultivated, but the soil is often very gravelly or sandy. The deep living green of the English fields is not equaled by this part of France. But northern France, or Normandy, must always possess a peculiar interest to all the Angle-Saxon race, whether in England or America. It was from this district that William the Conqueror invaded England and wrought permanent changes in its government, its customs, and its language.

At Rouen we passed through or under a considerable mountain, and then came into the valley of the Seine. The valley of the Seine is beautiful. Much of it is in vineyards. As we approached within a few miles of Paris, I was surprised to find tracts of what seemed to me very barren land that had been abandoned to scrub oaks. Perhaps the oaks had been planted on that sandy soil to grow timber; but it looked to me like a tract of worthless land that had been abandoned to oak bushes.

We had to pass the inspection of the custom house officer at Paris, though we had previously been examined at Dieppe. Tobacco and cigars were the special objects of search, as in Liverpool. Were it the object to exclude these vile things from the several countries which institute this strict inquiry, as the Chinese once sought earnestly to exclude opium from China, I should pronounce the attempt most praiseworthy. But to the discredit of human nature, it must be confessed that none of these governments have any such desire. They are glad to have tobacco brought into their countries; for they are able by means of it to raise a large part of their revenues. Men will pay for the support of their vices, and the revenue laws are framed with especial reference to this fact. Speaking of tobacco reminds me of the London cigars. In that city the smokers use a kind of cigar which I have never seen elsewhere. Something is mixed with the cigar which gives to its fumes a stench so horrible that ordinary tobacco smoke in contrast with it seems to be almost a perfume. I suppose it is something that gives an additional stimulus to the cigar; but its sulphurous fumes seemed to me a fit emblem of the atmosphere of hell.

Paris is a city of wonderful beauty. It has never been a Protestant city; and so it has not a religious history of interest to me, like that of London. The first subject of inquiry with me was with reference to the places where prominent Huguenots were murdered in the massacre of Saint Bartholo-

mew's eve in 1570. The next was to visit the place where the king and queen, and such a vast multitude of the people, were beheaded in the reign of terror. The guillotine stood directly in front of the palace of the Tuilleries, and in plain view of it, on the farther side of the garden of that palace. The spot is midway between the palace and the Arch of Triumph, which arch commemorates so many French victories. But it must have been an unpleasant memorial to the monarchs who have since ruled in France. It certainly seems as if the massacre of the Huguenots, when the king with his own hand fired on his unoffending subjects, was in God's retributive justice for national sins in some way directly connected with the events of the still more dreadful reign of terror, when the king and nobility of a later generation were themselves most cruelly murdered. The palace of the Tuilleries, the scene of the triumphs of the Napolean dynasty, is in ruins—fit emblem of the end of that glory which is derived from success in wickedness.

FROM PARIS TO NEUCHATEL.

Our sojourn in Paris was very brief. We had, however, an opportunity to see some of its places of historical interest, and some of its public buildings, We provided for ourselves in Paris by hiring two comfortably furnished rooms at the Hotel de Belgique for seven francs, or about $1.40 per day, and we provided our own food from the provision stores, which was simply bread and fruit. The expenses of our party of four were therefore small, and our fare much more to our minds than any we could have procured at the table of the hotel. For some reason, perhaps it is to secure a liberal amount of crust, many of the baker's loaves in Paris correspond in length and in size to the arm of a man. In that city, therefore, if nowhere else, bread may be called the staff of life.

Many of the streets of Paris are of remarkable beauty. They are wide, clean, well-paved, straight or gently curved, and on either side are lined with splendid buildings. Our hotel was in the immediate neighborhood of the Palais Royal, the Tuilleries, and other costly structures which have been used as royal residences in former years. Here men who have not feared God have been in great power, and have spread themselves like green bay trees; but they have passed away.

The banks of the river Seine are walled with hewn stone in such a manner as to give it a most beautiful appearance. It is crossed by many bridges of stone that are of elegant construction, and there are frequent stairways, wide and of noble workmanship, leading down to the water. At these points, the small steamers which navigate the river call to receive or land passengers.

The cathedral of Notre Dame is a venerable structure, erected upon an island in the central part of the city, and is of especial interest to visitors. Its front is terminated by two large square towers 280 feet in hight, and ascended by 380 steps. The view of Paris from the top of these towers is very fine. The interior of this ancient cathedral is filled with objects calculated to impress the mind of a devout Catholic, and, indeed, they are not without interest to every thoughtful person. In this church you stand in the midst of the events of past centuries. Here are memorials of eminent men, some of whom were noble and worthy, and others were deserving of no word of praise. The cathedral is built in the form of a cross, and the hight from the floor to the roof is 102 feet. The Catholic service which we witnessed in this church strikingly resembled the high church Episcopal service which, on one occasion, we attended at Saint Paul's in London.

The contrast between London and Paris is very great. In London it is all business; in Paris it is pleasure, fashion, and display. Many of the streets of London are almost a solid mass of carriages, wagons, carts, and vehicles of every kind, nearly all heavily loaded, and it is with much difficulty that passengers can cross these streets. In Paris it is quite otherwise, but many splendid equipages may be seen upon its streets. London is the center of the world's commerce, while Paris has no commerce at all. But Paris is the city which gives law to the fashionable world, and those who make money elsewhere delight to spend it in Paris. And if men wish to spend money in gaiety and in fashionable dissipation, this is the best place in all the world for the purpose. Paris, as the queen city of fashion, is a fit emblem of the world that now is. If men can be satisfied with the present world, Paris has within itself all that such persons can ask. The people of Paris are passionately fond of that glory which comes from success in war. And in this they are not unlike the rest of mankind. To illustrate and commemorate the many victories won by French skill and valor, stands the lofty Arch of Triumph in the place called the place of the star, because so many avenues start from this spot like rays of light from a star. The names of these great victories are inscribed upon this arch, and some of them are represented upon it in sculptured figures. But, as if to teach, not Paris only, but all mankind, the vanity of this kind of glory, it happened that in 1871

the victorious Prussians marched under this very arch. The French have taken Berlin, and the Prussians have taken Paris; but neither nation has learned that true and lasting glory comes to men not in conquering others, but in conquering themselves. "He that is slow to anger," said the wisest man, "is better than the mighty; and he that ruleth his own spirit, than he that taketh a city."

Our journey from Paris to Neuchatel occupied from 3:30 P. M. till about 11 A. M. of the following day. We were interested in the scenery while the light of day continued. France does not resemble any part of America that I have seen. Every one has noticed in pictures of European rural scenery how different in appearance are the houses, the fields, the fences, and the farming implements, from those in America. In general, these pictures give a very accurate representation of what they set forth—the villages with streets so narrow that carriages can barely pass each other between the buildings, and with so many zigzags in them as to make rapid driving impossible; the houses, generally of stone, with somewhat of a cheerless appearance, and with roofs very steep, but not pleasing to my eye like the roof of an American house; the various implements in use so much heavier than used by Americans; and the fields either fenced with living hedge, or not fenced at all, but showing a high state of cultivation, and often in large tracts devoted to the grape vine.

The Jura mountains, through which we entered Switzerland, present some very grand scenery, though they do not compare in hight with the Alps. But from our car windows we could look down in some places many hundred feet of nearly perpendicular descent; and as we were thus taken along the brink of the precipice, such were the curves in the track, we could see the tunnels ahead of us through which we were about to pass. When we reached the east side of this mountain chain, we were in sight of lake Neuchatel, and at a considerable distance beyond it the Alps were in plain view, towering up toward heaven, with their mantles of white upon them.

Neuchatel is a city of some 15,000 inhabitants. It possesses a situation of great natural beauty. Behind it the mountain rises abruptly more than 2000 feet; in front of it lies the beautiful lake; and all the eastern horizon, from north to south, is walled by the snow-clad Alps. The whole valley, and the hillside for several hundred feet above the lake, is devoted exclusively to vineyards. These are surrounded by high walls, that can only be scaled with difficulty.

The principal church in the city is a large, stone structure that was in use before the time of the Reformation of the 16th century. It is a noble building, and is in a good state of preservation. It was of course once a Catholic church. Many of the readers of the REFORMER are familiar with the fact that Carlstadt thought the images should be removed at once from the churches when the people had received the doctrines of the Reformation; and that Luther thought him rash in this thing, and contended that they should be left till the people of their own accord thought best to remove them. How well Luther's doctrine in this respect has worked elsewhere, I cannot yet state from personal observation; but this church at Neuchatel has not yet removed all of hers, nor do I think it likely that she will for some time to come.

Neuchatel, Switzerland.

That Package.

ED. REFORMER:—I went to town the other day, and the druggist, a dapper little fellow, politely presented me with a bundle for the "gude housewife," which, upon examining, we found to be made up of medical almanacs, bills, circulars, etc., etc., which in the aggregate would well compare in size with the "great flying roll" of the prophet.

First on the file is a 40-page family almanac, setting forth in a taking way the indispensable virtues of "Hostetter's Celebrated Stomach *Bitters*"—good for all zones and peoples, and just the thing in sickness and in health. Well, the writer has jogged along some forty years, amid the ills of this mortal state, without using these "bitters," which the proprietors say are composed of the finest liquors for the "stimulating basis," and would frankly advise others to do so too, and to let this elixir of Satan alone, lest peradventure they lie down in sorrow in a drunkard's grave.

Next up is "Walker's California Vinegar Bitters Almanac," in flaming colors, all the way from San Francisco, as full of puffs and bombast as it can be crammed. The proprietor pathetically exclaims, "Save your health and money by the use of Dr. Walker's Vinegar Bitters." Reader, for one, I shall just let these intoxicating bitters alone, and save my health and money by *not* using them.

No. 3 is the "Radway Almanac and Guide to Health" (who has not seen the cabalistic R. R. R.?), from that great emporium of patent medicine nostrums, New York City. It has an affecting vignette of a woman with outspread angel wings, having

a pill box in one hand and a bottle of R. R. syrup in the other, which she is offering to a group of cripples and invalids, who look up with wishful eyes as if they expected a blessing. Deluded souls! they had better all subscribe for the *Reformer*, adopt hygiene, and cast that miserable R. R. trash to the moles and the bats.

Now comes the "Centaur Almanac," with a strange creature on the title page, which is half man and half horse. This mythological being is fabled to be the god of medicine, Esculapius by name, and ages since to have compounded a recipe which is equally good for man and for beast. This was recently discovered by a wise professor in an old Greek MS., and is now being fabricated by an enterprising firm in New York! Shall we not believe all this, and use the Centaur remedies? These almanac-makers swear that they always tell the truth!!

No. 5 is the great "Hoofland Almanac and Family Recipe Book for Everybody's Use," which comes from the city of "brotherly love." It says the German Bitters will "effectually cure" (note these two mighty words) "liver complaint, jaundice," etc., etc., "and all diseases arising from a disordered stomach or bowels." By the way, we are informed that the purest Santa Cruz rum is used in getting up their tonic, which makes it the "most *pleasant* preparation ever offered to the public!" Reader, that is significant—beware of these liquor tonics, lest your experience and end be a "bitter" one indeed.

Another one is "Merchant's Gargling Oil National Almanac," setting forth in words as smooth as oil the wondrous worth of their remedies, "equally good for man or beast," and may be used inside or out. This is certainly convenient, but who knows what the greasy stuff is made of? The writer once applied a patent embrocation to his stomach, and for two hours he was in mortal agony as a consequence. One of their recipes for children's physic is: "Mix one dram of CALOMEL, five drams of sesqui carbonate of soda, and ten drams of compound chalk, together. Dose, five grains. Use as a purgative for children teething." Now if their oil *curare formale* is after this recipe, it would be quite appropriate for the throat of a volcano.

No. 6 is "Pond's Extract," a pamphlet in the interest of a new proprietary remedy which a stock concern are endeavoring with might and main to puff into notoriety. This "great remedy" is based on the virtues of *Hamamelis*—the common Witch Hazel. Perhaps there is something to this, for the witch hazel is a "remarkable shrub." Certain persons are said to be able to take a little crooked witch hazel stick, and with it to be able to discover a vein of water in the ground! If it can do that, perhaps it is equally good in the manufacture of a medicinal nostrum.

Next comes "Mrs. Winslow's Domestic Receipt Book," with her Soothing Syrup, etc. Others have decided on the *de*merits of this wretched preparation, one physician affirming that there was scarcely a remedy so destructive of infant life as this syrup. No doubt it has "soothed" thousands of little children so effectually that they will never cry, or even breathe, again.

"Pierce's Memorandum and Account Book," comes next in the bundle. This is styled, "A Present from the People's Medical Servant." His remedies are evidently cutting quite a figure in the world; for he has built up a "World's Dispensary" in Buffalo, where he seems to be doing a good thing, at least in the money line. There is at least *one* good thing to this book—every other page is blank. Would not the world be the better for it if these trashy prints were *all* blank?

Here follow circulars, etc.; one from Dr. Fitler, of Philadelphia, who has made rheumatism a study for forty years. He, also, has a GREAT REMEDY, and, of course, great means. But, reader, when the writer has the rheumatism he means to try the electrical bath *first*.

Another is "Dr. Fowler's Medical Journal," from New York, in which he proposes to cure all the ills that human flesh is heir to, with "One Dollar a Bottle." In fact, one dollar a bottle is the main thing on the sheet, which black ink makes very prominent.

Another still, from Dr. Ayer, Lowell, devoted to Pectoral and Pills. He wants all people to try his stuff. So, reader, as the spider said to the fly,

"Will you walk into my parlor?"

And yet another, "Cutler's Pocket Inhaler" and "Inhalant," from Buffalo, for the throat and lungs, full of puffs and accounts of great things wrought. Shall we not believe all he says?

Here is a flat sheet with the pathetic appeal to "Stop that Terrible Cough!" etc., with "Idaho Gum Crystals," which are "warranted to give entire satisfaction." No doubt the maker will be *satisfied* if his little tid-bits are purchased; further than this, deponent saith not.

Another one is devoted to "Dr. Kermott's Celebrated Vegetable Medicines"—five varieties, "positive and never-failing," etc. The doctor says he has *fifteen bushels of pills* on hand. Here is business, certainly, for some-

body. But hold! the next line says, "No harm can arise from their use in *any quantity*."

One more still, "Dr. O. Phelps Brown's Vermifuge Pills and Ointment." He thinks the human family greatly in need of his aperient—"the best remedy in the world;" "effectual in every case;" will do wonders "in one minute of time," and so on, and so forth, *ad infinitum*.

But hold, reader, this thing is played out. Are you not disgusted with this farrago of the patent-medicine mongers? The subscriber is, and will just pitch the rest of his bundle into the rag-bag for the ragman's cart, and save time and strength for a better purpose. VERITAS.

Limit your Wants.

LORD BOLINGBROKE, in his "Reflections upon Exile," says: "Our natural and real wants are confined to narrow bounds, while those which fancy and custom create are confined to none." Young men who are just entering upon life, and forming the habits which are likely to adhere to them to its close, will do well to treasure up in memory these true and instructive words of one of England's finest writers and most philosophic statesmen: "Our natural and real wants are confined to narrow bounds." It is surprising how little it is that is absolutely essential to man's existence, and, if he will take an intelligent and considerate view of life, to his comfort and happiness. Intellectual enjoyments are comparatively cheap. The cultivation of the mind, which affords the highest and the only enduring satisfaction, can be pursued on an income quite insignificant for the supply of luxuries. Our physical wants are very few, if we preserve our tastes simple, as they are by nature. To eat, to drink, to exercise, to sleep, to keep warm, and to be sheltered: a small sum will supply all these necessities. The pleasures which are pure, and which tend to our improvement, are within the reach of almost every one. But the wants which fancy and custom create, as Lord Bolingbroke well says, are confined to no bounds. It is against these that young men on the threshold of life should sedulously guard. Beware of luxurious and expensive habits. The gratification of them may cost you much of the labor and time which, if given to intellectual cultivation, would be far more conducive to happiness. It is easy to do without that which you have never indulged in. It is hard to leave off habits, however extravagant and absurd. When you are to decide about adopting a mode or style of living, consider well whether it is certain that, without inconvenience, you will be able always to preserve it. The only safe rule is, to keep your wants within narrow bounds.—*Sel.*

The Better Way and the Best Way.

WHILE visiting at the house of a friend, not long since, a little boy said to me:—

"Do you know what the REFORMER says?"

On what? I inquired.

"The REFORMER says it is better to eat butter on our bread than to cook it in our victuals."

Yes, I replied, and I knew that before. But I know of a better way still.

"What is that?" he queried.

The best way is not to use it at all. Now which way will you take?

"Well," said he, very deliberately, "I'll use it on my bread."

A certain writer has said, "Men are but children of a larger growth." In the frankness and simplicity of children, we may often learn lessons in regard to human nature which have a very wide application.

On the subject of health reform I have known many to express the deepest satisfaction with the teachings of the REFORMER when these coincided with their own tastes and feelings. And I have sometimes thought it was mainly *because* they coincided with their own feelings. "I told you so," and "I knew this was right," are the words earnestly spoken when something is read which agrees with their own habits. But when they read something which is contrary to their habits and appetites, they are as silent as the grave. Like the little boy, they rejoice to find the "better way" when it agrees with their own feelings; but have no desire for the "best way" when it is not in accordance with their feelings, or if it involves an advance step in the way of reform.

And here we may inquire, in the words of the psalm, "Who can understand his errors?" Who knows just how far he is influenced by feeling, and how far by principle?

Self-examination, an inquiry into our own motives, is desirable, that we may build ourselves up in any reform on just and safe grounds, and, to be true reformers, we must constantly examine the ground on which we stand, not only to see if there are not further advances to make, but to guard against falling back to a lower place than we have occupied. Many health reformers hold the re-

form, in many respects, or on many points, very loosely. Lukewarmness is always insidious; ever growing, and only overcome by an effort.

A reviewing of our position, a conscientious self-examination, is ever timely and often absolutely necessary, in order that we may maintain our integrity. We need to try our motives and cheerfully to accept *the best way.*

J. H. WAGGONER.

Battle Creek, Jan. 24.

Medical Problems.

AN esteemed correspondent writes us that he is engaged in a newspaper discussion of the subject of "Food and Drink," and that his opponent has raised as an objection to his statement that "the human system could not get nutrient material from inorganic elements," the fact that oxygen and water, both inorganic substances, are essential to life. Our correspondent's opponent also claims that alcohol is food, and quotes several authorities in support of his assertion. By request we will briefly consider these two points.

1. Can the human system assimilate inorganic matter? If by assimilation is meant the conversion of crude, unelaborated material into living tissue, we answer, No. If by assimilation is understood the supplying of wastes resulting from the disintegration of the tissues consequent upon the various vital activities in constant operation in the body, we answer, Yes. The grounds for this distinction will presently appear.

Let us notice, briefly, the relations of oxygen and of water to the system. It cannot be disputed that they are of an inorganic character, for oxygen is itself one of the primary elements, and water is a chemical compound of oxygen and hydrogen. It is not true, however, that either oxygen or water can be converted into living tissue by the organs of nutrition in animals. Plants alone possess the power to do this. The use which oxygen serves in the vital economy is wholly a chemical one. It is precisely the same as that which it serves in the furnace or the fireplace. It supports combustion, or oxidation, thus burning up the waste products of the body, and by the same process developing the necessary heat to maintain the proper temperature. Oxygen enters the body an inorganic element, and leaves it in combination with carbon, constituting an inorganic, gaseous substance, known as carbon di-oxide, having never been organized, but only absorbed. Absorption is a mere mechanical process, while assimilation is a vital transformation.

The purposes which are fulfilled by water in the body are mostly mechanical. It serves as a menstruum by means of which the nutrient particles can be conveyed to the parts needing repair or development. Water is also necessary to preserve a proper consistency of the various organs. Another important use of water is to dissolve and wash away the debris of the tissues and excretions of the body. There is no evidence whatever that water, taken as such, is ever organized in the body.

It cannot be disputed that inorganic substances are constantly found in our food, and that the system can and does make a suitable use of the same, in health. We now refer to the inorganic salts of lime, soda, magnesia, potassa, etc. It has been claimed by some prominent hygienists that these salts were only the result of the destruction of the living tissues from which they were obtained. This argument can no longer be urged; for the microscope reveals to us the characteristic crystals of these salts entangled in the cells of the wheat grain and other edible seeds. These inorganic matters are not organized by the system; they are merely dissolved, and then deposited in the bones, constituting the earthy matter of those organs.

We would not omit the observation that although these salts really exist in an inorganic form in the best and purest food, nature alone has the power to supply them to the body in just the proper form and the right proportions; and, hence, any attempt to supply a fancied deficiency of mineral matter by the administration of such products would be worse than futile.

IS ALCOHOL A FOOD OR A POISON?

The discussion of this question has been a long and very spirited one. Those who claim that alcohol is a food are the advocates of "moderate drinking," as they term the habitual use of alcoholic liquors to a degree not quite sufficient to produce absolute inebriation. Medical men generally are about equally divided on the subject; some adopting one view, and others holding the opposite. This alone would seem sufficient evidence that the arguments adduced in favor of the nutritious properties of alcohol were not conclusive. In reference to the value of the scientific arguments on this question, Dr. James Edmunds, Member of the Royal College of Physicians, and also of the Royal College of Surgeons of London, said recently in a public lecture in New York city:—

"I do not know that you will get much more out of scientific men on this question

than you will get out of your own unaided senses."

What are the grounds upon which some physicians base the statement that alcohol is a food? They are substantially the following:—

1. It cannot be demonstrated that every particle of alcohol taken into the body is expelled from it in the form of alcohol.

2. The thermometer seems to indicate an increase in the temperature of the body soon after the introduction of alcohol into the system.

3. The use of alcohol seems to prevent in some degree the elimination of urea and other excretory products and the consequent loss of weight when a person is taking a quantity of food otherwise insufficient to maintain the weight of the body.

From these three propositions the following inferences are drawn:—

1. A certain amount of alcohol is retained in the body when a given quantity has been ingested.

2. The alcohol which is retained is decomposed, being oxidized, and thus assists in maintaining the bodily heat.

3. The alcohol which is retained also develops force by its oxidation, and so supplies the place of a deficiency of ordinary food; and is, consequently, a food.

Specious as this argument appears at first sight, it does not bear a critical investigation; as we shall see by considering each point in succession.

1. While it is true that it cannot be demonstrated that every particle of alcohol taken into the body is expelled as alcohol, this cannot fairly be taken as evidence that the alcohol is not wholly eliminated as such. This is evident from the fact that there are no tests for alcohol sufficiently accurate to make any experiment even approximately conclusive. All experiments of the kind necessary are rendered exceedingly difficult by the fact that the great bulk of the alcohol is expelled by the lungs and skin. It should also be remembered that alcohol may often be found in the ventricles of the brain, several days after it was taken into the system.

2. There are good reasons for believing that the apparent increase of temperature after taking a dose of alcohol, is not due to oxidation of the latter, or in any way attributable to it except as a poison. According to Dr. Parkes, Dr. E. Smith, and many other authorities, the use of alcohol always diminishes the perspiration. Says the last named author in his work on "Foods," "The hands and feet, and the skin generally, become hot and dry; and an intoxicated man in a state of perspiration would be a *lusus naturæ*." That alcohol is not a heat-forming agent is also held by many eminent authorities, among whom are Dr. Parkes, Dr. Edward Smith, and Dr. B. W. Richardson. The last named author remarks, "The well-proven fact that alcohol, when it is taken into the body, reduces the animal temperature, is full of the most important suggestions."

Again, the experimental evidence upon this point is most conclusive. Dr. Parkes observes on this point, in his celebrated work on "Practical Hygiene," "All observers condemn the use of spirits, and even of wine or beer, as a preventive against cold." He then cites the authority and testimony of Sir John Richardson, Mr. Goodsir, Dr. King, Capt. Kennedy, Dr. Kane, and Dr. Hooker, all of whom drew their conclusions from their experience in the Arctic and Antarctic regions. Dr. Carpenter states on the authority of Dr. Knüll that the Russian army not only use no spirits while on the march in cold weather, when it would seem to be required if ever, but will not allow any soldier to march who has recently taken alcoholic drink. We might cite a vast amount of similar testimony on this point, but this will suffice.

Again, granting for argument's sake the claim that alcohol is decomposed in the body, thereby developing heat, this is no evidence that it is a food. If it were, then we should be obliged to class as foods all classes of chemical agents. A dose of chalk, followed by a dram of sulphuric acid, would undoubtedly develop a very appreciable amount of heat in the stomach. Even a glass of water followed by the same agent would produce a degree of warmth which would doubtless be somewhat uncomfortable. Acids taken into the blood form chemical compounds with its alkaline constituents, the result of which must always be the production of a certain amount of heat, as is the case with chemical action outside of the body. Still it cannot be argued that these caustic elements are foods. If it could be proved, then, that alcohol may undergo certain chemical changes in the body, it will still remain to be established that it can be in any sense considered a food.

3. In regard to the so-called conservative power of alcohol, all that the experiments of Dr. Hammond and others have proved is that alcohol prevents the elimination of urea and other products of the disintegration of the tissues. It is also true that alcohol diminishes the elimination of water by the kidneys and skin. The logical conclusion would be that these products are left to accumulate in the tissues, rather than that they are not formed. Dr. Parkes favors this view in the

statement, that alcohol causes "an accumulation in the system of imperfectly oxidized bodies, such as uric and oxalic acids."

Dr. Edmunds, in his recent work entitled, "The Medical Use of Alcohol," sums up a very conclusive argument on this subject by saying, "Tobacco is a narcotic, and so is alcohol." He further adds that "its real uses in medicine are those of a narcotic, and not those of a stimulant nor those of a food." In regard to its narcotic character his view is supported by the experiments of Dr. Edward Smith, which show that "it diminishes all the senses." Dr. Parkes pronounces it an anæsthetic. Dr. B. W. Richardson and Dr. Headland, in his famous work on the "Action of Medicines," also coincide with this view.

In the face of these facts, can any one doubt that alcohol is a poison, rather than a food? J. H. K.

Why not Greater Progress?

THERE evidently is progress in the reception of the doctrines of hygienic living; but why is it not greater? One would suppose that as men love life and enjoyment, and would avoid sickness and death, that there would be a spirit of anxious inquiry into any system of teaching which is devoted to the subject of securing health on the most sure and easy terms. But it is not so with the masses; and why not?

One great reason is that the mind is so filled with other objects, such as amassing wealth, aspiring to honors, or seeking for pleasures, that there remains no time to inquire into that without which wealth is vain, and honors and pleasures not to be enjoyed. In the giddy whirl of business and excitement, the first requisite is something to arrest the attention; and it would seem that "trichina horrors," and sudden deaths after a night of feasting, would serve this purpose; and they do awaken some. A certain writer says, "We have come to know that the man who dies of 'heart disease,' after 'eating a hearty supper,' and going to bed well, would have come down all right in the morning, if he had had no supper," &c. Such things should awaken inquiry; and they do in the minds of some. And the evident failure of drugs to cure disease, should cause men to inquire whether there is not a better way.

Another requisite is faith in that which commends itself to reason. The arguments in favor of pure air, food, and drink, demand credence from every intelligent mind; and that it is better not to take as food that which is not food and can do nothing toward building up the physical system, such as condiments of almost every kind, and which must necessarily tax the vital powers in expelling them from the system, no rational mind can in candor deny; but still there is a great want of that faith which puts in practice the theory to which the judgment is obliged to consent. In health reform, as in pure religion, the great want is a faith that not merely assents to the truth, but puts it in practice. Those who have faith enough to practice the teachings of health reform will reap the benefits, and be able to bear a telling testimony to others who would learn the truth.

Numerous obstacles impede the progress of health reform; but they should not discourage those who would labor for suffering humanity. If all are not converted, some will be; and the benefit to the few will be beyond computation. A great amount of good will be done, and a great amount of suffering avoided. And the philanthropic labor in the cause will certainly be rewarded with the consciousness of having been exerted in a good cause, and in securing an immense good to a portion of the race.

Courage, then, friends of reform! your labor will not be in vain. Let us press the subject and secure the attention. Repeat and re-repeat the convincing arguments, and thus inspire faith sufficient to induce a test of the theory by reducing it to practice. Convince men by a candid appeal to reason that they need something, and that that something will be of inestimable benefit. Much will be thus accomplished; and the satisfaction of having labored for the benefit of our fellows will, of itself, be a great reward.

R. F. COTTRELL.

Society for the Prevention of Cruelty to Women and Children.

BY W. T. CURRIE, M. D.

THIS is an age of humanity. People are now generally coming to recognize something of the great principle of human kindness so wonderfully depicted in the sermon on the mount. An effort to live by these principles has very materially modified human character. The men of this generation are an improvment, in some particulars at least, on the men of past ages. One of these is in the possession of a more humane spirit. This shows itself in many ways; but in none, perhaps, more forcibly than in the establishing of a new kind of organization. I refer to the societies for the prevention of cruelty to

animals. These societies are calling attention to many species of cruelty inflicted on the brute creation, which have heretofore been almost overlooked, and in this way are doing an immense amount of good.

Now I do not propose to say anything about the work of these societies; but I have a project in mind which I hope some day to be able to carry out, which I am absurd enough to think is of vastly more consequence. I propose to organize a society for the prevention of cruelty to women and children. You laugh! That is what I expected, my generous reader; however, if you will think a little upon this subject, I am sure you will find that there is the most imperative demand for this society. Indeed, I am so much convinced of this that I sincerely hope some of the teachers in the new seminary at Battle Creek will deprive me of the honor of being the first organizer of this society, and make its head-quarters at that institution. You laugh again! Wait until I explain, and then perhaps you will feel less merriment.

The first species of cruelty inflicted upon the poor helpless children is by the parents themselves. They bring the infants into the world with a system, nervous, irritable, weak, and sickly—with tastes perverted, despising good things and loving evil—with passions depraved, naturally inclined to all manner of sin, and wickedness—with all the accumulated abnormalities of their progenitors wrought into the very texture of their being. Is this necessary? *No;* by the thousand voices of God's unalterable laws, *No.* It is the sins of the parents visited upon the children. It is not simply unnecessary; it is horribly cruel. Ought we not to do something to prevent this species of inhuman cruelty? The law cannot reach this evil, I know; but teachers can do something to prevent it. God's ministers ought to do something, or else for what possible object are they preaching. People need to be shown the awful wrong they are doing, and to be shown the way of repentance and amendment of life. I am convinced that there are multitudes of those who think that they are good Christian people, who, if they could be shown the fearful wrong they are doing, would cry out like Job: "Wherefore I abhor myself, and repent in dust and ashes." If people would stop practicing this cruelty, they must study, learn, and obey, the laws of hereditary transmission of qualities, which laws are as unalterable as the statutes of the Medes and Persians.

Now add to the cruelty I have mentioned, the further wrong done to children in starting them on their career in this world with feeble physical constitutions, predisposed to disease, and I can conceive of no greater cruelty than this which is done to the poor innocents.

But this is only the commencement. Soon after the unoffending child opens the windows of his soul to learn something of his relations to God's world, he is placed in a cradle and rocked incessantly until his senses are benumbed; and when in despair he gives vent to his indignation in cries and sobs, he is pronounced sick, a doctor is called, and poison is poured into his throat. In vain he kicks and strikes, struggles and yells. No one comes to his help. No kind hand relieves him, no law protects him from his murderers. Talk of cruelty to animals; merciful heavens! No animal was ever tortured in infancy like this specimen of the genus homo. By this and similar cruelties one-half of the children born are killed before they reach five years of age. A dispensation of Providence! No, *sir;* excuse me. It is a dispensation of ignorance and cruelty.

Now for the survivors. We will take one of the feminine gender. Its good (?) mother takes the little one out for a walk. It is cold, raw, piercing, weather. Shall it be clothed warm and comfortable? Oh, my! what pretty arms and legs! Cover them up? No. So the little thing is exposed to the cold, and dies. Another dispensation!

Then, again, children must be educated. Of course. So the State provides schools, and parents send the little innocents to have ideas crammed into them. There they are compelled to sit for six hours a day on hard seats, nodding over books. Cannot the parents teach them anything? Yes: but it is so much trouble, and it does seem so good to have them out of the way. That is the secret. Now listen. Had I my choice, to have a child placed at five years of age in the best public school in America, and kept there five years free of expense, or to have it given to the Indians to run wild for five years, I should say, in mercy to the child, Let the Indians have it. But what bad children we do see in families and schools. They run into mischief just as naturally as ducks run into a pond of water. Then for following out the instincts of this nature which the parents have given them, they are whipped, and cuffed, and pounded. Poor things! It is cruel.

Turn now to the women. How cruel we are to the dear ones! Supposing I should compel my horse to work with some kind of a stay like the corsets which women wear. I should be arrested instanter for cruelty to

dumb brutes. Is it no cruelty to human beings? Supposing a man was compelled to go at his business with all the paraphernalia of a woman's dress about him. Why! he would go mad, and be in a lunatic asylum in less than three months. I would sooner be banished to Siberia. Well, this is only the beginning of our cruelty to the gentle sex. I think I have said enough, however, to make it evident that we should have a society for the prevention of cruelty to women and children.

Ministers and Cigars.

A STORY has been going the rounds that recently the Rev. Mr. Pentecost attended Mr. Spurgeon's church, and made an address, in which he spoke of his experience in using tobacco, and expressed his conviction that the practice was sinful. Mr. Spurgeon replied to to him as follows:—

"Well, dear friends, you know that some men can do to the glory of God what to other men would be sin. And, notwithstanding what Bro. Pentecost has said, I intend to smoke a good cigar to the glory of God before I go to bed to-night. If anybody can show me in the Bible the command, 'Thou shalt not smoke,' I am ready to keep it, but I haven't found it yet. I find ten commandments, and it's as much as I can do to keep them, and I've no desire to make them into eleven or twelve. The fact is, I have been speaking to you about giving up real sins, not about listening to mere quibbles and scruples. At the same time, I know that what a man believes to be sin becomes sin to him, and he must give it up. 'Whatsoever is not of faith is of sin,' and that is the real point of what my Bro. Penecost has been saying. Why, a man may think it a sin to have his boots blacked. Well, then, let him give it up, and have them whitewashed. I wish to say that I am not ashamed of anything whatever that I do, and don't feel that smoking makes me ashamed, and therefore I mean to smoke to the glory of God."

It is generally agreed, we believe, that the question is one of taste rather than morals, in which abstinence, by ministers at least, is favoted by the majority of thoughtful men.

A correspondent of the London *Methodist*, writing of the "Impressions made at Conference Time," tells a little story in the Cornish dialect, which illustrates one view on this subject. He says,

"The down train had just moved off towards Camborne from a station not far off, and, in a group which had been taking a watchful interest in the various ministers as they had been stepping into the carriages, one was heard to say to another, 'Ded 'ee see that theere man with a red cap all worked over with yallow wuster'd, an' a bob-pipe hangin' from his mouth like a great tomtoddy (tadpole) with his tail hitched 'tween the mans' teeth?'

"'Iss,' was the reply; 'that was a praicher."

"'A praicher? he looked more like a sodger. But I thoft that the praichers had a rule not to smawk.'

"'Iss, so they have. They do aal promise and vow to keep 'un, too.'

"'Well, then, that theere man es a liard, he es; whatsomever he may say in the pulpit about truth, he's a liard, he es, and so es every man that says he doan't and wean't do it, and then about weth a thing like that in his mouth. A great black tomtoddy, as I do say, come up from belaw, where they do live in fire 'stead o' water.'

"'Why, you do knaw what to say, they do smawk to keep theer temper sweet, an' to help 'em to think.'

"'To think! Why, the devil ez a great thinker, an' I 'spoase 'tes 'cause he is an auld smawker. Who can think of Paul goin' about weth a thing like that in hes mouth? or John keepin' hes temper sweet weth stinkin' smawk? And what wud John Wesley a' said to such praichers? Ded he want smawk to maake he think? To maake 'em think, sure 'nough! an' what es it, after aall theer smawkin'? Why, I've heerd people say, 'A penny for your thofts. I wudn' give a penny a hunderd for such thofts as they bring foath. Thofts that come from smawk are no more vally (value) than smawk.'

"'They do say, I've heerd, that the great doctors do maake it out that heart complaints graw weth smawken'. An' I b'lieve et as to praichers. Heart complaints, sure 'nough! They wudn' want smawk ef theer hearts wore all right. When praichers want smawk to maake 'em think, or to keep theer temper sweet, theer hearts must have more complaints than waun. But aw! tes no wonder ef young wauns go 'bout like the man in the red sodger's cap when the auld ones show 'ee the way.

Ded 'ee see that auld waun sittin' next to the smawker, weth a beard in two paarts—Picky-didly straimers, they do caall 'em, I'm tauld—how he was snuffin of et? What his nawse is like, who can tell? Fust, he wud poke the snuff up, then he wud nuss (nurse) his nawse with that auld dirty-lookin' silk hank'chef—aw, my dear, 'tween snuff and smawk' what a perty shape some people do git into! But I do like to see a man nice, an' clain, an' daicent, gen'l'man or no gen'l'man, praicher or no praicher.'"

A Remarkable Case.

MRS. VIOLETTA SANBORN, wife of Eld. I. Sanborn, of Johnstown Center, Wisconsin, died at Battle Creek, Dec. 9, 1874, of "Osteo Cancer" and disease of the biliary organs. Dr. Wm. Russell, one of the physcians of the Health Institute, gives the following account of the case, which we publish for the benefit of the numerous friends and acquaintances of Mrs. S.:—

About four years ago, Mrs. S. placed herself at an institution for the removal of a cancer located in the mammary gland. After expending considerable means, and enduring much suffering, she returned home in a prostrated condition, only, to soon pass through a similar course of affliction, as the cancer which had been pronounced cured, returned with increased malignity. After suffering much pain from the effects of an eating plaster, the cancer was removed from this part, and the surrounding tissues healed soundly: but her general health remained poor. She still continued to suffer with pain in the stomach and liver, distressing pains in the limbs and joints, which were regarded as rheumatic, her limbs being drawn out of their natural position. All possible means were used to alleviate her sufferings, but only temporary relief was at any time afforded.

A post-mortem examination was held by the physicians of the Health Institute, assisted by Drs. Cox and Robinson of the city of Battle Creek. The autopsy revealed the following conditions: The gall bladder was much contracted in its transverse diameter, and was filled with calculi, some quite large, and twenty-two in number. Among these was mingled a small quantity of black, viscid, semi-fluid bile. In the uterine organs were found four small cancerous tumors of the schirrous variety.

The foregoing was regarded as sufficient cause of her suffering and death; but in operating to straighten the flexed limbs, it was discovered that the bones were also badly affected, and a careful examination revealed the terrible disease, cancer of the bones. The heads of the thigh and leg bones were reduced to mere shells, and could be easily penetrated by the knife or crushed by very slight pressure. The medullary canals were filled with cancerous tumors which had caused the intense pain, above alluded to. The bones of the pelvis and lower portion of the spine were found in the same condition. We are no longer at a loss to account for the intense suffering of Mrs. S., nor the failure of remedial agents to cure or give relief.

Death.

EVERYWHERE we meet the evidence that death is in the world. The funeral procession and the numerous cemeteries and sepulchers of death, the hospitals, where the sick do congregate, the seas, rivers, and oceans, which do yearly engulf multitudes in their watery embrace, the field of battle, the earthquake and the tornado, and many other evil agencies, do conspire to wreck the fond hope of man, and lay him low in the dust. Last, but not least, the table, with its unhealthful preparations, is peopling the regions of death with those who might, if informed and educated on these subjects, live on much longer and happier.

To lengthen life and render it happy, and uniform, and healthful, is the object of the great movement called the health reform; and such publications as the HEALTH REFORMER are indeed a blessing to those who heed their warnings and advice. The HEALTH REFORMER has already been the means of saving many from premature graves; and to-day, in many a household, the cheerful hum of business is daily heard, and the lively song of praise, instead of the sigh of the invalid and the groan of the sick. Thousands, to-day, are praising God for light on the subject of health, and for the excellent principles, wise counsel, and good advice, which come to us monthly through the columns of the HEALTH REFORMER. Heeding these counsels, many households are free from sickness and death; at least, till accident, or time, break down or wear out the frame.

The great multitude, like fatalists, live as it happens, supposing that *what is to be* will be; and not dreaming that daily doses of tobacco, or other poisons, will kill, nor that bad food will vitiate the blood; but, believing that death will come at his appointed time, this infatuated multitude rush on, destroying themselves. Believing that patent medicine, or something else, will set all right, they pass on to the sick bed, thence to the grave, and in most instances, prematurely; and thus the cemetry is peopled by the young and middle aged, leaving broken families, widows, orphans, weeping and mourning, where there should be joy and peace.

JOS. CLARKE.

WORTH, the dress-maker, says that a lady lately begged him to invent a walking costume, pretty and becoming, in which women could walk with as much comfort and little fatigue as men do in theirs. "I have," he exclaimed, "but you won't wear it. I do not see the slightest objection to women wearing trowsers with tunic, as I have wanted them to. And there is the Persian costume, which is the perfection of beauty and grace."

The Health Reformer.

BATTLE CREEK, MICH., FEBRUARY, 1875.

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

Diphtheria.

FOR two or three months past this disease has been very prevalent in various parts of the country. It has made sad havoc with the children, especially those who live in the city where unhealthy surroundings increase the liability to the disease as well as its fatality. This disease is so common that its symptoms and characteristic features will require no description. The treatment is the thing of chief importance.

Until very recently, it was the fashion of all "regular" practitioners to keep the poor diphtheria patient in a state of constant irritation and feverish excitment by the assiduous application of nitrate of silver, blue vitriol, and other caustics to his throat. No matter how young or delicate the sufferer, he must submit to this barbarous practice together with the additional agony of imminent suffocation. With fossilized and unprogressive physicians this inhuman practice is still in vogue, as would appear from the frightful rates of mortality from this disease, if there were no other evidence of the fact.

But it is now conceded by the best informed of the profession that caustics not only do no good, but are absolutely harmful—a discovery made by hygienists, nearly a quarter of a century ago.

A few months ago a German physician announced in a foreign medical journal his entire disapproval of the use of caustics in this disease, recommending, instead, the application to the diseased surface of pure lemon juice, which would at least have the advantage of being harmless.

A recent member of the *Medical Record* contains the following paragraph from a foreign journal describing Myer's treatment of diphtheria which we can heartily recommend :—

"Even when the children are very young, and with infants under one year, he has them fed with small bits of ice, which are allowed to dissolve in the throat. In addition, he pours ice water on the tongue every few minutes. The ice should be very clean, and hence the artificial kind is the best. In very severe cases, the external use of cold in the form of ice cravats is very suitable. It is also stated that under this treatment the fever generally yields, the membranes are thrown off, general infection of the system does not follow, and the disease rarely extends into the larynx."

Dr. Myer also recommends the use of tepid baths, remarking that when they are employed to allay excessive fever, "after the bath the temperature remains reduced for a number of hours."

When the full bath cannot be conveniently administered, the wet-sheet-pack, or tepid sponging may be frequently employed. When the disease is somewhat protracted, so that the breath becomes offensive from the decomposition of the false membranes, antiseptic gargles, composed of very weak solutions of common salt or permanganate of potash may be advantageously employed. Careful attention should be paid to keeping the extremities warm. Diet should be simple but nourishing.

During a recent epidemic of diphtheria in Brooklyn, Dr. O. T. Lines of that city treated one hundred cases in the manner described above without losing a single patient, although the city reports showed an average mortality of forty per cent of those treated in the ordinary way. Such success is certainly significant.

A Medical Revival.

AT a recent meeting of the New York Academy of Sciences, at which we chanced to be present, the learned president of the society, Dr. Austin Flint, read a paper on the "Researches of Currie, and Recent Views concerning the Medical Use of Cold Water." The society met at the College of Physicians and Surgeons, the capacious lecture room being well filled, the subject of the evening having been previously announced. The following is a brief summary of the chief points of the address :—

The use of water externally as a means of reducing the temperature of the body in disease has recently been coming quite prominently into notice. According to Liebermeister, a noted German medical author, Currie was the first to systematize the use of water. His work was published in 1797. Liebermeister, in his re-

cent article on typhoid fever, accords to cold water the first place in importance as an article for reducing the temperature. The use of water for this purpose is at present attracting much attention; and it is safe to predict that it will soon occupy an important place as a remedial agent.

The author thought that although much harm had been done by the "rude empiricism" of Priessnitz, and the various water cures in the country, much good had also been accomplished by the latter institutions, and they had in a measure prepared the public mind for the general introduction of water as a remedial agent.

After the publication of the views of Currie in 1797, his method of practice, which was chiefly hydropathic, became quite general; but it was soon nearly forgotten. Trousseau recommended water treatment in scarlatina, and the use of the remedy has continued to be recommended in the text-books; but as a measure of treatment in practice, it has nearly become obsolete. It is, however, obvious that, unless we accept the absurd proposition that diseases have changed since Currie's time, the remedy which he recommended so highly must be just as efficient now as then.

Dr. Currie made use of the cold douche in fevers, applying it vigorously to the patient while in the hight of the fever, and continuing it until the temperature became decreased, as indicated by the thermometer and the pulse. He treated seven cases of continued fever by this method, at the Liverpool Infirmary. All recovered. In an epidemic of typhoid fever among a regiment of troops, he treated fifty-eight cases, using the cool or tepid douche in all but two cases. The latter died. The remaining fifty-six recovered, the disease being greatly shortened in more than half the cases.

Dr. Currie asserted that in small-pox the use of the bath afforded instant relief to the patient, and caused the disease to assume a benignant form.

He found the cold bath always effectual in tetanus and convulsions, as also in hysteria.

In temporary insanity from the use of liquor, this acute observer found that the cold plunge was a most efficient remedy for the worst cases.

But Dr. Currie's practice was not confined to cold water. He observed that affusion with tepid water was not only a more pleasant application, but that it was even more effectual in reducing unnatural heat than cold water, as it produced no reaction, not being at all stimulating in character.

With regard to the efficacy of this agent, Dr. Currie stated that by its use in fevers the pulse would be reduced thirty or forty beats, with a corresponding decrease of temperature with almost immediate relief of headache.

In his second volume, published some six years after his first volume, Dr. Currie declared that although his experience in the use of water, especially in fevers, had been very extensive, he had had only four fatal cases in which water was employed, and had never met with a single evidence of its being in the least degree objectionable or injurious. Neither had he found that it had been thought to be objectionable by those whom he treated. He details a very interesting account of his treatment of scarlatina, in the cases of his two sons, aged, respectively, three and five years. He gave the older, in thirty-two hours, fourteen affusions, varying from cold to tepid. Twelve were found to be sufficient for the younger boy. Both became convalescent in three days.

It was clearly established by Currie that by the use of water, the course of typhoid fever might be abbreviated. This is not even claimed for the modern remedies in common use.

In referring to his own experience in the use of water, Dr. Flint remarked, "The relation of my own experience will of necessity be stated in a few words, as my employment of the remedy has heretofore been much more limited than it will be in the future if my life is spared." He then related some very interesting cases in which water was employed as the chief remedy with the most excellent success. He also took occasion to recommend, as one of the best means of applying water in fevers, the wet-sheet pack as employed in the various hydropathic institutions of the country. He had used the continued cold pack in a number of the worst cases of sun-stroke, in Bellvue Hospital, with marked success. This remedy is still employed there in this class of cases.

In a case of obstinate remittent fever, which was not in the least benefited by quinia, he employed the cool pack thirty-five times in a week, continuing each from ten to thirty minutes, and always with great relief to the patient, although he finally died. He expressed

the opinion that if he had employed the pack more thoroughly, continuing it longer, the patient might have recovered. Currie announced a true principle when he said that the voice of nature should not be superseded by theories. He advocated the free use of water as a beverage in febrile diseases as an important remedial agent. Dr. Flint unhesitatingly advanced the belief that the chief benefit derived from the numerous mineral waters, so largely used as beverages, was only that which was due to the properties of pure water. He stated as proof that it was not long since proved by chemical analysis that the only thing peculiar about the water of a certain spring, famous for medicinal virtues, was its remarkable purity. He also suggested the introduction of distilled water for drinking and cooking as a necessary sanitary measure.

Dr. F. then related a very remarkable case of acute inflammation of the kidneys in which the patient exhibited the characteristic symptoms of uræmic poisoning. Other remedies were tried in vain, and the patient's life was saved by the simple administration of water in small quantities at short intervals. It soon washed away the poison and gave immediate relief.

After the conclusion of the paper, by Dr. Flint, the venerable Dr. Richards arose and gave a little of his experience in the use of water in treating disease. His ideas of hydropathy were obtained from Dr. Currie's works when he was a young man. He adopted his practice at that time in an epidemic of typhoid fever, with such remarkable success as to astonish old practitioners. He stated that he had cured more than one hundred cases of obstinate constipation by simply directing the patient to drink a glass of cold water half an hour before breakfast each morning. In one of these cases the individual had not had a natural passage from the bowels for a number of years; but he was effectually cured by the simple remedy mentioned, in the course of a few months.

Dr. Loyle gave an interesting resumé of ten years' experience in the use of water, with uniform success, especially in convulsions and scarlatina. He had employed water alone in about one hundred cases of acute nepluitis and anasarca after scarlatina, and with wonderful success in every case. Had found it equally successful in coma, restoring consciousness when life was apparently extinct. During the late war he on one occasion renovated twenty ambulance loads of exhausted soldiers who had fallen on the march, by the judicious use of water. He recommended water most highly as an excellent diuretic, and a capital regulator of the bowels, far superior to "after dinner pills." Commended it also as an efficient remedy for sun-stroke and frozen feet.

The sentiment of the audience, which was wholly composed of medical gentlemen, was shown by the hearty applause with which the remarks of each speaker were received. We did not fail to do our part in the cheering, and would warmly commend the good sense, honesty, and evident desire for truth, which led these eminent gentlemen to make so frank an avowal of a truth which, as hygienists, we all entertain.

Ministers vs. Tobacco.

It seems that the clergy are really awaking, at last, to something like a proper sense of the necessity for raising their voices against a habit which threatens to exterminate the race unless some measure can be adopted to stay its progress and rescue its victims. Ministers can do more to aid the anti-tobacco reform than any other class. They have a powerful hold upon the moral characters of their followers, and can exercise a mighty influence in instilling into their minds sound physiological principles as well as moral truths. But in no way can clergymen accomplish so much in this direction as by a correct example. It would be of very little avail for a preacher to declaim against tobacco in the pulpit when half his congregation were accustomed to meet him in the street with a cigar in his mouth.

At a recent meeting of Methodist ministers in New York, the subject of tobacco was considered, especially its relations to the ministry. A paper on the subject was read by Dr. True. A city journal gives the following brief account of the essay together with subsequent remarks :—

"Besides the well-worn arguments touching its unhealthiness and uncleanness, it contained many excellent suggestions drawn from its effect upon the minds of public speakers and writers. It destroys the logical faculties and tends to make such men very superficial. The pernicious effect which the habit has on the young, who are so fond of imitation, and

its hindrance to growth in grace were made prominent reasons for breaking off the use of the weed.

"The Rev. Mr. Corbitt, who is recognized as the champion chewer, was unanimously called to respond to the essay. He did so, and entered his solemn protest, founded on many years' experience, against the use of tobacco in any form. He did not feel called upon to sacrifice his life in the attempt to give up the habit himself; but if he had his life to live over again he would not touch, taste, or handle it. These remarks, so unexpected from such a quarter, were received with applause."

The Rev. Mr. Corbitt certainly deserves credit for his frank acknowledgment of the harmful nature of tobacco; but how much more good he might accomplish by resolutely discarding the filthy weed and asserting his liberty from the bondage which has so long enslaved him. His fears of dying are groundless. Many a man has done the thing before, and never one died for want of tobacco. He would doubtless feel as though his dissolution was close at hand, but he would certainly survive, and his usefulness would be immeasurably increased.

The Illinois Methodist Conference recently adopted the following resolution which augurs well for that denomination as evincing their appreciation of one of the great truths which reformers have been for years advocating:—

"*Resolved*, That in view of the fact of the great expensiveness and filthiness of tobacco, and of the fact that tobacco belongs to the same class of poisons and conduces to strong drink, we urge upon all our laymen to abstain from its use; we recommend that all young men admitted to the conference at this important point in life forego its use; and we suggest that the example of presiding elders using it is extremely hurtful."

Dr. Talmage, also, who has so long been a vigorous supporter of the total abstinence cause, declares himself as an opponent of tobacco in every shape; and this, notwithstanding the recent demonstration by Rev. Mr. Spurgeon, who is a contributor to his paper.

Tobacco-using is adverse to piety, whether ministers or laymen indulge in it; and the wonder is that Christian ministers have been so long in finding out that the narcotic weed is one of their most powerful enemies. A narcotized Christian is not likely to be a very energetic one.

What Is Medicine?

WE will first listen to what some of the most able practitioners and professors of medicines say of it:—

"All of our curative agents are poisons."—PROF. CLARKE, M. D.

"All medicines are poisonous."—PROF. ST. JOHN, M. D.

The above citations, which we quote from "Water Cure for the Million," are at once terse and unqualified. We might give many more, similar in character, but these will suffice. Indeed, it does not require the authority of a professor to convince a person of ordinary intelligence that corrosive sublimate, arsenic, strychnia, prussic acid, aconite, and belladonna, are poisons. A person who is well and strong takes by mistake one of these reputed remedies and speedily dies. The suicide finds in that favorite remedy, opium, the ready means of self-destruction. Who can believe that a simple change of hands can convert a deadly poison into a harmless agent? But we will not urge the argument that drugs are dangerous because large doses of them will kill, for it might be said of water that too much of it, improperly applied, would produce the same result. Heat and cold are most excellent remedial agents; and yet an excess of either is rapidly destructive to life. We are opposed to drugs because they are bad in themselves, and in all appreciable quantities. Some substances are poisons on account of excess in quantity, or the modification of circumstances; but a drug is a poison *per se*. No circumstance, or combination of circumstances, can change its character, although its so-called action may be modified by circumstances. For example, a man who has been poisoned by a rattlesnake may take great quantities of whisky without apparent effect. The latter article *seems* in this case to be inert, on account of the presence of a more deadly one. Its injurious effects are felt upon the tissues, however, although the brain does not seem to be affected.

But why are drugs poisons? Simply because they are substances which cannot be used in the system, and so require to be expelled.

A poison is just the opposite in character to a food. A food is a substance which can be used in the vital economy of the body; a poison is a substance which cannot be used, and which thus interferes with the performance of the organic functions.

Notwithstanding our maintenance of this view of the real character of drug medicines, as remarked in a previous article, we are ready to admit that circumstances may arise which would render their use justifiable. Even in such cases, however, they are poisons still, and are acted upon by the system as such. If a person should suddenly swallow a fatal dose of strychnia, we would not hesitate to give him a dose of mustard, sulphate of zinc, or even blue vitriol, or ipecac, rather than run any risk of delay in securing evacuation of his stomach. If a person should suddenly fall in syncope, we would not object to applying ammonia to the nostrils, if other means were inefficient, or not available.

Again, if an individual was suffering agonizing pain, of such a nature that the usual hygienic remedies, ordinarily so potent, were ineffectual in affording relief, we should regard it as an act of humanity to place him under the influence of a narcotic, if he desired it. After several months' reflection, we can see no reason why such a course would not be equally justifiable with the use of anæsthetics in surgery; and certainly no one will question the propriety of the latter.

We do not think it wise to denounce, unqualifiedly, the use of drugs, even though they are poisons. In our estimation, it is safer, wiser, and more consistent with reason, to follow the principle of always using the *best remedy available*, if any whatever is employed. If this rule were followed universally, little damage would result from the use of drugs, for they would be rarely employed. Nature is undoubtedly the best physician, and it is generally admitted that hygienic agents are of all remedies the best.

We will conclude with the following quotations from eminent physicians, which are derived from the same source as those cited at the beginning of this article:—

"Hygiene is of far more value in the treatment of disease than drugs."—PROF. BARKER.

"The effects of our medicines on the human system are in the highest degree uncertain, except, indeed, that they have destroyed more lives than war, pestilence, and famine combined."—JOHN MASON GOOD, M. D.

"Every dose of medicine is a blind experiment on the vitality of the patient."—DR. BOSTWICK.

"Some patients get well with the aid of medicine, more without it, and still more in spite of it."—SIR JOHN FORBES, M. D.

Tape-worm in Beef.

IT has long been known that the eating of pork frequently gives rise to tape-worm in the human stomach, the successful treatment of which has been a difficult problem for the medical profession, or, at least, the most intelligent physicians, as many have been deceived in thinking that they had effected a cure when they have induced the expulsion of only a small portion of the worm. While the danger of contracting this disease has been very clearly associated with pork-eating, by medical men at least, it has been the general belief, and eminent physicians, even, have asserted, that beef was wholly free from the cysticerci which develop into tape-worms when taken into the human stomach. It appears from recent researches, however, that beef and veal are often found to be infested with measles. Indeed, Dr. T. Spencer Cobbold, F. R. S., F. L. S., professor of parasitic diseases at Middlesex Hospital Medical College, Eng., announces in the London *Lancet* for Dec. 5, 1874, that for some years he, in connection with other English physicians, has recognized beef to be the most frequent source of tape-worm both in England and several other countries. In an account which he gives of very extensive observations on this subject by himself and Dr. Limond, he states that in a young calf which they knew to be suffering from the presence of cysticerci in its flesh, they found many thousands of the embryonic parasites on examining its flesh after killing it. They observed also that they were most numerous in the superficial muscles.

The statements of these eminent observers are fully sustained by the observations of numerous others of equal eminence. Leuckart, Mosler, and M. Davaine being among the number.

Here, then, we have an additional argument against the use of beef, which has heretofore been considered as the most healthful of all animal food. It is also worth mentioning that these minute animals (as they are in an embryonic state in the flesh) possess a wonderful power to withstand heat, so that there is no certainty that a beefsteak may not contain them at any time.

Cigar-Making Again.

NOT long since, we gave a brief account of the horrors of cigar-making in New York city, mentioning the fact that the Board of Health was about to investigate the matter. The N. Y. *Sun* gives the result of the investigation, which cannot be considered as anything less than an insult to humanity, and a shameful abuse, or non-use, of power on the part of the appointed guardians of the public health. It is especially aggravating to hear such absurd statements as are made by the board in support of their action. We clip the following from a recent number of the *Sun*:—

"In November the Sanitary Inspectors of the Board of Health investigated the relative advantages and drawbacks of factory and tenement labor in the manufacture of cigars. They reported in favor of tenements as being more wholesome for workmen, there being more space in the tenements and, consequently, more air for the workmen. The inspectors add that in tenements families are able to add materially to their receipts by having invalids and children assist them in their labors; that the tenements are much more cleanly than the factories, and that the belief that the tobacco dust is hurtful to children is unfounded, as such children are as healthy as others.

"Having read the report, the cigar makers assembled in Concordia Hall yesterday afternoon, 'to protest against the partial and unjust decision of the Board of Health concerning tenement-house labor.' A report from the Central Committee of the United Cigar Makers, characterizing the Health Board's report and conclusions as untrue, was unanimously adopted. The cigar makers say that sleeping and eating in the room in which cigar making is carried on are detrimental to health; that there are more doors and windows in factories, and that their halls are larger, with consequent purer air; that tenement-house workers have no time to prepare their meals; that the factories are much more cleanly, as more attention is paid to cleanliness; that the tenement-house worker is paid only $3 per week, and is obliged to work 16 or 17 hours a day to make a living, while the hours of factory employees are from 7 A. M. until 6 P. M., with a short intermission for meals."

SENSIBLE AND SUGGESTIVE.—The London *Dietetic Reformer* quotes the following graphic sketch drawn by the Baboo Protah Clumder Mozoomdar, of Calcutta, at a meeting at Exeter Hall, London:—

"I am a Hindoo. I come from the banks of the sacred river Ganges. My forefathers were peaceful and progressive men. When they were hungry, they did not kill the beasts of the wilderness or the fowls of the air, but they satisfied their hunger with herbs and fruits; and when they were thirsty they didn't open large casks of brandy, but quenched their thirst from the simple streams of our rivers. But the nations of the West have introduced into our land those two mighty powers of modern civilization—grog and gunpowder. Before the god of gunpowder the physical liberties of my countrymen have made an unconditional surrender; before the terrible god of alcohol, the moral nature of my countrymen is now about to be offered as a sacrifice. For this state of things who is responsible? I am ready to accord to your people credit—great credit—for the noble reforms and the nobler civilization which you have introduced among us, but I am the last man to withhold from you the discredit of the modern and Western evils which you have introduced along with that of civilization."

SAD FACTS.—The superintendent of the Liverpool workhouse states, in his recent report, that eighteen out of every twenty-seven persons sent to the workhouse were suffering from delirium tremens.

One of the physicians of Bellvue Hospital recently informed me that at least two-thirds of all the patients treated at that institution were suffering from the effects of alcohol.

It is well known that at least nine-tenths of all the crimes committed are due to the influence of liquor.

Who will say, in the face of these facts, that the sale of alcohol should not be as stringently prohibited as that of arsenic, strychnia, prussic acid, or any other poison.

DIETETICS.

Two New Facts for Vegetarians.

It is a very encouraging fact that nearly every new discovery in physiology which has any immediate bearing on dietetics tends to confirm the views which vegetarians have so long advocated with reference to the use of animal food. We have a perfect right to avail ourselves of these new acquisitions, although their discoverers may not have recognized the bearing which they have upon this great question. The facts to which we wish to call attention are not entirely new to physiology; but we do not remember that they have been before cited in support of vegetarianism. They relate to the urine and urinary organs.

1. It has long been taught that many painful diseases are always associated with an acid condition of the urine. Urinary calculi, articular rheumatism, gout, and heart disease, are affections of this class. To cure or prevent these diseases, physicians often prescribe large doses of alkalies for the purpose of rendering the urine alkaline. Now, it has been found that the urine of flesh-eaters is almost invariably acid; while this excretion in those who use only vegetable food is as uniformly alkaline. Is it not a clearly legitimate deduction, then, that a vegetable diet would be a very excellent safeguard against these dire maladies? Undoubtedly it is. In fact, some eminent physicians have discovered, what vegetarians have long known, that a vegetable diet is an excellent remedy for rheumatism. It is certainly no mean comfort to those who discard animal food to feel that they are safe from such dreadful diseases as pericarditis, endocarditis, and gout.

2. The most important function of the kidneys is to remove from the blood the urea which is constantly accumulating in it from the disintegration of the tissues of the body. Such is the poisonous character of urea that if its quantity in the blood becomes increased beyond a very small percentage, the most disastrous results follow. The patient is often seized with convulsions and dies in coma. It is very plain that the safety of an individual from death from this cause must depend entirely upon the efficient performance of the work of excretion by the kidneys. It is also equally clear that the ability of these organs to do this must depend greatly upon the amount of work imposed upon them. If the quantity of urea is great, they can eliminate it less perfectly from the blood. Is it not evident, then, that it would be wise to pursue such a course as would limit the formation of urea to the smallest amount compatible with the maintenance of the health in other respects? The answer must be in the affirmative. We are now able to appreciate the fact discovered by Lehmann that a person living on an exclusively animal diet is obliged to excrete nearly three times as much urea as a person whose diet is wholly vegetable, and that the latter is required to excrete less than two-thirds as much of this poisonous substance as a person living on a mixed diet.

Then if a person who eats largely of flesh compels his kidneys to do three times as much work as those of an individual who eats no meat, it must of necessity follow that they will be much the most likely to exhibit evidences of disease and disability.

There are two other points worthy of notice in this connection.

1. The excessive quantity of so exceedingly poisonous a substance as urea which must constantly exist in the blood of a person living on a flesh diet, undoubtedly exercises a deleterious influence upon many of the delicate tissues of the body. It is more than probable that it is this poisonous agent that renders large flesh-eaters so sluggish in their temperaments.

2. We have claimed that animal food always contained a considerable amount of excrementitious matter, the debris of the tissues. This view we have supported by the fact that the venous blood is retained in the flesh of a slaughtered animal, and by the additional fact that flesh food is stimulating in character. But here we have the most decided and incontrovertible evidence in the fact that an individual who eats flesh is obliged to eliminate a larger quantity of excrementitious matter than a person who does not.

Let the advocates of meat-eating weigh carefully these arguments.

How Flavors and Jellies are Made.

Pineapple essence is a solution in alcohol of butyric ether, which is made by distilling butyric acid with alcohol and oil of vitriol. The butyric acid is made from decayed cheese.

Quince essence is a solution in alcohol of an ether obtained by treating oil of rue with aquafortis, and digesting with alcohol the acid thus obtained.

Pear essence is made by distilling a mixture composed of fusel oil, acetate of potash, and strong sulphuric acid, or oil of vitriol, and mixing the product with alcohol.

Apple essence is made from sulphuric acid, fusel oil, and valerianic acid.

The flavor of currants, bananas, raspberries, strawberries, etc., are imitated by mixing the various ethers known to chemistry, also combining with them camphor, acetic acid, vanilla, and the various essential oils.

Not only are these essences sold at retail for domestic use, but they are largely, in fact, almost exclusively, used by bakers and confectioners. Pastry, jellies, and ices are made still more atrocious by the addition of these abominable mixtures. Death and serious illness have frequently been caused by the use of articles containing the poisonous articles above mentioned. Eminent medical authorities recognize the use of candies flavored with artificial essences as one of the great causes of fatal intestinal diseases among children. It is next to impossible to find a specimen of candy which is not absolutely dangerous from the poison used to flavor it.

Among other essences we ought to mention almond essence, which always contains prussic acid and in sufficient quantities to cause death, if taken in other than small quantities.

COMPOSITION OF JELLIES.

The various fruit jellies in such requsition for the use of invalids are rarely what they are represented to be. The cheaper ones are nothing more than glue, or gelatine, flavored with some one of the essences already described. Some are said to be composed chiefly of alum and sugar in solution, some artificial extract being added as a flavor. Those which sell at a higher price are composed of apple jelly flavored with the requisite artificial essence.

The simple facts are more eloquent than would be a column of comments upon the probable influence of such compounds upon the health, and especially that of feeble invalids.

We trust that the facts we have given are sufficient to convince our readers of the danger of employing, as additions to food, any of the articles described. Many of them are falsely marked "genuine." Beware of them.

Many of the above facts were obtained from the Report of the Massachusetts Board of Health for 1873.

What Parisians Eat.

A RECENT scientific journal informs us that the carcasses of dead horses are now consumed by the fastidious Frenchmen of Paris at the rate of 6,000 annually. Of course it would be unprofitable to use as food animals which were worth more for any other purpose; consequently, the horses thus disposed of are only those which have become so badly diseased and crippled by age and bad usage that they are worthless for anything else. And so, *mirabile dictu*, they must be eaten! This practice, so disgusting to people whose tastes are not wholly perverted, has even found some champions among scientists. A certain class of savants seem to think it their chief duty to find some sort of apology for all the abnormal practices which are invented to gratify morbid tastes.

According to *Chambers' Journal*, rats are again becoming a table delicacy with the French *gourmands* of Paris, as shown by the following paragraphs :—

"As an encouragement to their increase in numbers, they are allowed to make nightly visits to the depots for dead horses, the bones of which they strip to the required cleanness. The depots are surrounded by walls, to which they gained access by holes bored all round, every hole being the exact length of a rat's body, leaving the tail sticking out. Once in every three months there is a grand battue. As the assailants, with noise of tin pans and drums, rush into the inclosure, the rats rush into the holes, and the collector, making a tour of the premises, seizes rat after rat by the tail, and transfers him to his bag with amazing dexterity. We are informed that 'the privilege of gathering rats on the battue-days is farmed out by the authorities, and a profitable business it is. These rats, sleek and fat as they necessarily are, fetch a high remunerative price—the fur, the skin, and the flesh, meet with a ready sale.'"

The following paragraph from the same journal is very suggestive concerning the character of the pork supply of the great city :—

"The French, who are up to everything in the chemical line, have taken a proper view of the value of soap-suds. Whether from private dwellings in Paris, or from the barges of the *blanchisseuses*, the Seine must have a good deal of soap floating about it in a wasteful kind of way, to say nothing of the greasy pollution from dead dogs and cats. There was a fortune, if properly looked after. An enterprising firm, fortified by the authority of the prefect, determined to begin a system of skimming the Seine. You would imagine it a nonsensical idea. Quite a mistake. By uniting the skimmings of the river with the offal from hospitals, the firm is able, by the aid of chemistry, steam, and cookery, to fatten three thousand pigs."

Not a journal in the country ever thinks of objecting to such abhorrent practices as these; but we often hear about the "poor food," "starvation diet," "bran bread," etc.

of hygienists, whose diet has been abundantly demonstrated by science to be the purest, richest, most healthful, and most nutritious of any which has ever been proposed or adopted. The use, as food, of decrepit horses and hogs fattened on sewer scum, is even commended as a measure of wise economy. And Mr. Simmonds, the author of a recent work on "Waste Products," expresses the opinion that "a nice, plump young rat, fried or roasted, and served up with good gravy and other condiments, would make a very delicious dish;" while the writer in *Chambers' Journal* thinks that it is only an "old-fashioned prejudice which prevents people from trying the experiment"! We may fairly expect that ingenious French cooks will soon rival the Chinese with their fricasseed rats, cat soup, and puppy stews!

Dirty Food.

THE following extract is from *Chambers' Journal*:—

"The old proverb which implies that everybody must eat a peck of dirt is not often quoted by decent people; and yet, if official evidence may be believed, there is no one exempt from eating dirt or its equivalent. In the report of the inspectors of food for the city of London recently presented to the corporation, it is stated that, in the year preceding, there had been condemned nearly eighty tons of meat, more than a million fish, weighing four hundred tons, four thousand pounds of eels, about two thousand bushels of shrimps, sprats, oysters, periwinkles, whelks, mussels, and cockles. Fruit appears to be as objectionable as fish; for, to say nothing of cocoanuts and other delicacies seized in the streets, there were condemned in bonded warehouses thirty hogsheads, eight hundred and ninety-six boxes, six hundred barrels, forty bags, and sixty-nine cart-loads of figs. In the same warehouses, boxes and barrels of currants underwent the same fate.

"Here is grave matter for reflection. But for legal inspection, all this mass of filth would have been offered for sale; and the figs not sold in the streets would, by dishonest experts, have been converted into 'jam,' or some other delicacy. The conclusion is, that honesty enforced by legislation is better than no honesty; and the question arises, Will honesty diminish as education increases?"

Not long since, we met a gentleman who incidentally informed us that he had been engaged in the manufacture of fruit jams and sirups from spoiled fruits, large quantities of which can often be obtained for a trifle in the city of New York and other great markets. This kind of enterprise is very flourishing in the city, and is evidently very remunerative. It is a very simple matter to flavor the products obtained from these decayed fruits by the use of artificial essences, so that the consumer will be unable to detect the fraud. The only way for a person to be sure that canned fruit is fit for use is to put it up himself, or obtain it from reliable parties. No dependence can generally be placed upon the articles offered for sale at the stores. It would appear that we have quite as much ground for complaint in this direction as our English friends.

Common Salt.—No. 2.

BY J. S. GALLOWAY, M. D.

Section III. "The more recent analyses show that salt is present in the following proportion in the animal fluids and solids:—

"Quantity in 1000 parts of muscle, 2; urine, 3; aqueous humor, 11; bone, 2½; bile 3½; vitreous humor, 14; milk, 1; blood, 4½; saliva, 1½; mucus, 6. In the blood it is rather more abundant than all the other saline ingredients together."

"Since salt is so universally present in all parts of the body, it is an ingredient of the food also. It occurs of course in all animal food, in the quantity in which it naturally exists in the corresponding tissues, and in vegetable food also, in a smaller quantity. Its proportion in muscular flesh is however much less than in the blood and other fluids. Consequently, it is not supplied in sufficient quantity as an ingredient of animal and vegetable food and has to be taken by itself as a condiment to make up the deficiency."

It has already been conceded that the tissues of men and animals contain salt. It hardly could be otherwise in the analyses made only upon such as are accustomed to its use. But in the quotation from Dr. Bellows it is admitted that it is not food—that its use is not known. If a trace of salt is found in vegetable food, or in the flesh of animals unaccustomed to its use, be it so. Our object is to ascertain whether salt should be added to our food—not whether it is a natural constituent of it.

Section IV. "There is no other substance so universally used by all races and conditions of men, as an addition to their food, as salt. This custom does not simply depend on a fancy for gratifying the palate, but it is based upon an instinctive desire for a substance which is necessary to the proper constitution of the tissues and fluids. Even the herbiv-

orous animals are greedy for it, and if freely supplied with it, are kept in a much better condition than when deprived of its use. . . . The importance of salt has been well substantiated by Boussingault in his experiments on fattening animals. These experiments were made upon six bullocks, selected as nearly as possible, of the same age and vigor, and subjected to the same comparative experiment. They were all supplied with an abundance of nutritious food; but three of them (lot No. 1) received also a little over 500 grains of salt each per day. The remaining three (lot No. 2) received no salt, but in other respects were treated like the first.

"The result of these experiments is given by Boussingault as follows: 'Though salt administered with the food has but little effect in increasing the size of the animal, it appears to exert a favorable influence upon his qualities and general aspect. Until the end of March (the experiment began in October) the two lots experimented upon did not present any marked difference in appearance, but in the course of April this difference became quite manifest, even to an unpracticed eye. The lot No. 2 had then been without salt six months. In the animals of both lots the skin had a fine and substantial texture, easily stretched and separated from the ribs; but the hair, which was tarnished and disordered in the bullocks of the second lot, was smooth and glistening in the first. As the experiment went on these characters became more marked; and at the beginning of October the animals of lot No. 2, after going without salt an entire year, presented a rough and tangled hide, with patches here and there where the skin was entirely uncovered. The animals of lot No. 1 retained, on the contrary, the ordinary aspect of stall-fed animals. Their vivacity and spirit contrasted strongly with the dull and unexcitable aspect presented by the others. No doubt the first lot would have commanded a higher price in the market than the others.'—*Extract Chinese Agricola, Paris, 1854*, p. 271.

"The result of this experiment will stand authoritatively until some one as distinguished in the scientific world as Boussingault proves the contrary, by the results of equally reliable experiments. It proves, conclusively, even if it were not otherwise known, that salt is neither an irritant nor a poison, but that the system absolutely requires a supply of it above that naturally contained in the food, if good health is to be maintained for any length of time."

It is admitted that so far as a single experiment, on a very limited scale, can settle a question, this one settles that of the necessity of salt *for cattle*. But the issue is not made on this question. Men, and not cattle, are now under consideration. Buffalo, wild cattle, and other animals with divided hoofs and compound stomachs, in the undomesticated state, seek salt. It is but natural that they should crave it when brought under subjection to man. Examples, bearing strongly against this view, might be urged as having come under the observation of the writer. But as they have nothing to do with the subject before us, we pass them by at present; at a future time they may be thought worthy of narration.

Why should we so persistently plead for the use of salt by man because cattle eat it and seem to be benefited by it? Much the larger share of the animals in the world live on concentrated food and eat no salt. Like man they have simple stomachs. They include carnivorous, frugivorous, granivorous, herbivorous and omnivorous animals. But we ignore all these and take the ox as our guide. Cattle eat salt, therefore man should eat it. Why not as well say cattle eat grass, therefore man should feed upon grass? Cattle flourish upon corn leaves, browse, and coarse herbage, and man should adopt such food in imitation of their example! Is there any reason why we should accept them as guides in the one case any more than in the others? That it is extensively used by "all races and conditions of men" proves no more of the necessity for its use than the very general use of fermented and distilled liquors does of the need of these pernicious beverages, or than the prevalence of tobacco-using settles the question of its utility to the human race. It certainly will not be claimed that a thing becomes good and useful by being more generally prevalent than any admitted evil. If such is to be our standard, sin must be placed highest in the catalogue of virtues because the love of it is well-nigh universal.

As to the use of salt by animals of simple stomachs, one or two facts may be interesting here. An intelligent gentleman in this vicinity, who has always been fond of fine horses, has used no salt for his domestic animals, and little or none in his family, for some fifteen years past. Much prejudice has existed among his neighbors against him. Yet they freely admit that his horses are unsurpassed for quality and condition, and that his other animals compare favorably with those of his neighbors, though theirs are regularly supplied with salt.

A few years since, while living upon my farm, I tried a similar experiment for fourteen months. My hired man kept a fine mare, and fed her, with my horses, in the same manner,

except that he supplied her with plenty of salt. He thought me very wicked to deny it to mine. Six months after the experiment began, he saw and frankly admitted that my animals without salt had smoother coats and were in better condition than his with it. He discontinued it, and the difference soon disappeared.

It is said that the Arab never salts his horse, yet none are finer or better conditioned than the Arabian horses. Some time since, a gentleman related the following incident: "Being present at a conversation between an intelligent veterinary surgeon and an adventurous traveler, the former said that the use of salt is unnatural to the horse. In confirmation of this, the traveler stated that with a party of friends he had at one time captured a large herd of mustangs. They were divided into two lots and placed in different inclosures. Salt was placed on the ground in one of these only, and it remained for weeks untouched. The weather being dry, the pastures failed, and the mustangs were supplied with cut feed with no salt for one lot, and a little mixed in for the other. They steadily refused to eat the salted food till forced by hunger to take it, and the result was that in a few weeks an eruption resembling "scratches" broke out over the whole surface, while the other lot continued in good condition.

It is a well-known fact that the exclusive use of salt food is one of the chief causes, if indeed it is not the sole cause, of scurvy. This, no doubt, will be charged to the excessive use of salt. But who is to draw the line between the proper and improper use of it? At the same table, one will add salt freely to food which another finds quite too highly seasoned for him. Like the craving for alcohol or tobacco, the desire for salt increases with its use. At the same time, the delicate flavor of food gives place to the taste of the saline chemical used as a seasoning. It is a common thing for those who have left off the use of seasonings for a few months to express their surprise that they had never before supposed that unseasoned food had any agreeable taste in itself. Nor are they less surprised in finding chronic indigestion subsiding, and morbid conditions generally yielding to greater simplicity of habits. Only those who have had ample opportunity for observation can fully appreciate the superiority of simple hygienic agencies over the more popular, but less effective, method of "living well in order to be well," in the restoration of health. It is impossible to determine how much of the suffering attributed to other causes may justly be charged upon the use of what in usual parlance is called nutritious food, or how much may depend alone upon the seasonings so generally used, among which salt holds a prominent place.

Near the close of Section III., it is said: "*It proves conclusively, even if it were not otherwise known, that salt is neither an irritant nor a poison.*" So far as an experiment made upon six stall-fed cattle goes to settle the value of salt for cattle generally, whether stall fed or not, this may be true. But what if men and not cattle are under consideration! May not this affect our conclusions? Costill, page 13, says: "Irritant poisons are those which, as their name implies, irritate and inflame the stomach when taken into it; and produce violent vomiting and pain in the abdomen." Let any one swallow a few drachms of salt and see if all these indications do not follow. Or, whether using much or little, as a habit, double the quantity and observe the increase of force and frequency in the pulse, the increased sense of thirst, the redness of tongue and fauces with the general feverishness of feeling, and tell us how these things are to be accounted for if salt is not an irritant.

Dr. Taylor of London, and Dr. Christison of Edinburgh, both report cases of fatal poisoning from large doses of common salt. Costill also mentions a similar case. It is a well-known fact that domestic animals are sometimes killed by eating salt to excess. Fowls seem to be remarkably susceptible to its poisonous influence, and may be destroyed by the use of liberally salted food.

Dr. Graham, *Science of Life*, page 609, says, "Salt is wholly innutritious—it affords no nourishment to any structure or substance of the human body. It is utterly indigestible—it enters the body as a mineral substance—it is absorbed unchanged as a mineral substance—it goes the rounds of the general circulation as an unassimilated mineral substance, and is finally eliminated from the body through the kidneys, lungs, skin, etc., as an unassimilated mineral substance. Its acrid quality is offensive to the vital sensibilities of the organs, always causing vital reaction or resistance, and this vital reaction constitutes the only stimulation ever produced by salt, and is therefore always attended with a commensurate degree of irritation and vital expenditure, and followed by a correspondent degree of indirect debility and atony; and consequently it always and inevitably tends to produce chronic debility, preternatural irritability and disease; the stomach, intestines, absorbents, veins, heart, arteries, and all the other organs of the system, are always irritated, exhausted and debilitated by its presence. It never, in any measure, promotes digestion, nor any of the assimilating functions of the system; on the contrary, it always retards those functions, and is unfavorable to all the vital changes."

It is vain to expect any advantage from our profession of the truth, if we are not sincerely just and honest in our actions.

SEASONABLE HINTS!

Cheap Bedding.

It is often a serious problem with parents whose families are more extensive than their means, how to be able to provide warm bedding for so many little bodies during the bleak cold of winter. Many times anywhere from three to a half dozen are crowded together in one bed in order to keep the frost from little toes and fingers. But this is decidedly unhealthful. The active skins of little children throw out a great amount of impurities; and, consequently, they really require as much sleeping room as older persons.

But now about the cheap bedding. A very warm blanket can be made by stitching together two thin blankets, or even sheets, between which two or three thicknesses of firm paper have been placed. Such a blanket is fully as warm as a very thick and heavy one, and has the additional advantage of lightness. It should be placed upon the outside of the bed. Paper is an excellent nonconductor of heat, and so retains the animal heat which is produced in the body. This is a suggestion worth remembering by wealthy people as well as poor.

Hair Dyes.

So numerous are the preparations for coloring the hair, or restoring to it its lost hue, and so specious are the advertisements descriptive of these various compounds, that we deem it important to frequently call attention to their real character. We have reliable authority for saying that not one of these multitudinous preparations is what it claims to be. The so-called hair vigors and restoratives, said to restore to the hair its lost vitality, possess no such properties in the least degree. Every one of the mixtures contains rank poisons. Lead is an almost constant ingredient; and it is very common to meet with sad cases of lead poisoning from this source. The so-called *vegetable* dyes are arrant frauds, containing nothing but minerals, and being equally dangerous with the rest.

But the attempt to change the natural color of the hair by artificial means is in most cases an outrage against nature, independent of the injury to health which often results. The operations of nature are usually harmonious; and it is short-sighted vanity in an individual whose locks have grown snowy with age to endeavor to conceal the marks of time by dyeing his gray hairs, for the attempt is a certain failure. The features will betray him, and every observing person will quickly detect the fraud, for such it is. Gray hairs are an ornament to an individual who has not attained them prematurely by dissipation, or as the result of disease. They soften the countenance, and give to it a dignity which demands respect.

There are some cases, however, in which the use of some kind of a dye is very desirable, as in those in which a portion of the hair has lost its pigment by disease or accident, while the remainder retains its natural color, or in cases of premature whitening of the hair. For use in such cases we would recommend the permanganate of potash. Prepare a strong solution of the salt by dissolving ten or fifteen grains in an ounce of water. Apply to the hair with a brush, being careful to avoid staining the skin. This is reputed to be an excellent dye, far superior to any of the patented mixtures. It gives to the hair a rich color and luster, and does not injure its texture.

Air for Infants.

Infants, even the smallest, need oxygen as well as older people; and yet their mothers often use them as though they were proof against suffocation. Some mothers are in the habit of allowing their young children to sleep with their heads entirely covered with the bed clothes in cool weather. Others always surround the little one's head with many thicknesses of shawls and blankets whenever it is taken into the air during any but the mildest weather. As the result of these practices, the young life is often extinguished just as a candle would be if shut up in a tight jar. Several instances of this kind have come to our notice. But if the child is not actually killed, it may suffer great injury; and, doubtless, thousands of babies could testify to this if they had an opportunity.

We don't advocate the exposure of delicate infants to the rough winds of winter without suitable protection. We only wish to call attention to the fact that a child will smother under the same conditions that would suffocate an adult, and that there is such a thing as too much protection from cold air, when all air is excluded. Let the little ones breathe.

It is a mistake to expect to receive welcome, hospitality, words of cheer, and help over rugged and difficult passes in life, in return for cold selfishness, which cares for nothing in the world but self.

Questions and Answers.

NASAL CATARRH.—C. E. S., Mass., complains of loss of smell, defective hearing, constant running of the eyes, and of being obliged to breathe exclusively through the mouth most of the time, owing to swelling in the nose. Wishes advice.

Ans. There can be no doubt that the cause of all the difficulties mentioned is chronic inflammation of the mucous membranes of the nasal passages, which extends to the Eustachian tubes and to the conjunctiva of the eyes. The only cure for chronic nasal catarrh is to be found in combining with the strictest hygiene proper local applications to keep the affected parts absolutely clean.

TWO MEALS FOR DYSPEPTICS.—R. F. A. asks "whether a dyspeptic, whose stomach will bear only one ounce of bread and a proportional quantity of fruit at a time should eat two or three meals per day."

Ans. Of all persons, dyspeptics are the ones who derive the most benefit from the two-meal system—as the custom of eating but twice a day is often termed. By allowing the stomach greater time for rest and recuperation, while other appropriate means of treatment are adopted, it will soon begin to regain its accustomed strength, and so be able to digest an ample quantity of food.

CHEAP FILTERS.—A. C. B., N. J., wishes to know how to make a filter.

Ans. With the exercise of a little ingenuity a very serviceable filter can be constructed from almost any water-tight vessel; a large earthen vessel is the best. It should be nearly filled with alternate layers of clean gravel and well-washed pounded charcoal. The bottom layer should be coarse gravel, the top layer finely pulverized charcoal. Cover all with a piece of white flannel to strain out the coarser dirt. This should be removed and washed frequently. Leave a small chamber in the bottom of the vessel for the accumulation of the purified water; and make a suitable opening for drawing it off. The charcoal should be freshly burned, and will need renewing occasionally.

RATTLESNAKE BITE.—W. A. D., Minn., asks for a cure.

Ans. In case of poisoning from the bite of any venomous animal, the wound should be immediately cut out. Then apply a ligature above it, and immediately apply suction with the lips. Cauterization with a hot iron, and the application of concentrated carbolic acid to the wound are also recommended. If inflammation ensues in spite of preventive treatment, the cold douche continued is the most successful remedy, applied locally. Whisky and other poisons are useless. Many popular remedies have acquired their celebrity in consequence of the fact that not more than one in twenty of those bitten by rattlesnakes are poisoned by them.

BRONCHITIS.—S. A. M., Minn., has had bronchitis "very bad" for more than ten years. Says she cannot live hygienically on account of the opposition of her husband. Wishes to know what to do.

Ans. The only remedy for bronchitis is hygienic living. We hope your husband will not persist in withholding from you the only means of regaining health.

DIET FOR CRAZY PEOPLE.—J. R. asks, What is the best diet for people who have gone about crazy?

Ans. Doubtless more people have "gone crazy" as the result of bad diet than from any other cause. A wholesome, nutritious, hygienic diet is best, both as a preventive and as a curative measure for lunacy.

C. D., Ohio: See answer to C. E. S., under "Nasal Catarrh," in this number.

TINCTURE OF SWINE.—U. S. R. asks: Why is it that the stomach of a young hog or swine cut up in spirits, and the liquor taken, will give relief to a person who has dyspepsia *very bad.*

Ans. The alcohol gives apparent temporary relief; but a continuance of the practice will result disastrously. The hog's stomach has no influence whatever except to make the mixture nasty.

CHILBLAINS.—W. D. P., Vt., wishes a remedy for chilblains.

Ans. One of the most successful remedies is the alternate hot and cold foot-bath, taken just before retiring, concluding by dipping the feet in cool water and wiping dry.

NERVOUSNESS.—D. R., N. Y., says: Please say in next REFORMER if there is any remedy for this nervousness in my right hand, so that I can again write legibly and decently. My age is only eighty.

Ans. Trembling of the hands is very common in advanced life, especially in those whose dietetic habits have not always been correct. It often depends upon structural change of some of the nerves or nerve centers; in such cases little improvement can be expected. We would recommend the use of electricity in connection with general hygienic measures. The galvanic current would probably be the best.

TWO MEALS FOR CHILDREN.—A. C., Ill., asks: Is it better for children from three to seven years of age to eat twice or three times a day?

Ans. We have in mind at this moment one of the finest little boys we ever saw, who never ate but twice a day after being weaned. He always enjoys perfect health, and never ate anything between meals. We do not lay down arbitrary rules for infants or any one else; but our observation leads us to the opinion that two meals a day are ample for children over three years of age.

TWO MEALS AND TAPE-WORM.—A correspondent asks: 1. Is it well for a man to live on two meals a day who has a tape-worm? 2. Does the stomach ever bleed inwardly on account of hunger?

Ans. 1. A man who has a tape-worm should get rid of it immediately.

2. No.

CATARRH AND KIDNEY COMPLAINT.—B. D. asks advice for a friend who has suffered from catarrh for a long time, and is now nearly deaf. Is also losing his eye-sight, and has serious kidney difficulties.

Ans. The case is entirely too complicated to admit of home treatment. It is of so serious a nature that it demands immediate attention. We can do nothing for him unless he can come to the Institute.

J. A. C., Tenn.: Apply to a competent surgeon to ascertain the nature of the tumor in your sister's throat. Your description is too meager to enable us to form an opinion of it.

DIET FOR MOTHERS AND CONSUMPTIVES.—E. H., Ohio, asks: 1. What is the best food to cause a nursing mother to furnish the most nurse for her child? 2. Will beans that the mother eats cause the child to have colic also? 3. What kinds of food are the best to nourish and strengthen a consumptive who has a continual cough and has to labor?

Ans. 1. That which is the most agreeable and nourishing.

2. Food which disagrees with the mother will be quite likely to disagree with the child.

3. Oatmeal and other nutritious grains, with fruits and vegetables.

DYSPEPSIA.—J. C. S., Tenn., describes himself as a dyspeptic at twenty-three, and wishes advice.

Ans. To relieve the constipation, knead and percuss the abdomen several times a day for five minutes at a time. Drink a glass of cold water half an hour before breakfast. Exercise in the open air every day. For further advice, see our tract on the subject of dyspepsia, advertized under the head of Health Tracts.

R. J. MOFFAT, New Brunswick: Please see article entitled "Medical Problems," in this number, for answer to your questions.

Literary Notices.

VITAL STATISTICS FOR MICHIGAN, 1871.

The report of Vital Statistics for the State of Michigan, for 1871, has recently appeared. Through the able and arduous labors of Dr. H. B. Baker, of Lansing, Mich., this report is by far the most accurate of any previously published. Indeed, owing to certain very important improvements in the arrangement and compilation of the report made by Dr. Baker, it may justly receive the credit of being in many respects superior to any report published in this country, if not to foreign reports as well.

Dr. Baker deserves much more credit than he is likely to receive for his untiring industry and energy in working for the improvement of our sanitary conditions.

OLIVET COLLEGE. We have just received the annual catalogue of this flourishing institution, situated at Olivet, Mich., which is an ornament to the State as well as to the beautiful city where it is located. Its corps of professors numbers several of the most eminent educators in the State. Its facilities are ample, and its location wholly unsurpassed for beauty and retirement. One of the chief attractions of the institution is a fully equipped Conservatory of Music where both the science and the art of instrumental and vocal music can be acquired under the most favorable circumstances. The present term opened Jan. 4.

THE SANITARY JOURNAL. Edward Playter, M. D., editor, Toronto.

We have received several numbers of this new journal, which is published bi-monthly. The prospectus announces that the journal is to be devoted to public health. In the numbers we have examined we find very little which we cannot fully indorse. It takes the right positions on the temperance and tobacco questions, as well as general reform. We wish for our contemporary a fair share of success, and trust that the people of Canada are sufficiently awake to their interests to give it the support which it well deserves. We are glad to see the rapid increase of hygienic and sanitary literature which has accrued within the last five years. It augurs well for humanity.

TRUTH FOR THE PEOPLE. Detroit, Mich.

This is a four-page monthly which begins its existence with the year. It contains many excellent things. It seems to be an advocate of woman suffrage, and is conducted by a lady.

Items for the Month.

☞ A BLUE cross by this paragraph signifies that the subscription has expired, and that this number is the last that will be sent till the subscription is renewed. A renewal is earnestly solicited.

The Health Reformer.

THE January number of the HEALTH REFORMER was so very excellent that we printed 6,000 copies more than needed for immediate mailing. And as we look over the proof-sheets of the first thirty-one pages of the present issue, on the Michigan Central Railway, between Battle Creek and Chicago, where we are penciling these lines, we decide that the February number is better than the one before it. The young editor, though reaching out for every benefit in the present closing term of his medical studies, finds time, whether by day or by night, to do a large amount of excellent work on the REFORMER.

The HEALTH REFORMER is destined to be the leading health journal in our country. Neither time, study, nor means, will be spared to make it such. We are happy to state that in a few weeks Dr. Kellogg will be able to give more attention to the REFORMER, and will use his pen to furnish the reading public with more excellent health tracts, and larger works as the cause of health reform may demand.

The printer has no idea of being outdone by any office in our country, in the correctness and neatness of the mechanical work, and the publishers mean to beat the world in furnishing a monthly, the size and value of the REFORMER, post-paid, for the small sum of One Dollar.

With due respect for the value of money, in paying for stock, meeting the demands of the printer and the editor for their services, and to pay the postage demanded by our government, the publishers of this journal are prompted by feelings and motives of philanthropy and Christianity, rather than a love for gain. They turn from the pecuniary advantages of advertising, and give the numerous readers of the REFORMER thirty-two pages of reading matter each month, postage paid, for only One Dollar.

In thus conducting an enterprise of such importance they feel that they should have the co-operation of all true health reformers, and a large patronage from the reading public.

First-class agents are wanted to make a business of canvassing for the REFORMER everywhere on the most liberal terms. And each reader is urgently invited to obtain one or more full-paying subscribers. Friends of reform, while we place this matter at your most convenient reach, please help us in our work for humanity and Heaven.

M. C. R. R., near Michigan City, *en route* for San Francisco, in enjoyment of restored health, and that hope for this and the next life, such as obedience to the principles of Christian Temperance and faith in Christ give.

JAMES WHITE.

Jan. 27, 1875.

Big Invention.

LLOYD, the famous map man, who made all the maps for General Grant and the Union army, certificates of which he published, has just invented a way of getting a relief plate from steel so as to print Lloyd's Map of American Continent—showing from ocean to ocean—on one entire sheet of bank note paper, 40x50 inches large, on a lightning press, and colored, sized and varnished for the wall so as to stand washing, and mailing anywhere in the world for 25 cents, or unvarnished for 10 cents. This map shows the whole United States and Territories in a group, from surveys to 1875, with a million places on it, such as towns, cities, villages, mountains, lakes, rivers, streams, gold mines, railway stations, &c. This map should be in every house. Send 25 cents to the Lloyd Map Company, Philadelphia, and you will get a copy by return mail.

☞ FIVE HUNDRED FIRST-CLASS CANVASSERS WANTED! The publishers of the HEALTH REFORMER are determined to raise their subscription lists to 50,000. They offer to first-class canvassers, who will give their time to the work, a cash premium by which they can make from five to ten dollars a day. For further particulars, send for our circular. PUBLISHERS.

☞ Just as the REFORMER goes to press, we are authorized by the editor to make the following statement in regard to the prices of HONEYWELL'S GRAHAM CRACKERS, whose advertisement is on the second page of the cover:—

Plain Graham	Wafers,	10	cents	per	pound.
" "	Crackers,	9	"	"	"
Graham Cream	"	13	"	"	"
Oatmeal	"	12	"	"	"

☞ "A thing of beauty is a joy forever." This is eminently true of Webster's Unabridged—the life-labor of the great lexicographer who "taught millions to read, but not one to sin." We know of a family of little folks whose chief delight is to con the engravings of this magnificent volume. See particulars in regard to prices, etc., on second page of cover.