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

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BIBLE HYGIENE.

BY ELD. JAMES WHITE.

IN the beginning the Creator designed that appetite should be man's servant, and not his master. It was the plan of God that the appetite should be subordinate to the moral and intellectual. This great fact is seen in the first prohibitory declaration, "Of every tree of the garden thou mayest freely eat, but of the tree of the knowledge of good and evil, thou shalt not eat of it." Gen. 2:16, 17. Webster defines appetite to be "a desire of food or drink." When controlled by the higher powers, the appetite is one of God's blessed gifts. But uncontrolled, it becomes a debasing tyrant.

God made man upright, and endowed him with powers of mind far above any of the living creatures of his hand upon the earth. He placed him upon probation that man might form a character for the glory of the Creator, and for his own happiness. The first great moral lesson which the innocent pair of Eden were to learn was self-control. God appeals to man's nobler powers. He graciously gives him all he needs for the delights of taste and the support of his nature. And it was for man's moral good, to say the least, that God prohibited a single tree. Of all the trees of the garden he might freely eat, *save one*. In this prohibition, the Creator places the appetite under the watchcare and guardianship of the moral and intellectual.

When man came from the hand of his Creator he was declared to be "very good." He was put upon probation that he might develop a perfect character. This achieved, his probation would have ceased, and the race would have continued to enjoy the seal of perfection of character transmitted from their representative. In this state of things, existence would have been for the glory of the Creator, and the highest possible delight of man. But he did not develop a perfect character before God. He basely yielded to the tempter, lost his innocence, and his entire being, soul, body, and spirit, for six thousand years has felt the taint of sin, and the weight of accumulated guilt and ruin resulting from continued transgression of moral and physical law. Sickness, sorrow, pain, and death, are the legitimate fruits of transgression.

And man alone is to be blamed for the moral and physical wretchedness under which the race suffers. There was no need of Eve yielding to the tempter. And Adam is quite as inexcusable, in rashly plunging himself into the same fearful dilemma as that in which he found his unfortunate wife. In Eden they were surrounded with unparalleled variety of plenty, and the perfection of beauty. "And out of the ground caused the Lord God to grow every tree that is pleasant to the sight and good for food." Gen. 2:9. The surroundings of our parents in Eden were delightful. The Creator had spread out before their joyful eyes a feast of pleasure in the stately trees, the climbing vines, and in the beautiful shrubs and flowers. God is the author of the beautiful.

Eden also abounded with that which was "good for food." God had caused every good fruit tree to grow, affording variety and an inexhaustible supply. He welcomed man to "freely eat" of them all, excepting only one. And then he warned him, face to face, not to partake of the fruit of that *one* tree on pain of death. Thus surrounded with the beautiful, and with the variety of the most delicious plenty, and thus warned by the beneficent Author of his happy existence, man rashly and basely yielded to the tempter, and plunged the race in ruin.

It was that curious, bewitching longing for

just one more variety, on the part of the beautiful Eve, that led to the transgression. When she had all that heart could wish, she still wanted one more variety—only one more. She did not need the fruit of this tree; but she was charmed with the idea of just one more variety. The tempter succeeded in making Eve believe that eating was a very important matter, and that she should not at all restrict her appetite. She was flattered with the idea that eating the forbidden fruit would raise her to a higher and happier life. Her reason was dethroned, and her appetite reigned in ruin. The fall was a terrible one. And let it be remembered that uncontrolled appetite occasioned it.

But why complain bitterly of our first parents for their transgression, which brought the terrible weight of moral and physical evils upon the race, while manifesting daily as great moral weakness as they did? If there had been but one fall, murmuring against Adam and Eve would not come from these with so ill a grace. But there have been a succession of falls. And these very persons, with the history of the first transgression and its results, the plan of redemption through Christ, and all the prohibitions of the Old and New Testaments before them, sin against as great light as the inexperienced representatives of the race did.

But Infinite Wisdom immediately devised the scheme of redemption, which placed man on a second probation by giving him another trial, with the Redeemer to help him in the work of forming a perfect character before his Maker. And if the ways of God are equal with the created intelligences of his love and care whom he has put on probation, then we have as favorable chance to perfect righteous characters before God as had innocent Adam in Eden. For while it may be urged that our condition of moral darkness and feebleness is far below that of Adam, on the other hand it can be plead that, although our moral distance from God is greater, we have the light of experience and of the word of God, and the long arm of our adorable Redeemer to help us, which our first parents did not have. Then let the men of our time cease their murmurings against God for suffering the first transgression and the consequent fall, and their bitter complaints of Adam for his moral weakness, while they are falling daily over the indulgences of morbid appetite for tea, coffee, tobacco, and stimulating drinks and foods, which are filling up the cup of human woe.

And is it not reasonable to suppose that in the second probation the great test would come just where God tested our parents in Eden, and that the indulgence of the appetites and passions would be the greatest moral evil in this world during the period of human probation? But we are not left to mere supposition in forming an opinion upon this subject. The Sacred Record shows in the clearest manner possible that God has tested his people since the fall just where he tested man before the fall, and that among the most flagrant sins of fallen man, resulting in the greatest amount of human woe, has been the indulgence of unrestricted appetite.

Gluttony and drunkenness were the prevailing sins of Sodom. It is said of the people of Lot's time, "They did eat, they drank." Appetite ruled them, or their eating and drinking would not have been mentioned as sins. For their sins they were visited with fire and brimstone. It is also said of the people in the time of Noah, "They did eat, they drank." Gluttony and drunkenness led to other crimes; and to wash the world from moral pollution God poured around it a flood of waters.

For the first twenty-five hundred years after the fall, Sacred History is exceedingly brief. For example, the life and wonderful translation of holy Enoch is contained in a few lines. While the almost numberless good deeds and careful acts of obedience in the long life of this wonderful man would furnish to some modern writers material for several voluminous religious novels, the whole matter is summed up in these few words, "And all the days of Enoch were three hundred sixty and five years; and Enoch walked with God; and he was not: for God took him." We cannot reasonably expect that very much could be said upon any one subject when the history of twenty-five hundred years, embracing many of the greatest events in this world's history, is crowded into the first fifty short chapters of the Bible.

But when God is about to establish the tribes of Israel in a good land of promise, and they to be to him "a peculiar treasure above all peo-

ple, a holy nation," it is then that the sacred historian speaks more fully, and the fact appears that God tests his people since the fall just where he tested man before the transgression in Eden. The sons of Jacob went down into Egypt, where they sojourned in a strange land four hundred years. There they were humbled by the most oppressive slavery, from which they were delivered by the special hand of Providence in the most triumphant manner. The entire providential experience of the Israelites, both in their servitude and in their miraculous deliverance, was designed to lead them to revere, and trustingly obey, the God of the Hebrews.

The history of their departure from Egypt, the parting of the Red Sea before them, and the destruction of their pursuers, is one of thrilling interest to all Bible Christians. These manifestations were designed to remove their infidelity, draw the hosts of Israel very nigh to God, and deeply impress them with the fact that the Divine Hand was leading them, and thus prepare them to stand the test which God was about to bring to bear upon them in the gift of the manna.

Hands vs. Brains.

NOTHING is perhaps becoming more evident, says the Chicago *Inter-Ocean*, than the fact that rude labor, requiring only a certain amount of practice and dexterity, is now generally better paid than what involves more or less education, brain work, and skill. In many places the clerk is not earning half of the income of the carpenter. In short, all kinds of manual labor, both skilled and unskilled, are at a premium; while all that is sedentary and involves chiefly, if not exclusively, the work of the brain, has become a drug on the market. Day laborers grumble when receiving only two dollars for eight hours' work, while clerks can be had by the hundreds for eight or ten dollars a week, with hours of almost any length. All the professions are crowded. The candidates for sedentary work increase at a far more rapid rate than the demand for them; and hence is coming round the strange anomaly that education, instead of fitting the young for earning higher wages and getting on better in the world, is actually becoming a bar to their progress, and condemning them to a life-long course of pinchery and unremunerative struggle. The fact is undoubted, whatever may be its cause, and however society may seek to apply a remedy.

The main cause of this unpleasant state of things is the foolish notion that physical toil carries with it, one way or another, a certain amount of inferiority, if not positive disgrace; so that in order to be "genteel," it is thought necessary to earn one's bread with unsoiled fingers. Mrs. Grundy has settled it that "labor" is not honorable, and therefore, in obedience to her ruling, any and every device is attempted to get young men into "respectable," though pinched, ways of living. The result is manifest. Clerks of all sorts and sizes swarm like flies in Egypt, and jostle and underbid each other for every small, ill-paid vacancy that turns up; while mechanics can get employment, and day laborers turn up their noses at what would be a Godsend to many a starving, educated gentleman.

So long as the present state of feeling in reference to labor prevails, matters will not only continue as they are, but become always worse. Some mothers and sisters and wives are born aristocrats, and have far more to do with this crying evil than they might be ready to acknowledge. To think of any of *their* relatives coming home at night begrimed with "honest sweat" and dust would be intolerable. The boy that hints at such a thing for himself is apt to be forthwith denounced as a person of "low tastes," who is bent on disgracing the family. While, on the other hand, the prosperous mechanic or his wife dreams at once of getting his son into something higher and better than that at which he himself has toiled.

Now, it is an interesting question whether this evil will work itself out like some others, by ultimately going to an extreme and causing a revulsion. May it not come, by-and-by, that labor shall be all the rage, and education looked on as a brand of inferiority, as it was in the days when knightly hands were guiltless of the use of the pen? That would certainly be a sad issue to all our civilization and all our schemes of popular instruction. Fortunately, there is no need for such a return to comfortable and prosperous ignorance, side by side with a nervous, ill-payed education and accomplishments. What is wanted is simply a more rational and more correct estimate of the position and dignity of labor; a conviction that manual and mechanical toil does not necessarily imply either coarseness of manners or barrenness of intellect. We must come to understand that gentlemen may, without reproach, have horny hands, and that the dignity of a family is not compromised by any of its members being a skilled carpenter or a good blacksmith.

GENERAL ARTICLES.

"TO THE FRONT."

I'm coming straightway to the point;
If true, "the world is out of joint,"
And times no longer smoothly run,
There surely should be something done.
If out of gear,
The times appear,
Good men the rallying cry should hear,
"To the front."

There must be evils 'neath the sun
Disturbing equilibrium;
When laws God-given are obeyed,
Sweet peace and harmony pervade;
But if defied,
Things turn aside.
Who seeks to check the evil tide,
"To the front."

Strange things they're finding out of late,
So deep do men "investigate";
And science seems to have "the track,"
Whilst inspiration "is set back"—
Some only doubt,
Whilst others scout;
Who'll risk the "Good Book" to hold out,
"To the front."

When moral sense becomes obtuse,
The reins of conscience fall quite loose;
And crime, dark browed, strides through the land
With wary foot and bloody hand,
And there's excess
Of wickedness.
Who sides for truth and righteousness,
"To the front."

If "fires of hell" men thirst to drink,
Low in the scale their souls must sink.
"Strong drink is raging," he who durst
Deal out a thing that's so accursed,
Must fond hearts break,
And orphans make.
Who'll touch not, taste not, for their sake,
"To the front."

If passion, appetite bears sway,
Then health and happiness give way;
And all the M. D.'s in the land,
With all the knowledge they command,
Of mixtures, potions, powders, pills,
Can't cure the people of their ills.
The wiser say,
"To live, OBEY."
All who teach this, the nobler way,
"To the front."

Surprising greed is shown for pelf,
And strong the current sets for self;
And yet, how wretched he who knows
No joy from lessening others' woes.
The age is rife
With selfish strife;
Who seeks a higher type of life,
"To the front."

And fashion, frizzled, puffed and curled,
How this *weak* goddess rules the world!
"'T is all to be a slave" "to style,"
And freak and fancy chase the while,
Folly and pride,
A fair outside.
Who will let reason, conscience guide,
"To the front."

And yet, this world "so out of joint,"
So full of things to disappoint,
'T is not, oh, no! 't is not all bad,
Hope's left, and love to make us glad.
With these to cheer
Each other here,
Who'll hope, *love*, WORK, each in his sphere,
"To the front."

A SUBSCRIBER.

Physiology and Hygiene.

CHAPTER III.

THE human body consists of numerous parts called *organs*, each of which is especially fitted for the performance of some particular function. Thus, a muscle, a bone, a ligament, a nerve, or a blood-vessel, is an organ. The liver, lungs, kidneys, and heart, are also organs. Organs which are similar in structure, though differing in form, size, and more or less in function, are together termed *systems*. All the muscles of the body form the muscular system. The various arteries constitute the arterial system. The bones of the body together constitute the osseous system. The various nerves are comprised in the nervous system.

Several organs which are quite dissimilar in structure may be associated together for the purpose of accomplishing a single object. Such a congeries of organs is called an *apparatus*. Thus, the heart, arteries, capillaries, and veins, together constitute the circulatory apparatus. The lungs, air-passages, and muscles of respiration, form the respiratory apparatus. The stomach, intestines, pancreas, and other organs concerned in digestion constitute the digestive apparatus.

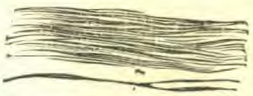
By microscopical examination, it is seen that every organ is composed of very minute parts which differ greatly from each other in structure. Thus, in a kidney may be found capillaries, minute ducts, certain peculiar cells, and other distinctive elements; these are called *anatomical elements*. Every system of organs has certain peculiar anatomical elements by which it may be distinguished. These elements unite to form *tissues*. Thus we have formed *bone tissue*, *connective tissue*, *nervous tissue*, *adipose*, or *fatty tissue*, *muscular tissue*, etc.

In different animals, the various organs which constitute an apparatus may vary in-

definitely in form and size, to suit the peculiar habits and wants of the individual; but it is remarkable that in the higher orders of animals there is very little variation in the anatomical elements of which corresponding organs are formed. Thus, the muscular fibers of the ox are nearly identical in appearance with those of the human subject; so also with connective, nervous, and other tissues.

Connective, or fibrous tissue, constitues the anatomical framework of the body. Its fibrous character is well shown in Fig. 10. It serves to bind together delicate parts and to give form and symmetry to certain portions of the body.

Fig. 10.



There are two kinds of fibrous tissue, *white* and *yellow*. White fibrous tissue is inelastic. Yellow fibrous tissue possesses an extraordinary degree of elasticity.

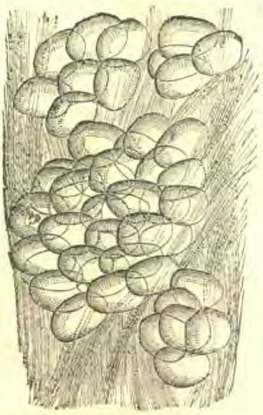
The connective tissue is very loosely arranged in many parts of the body, especially just beneath the skin. In these localities it is often called *cellular tissue*. In general dropsy, this loose tissue becomes filled with fluid, giving to the patient a bloated appearance. It occasionally happens in wounds of the chest that a communication is formed between the injured lung and the cellular tissue beneath the skin. With each effort of inspiration, air is forced into the cellular interspaces, and in a short time the whole body assumes the appearance of a huge gas bag forcibly distended. Butchers sometimes avail themselves of this property of connective tissue by forcing air beneath the skin of lean animals with a bellows, thus giving them a very plump appearance, very deceptive to customers.

A curious instance of cruelty is related of some French parents who exhibited in Paris a child with an enormous head, for the purpose of obtaining money. They confessed to the authorities that they had themselves produced the monstrosity by bandaging the lower part of the head, while they distended the skin of the upper portion by blowing through a pipe introduced into an opening through the skin above.

When the interstices between the fibers of connective tissue become filled with globules of fat, *adipose tissue* is produced. When the deposit of fat occurs only in a moderate degree, it serves to give symmetry and beauty to the form; but its excessive accumulation constitutes obesity.

A certain amount of fatty or adipose tissue always exists in the body, and it serves many useful purposes; yet many err in making the amount of fat exhibited by a person a criterion of health. Fat is much more often a sign of disease than of health. It possesses no vital properties, and renders no assistance in the performance of mental or physical labor. Fig. 11 is an excellent representation of adipose tissue as it is viewed under a microscope of considerable magnifying power.

Fig. 11.



There appears to be a remarkable tendency to the accumulation of fat in particular locations which vary with different nations in some degree. The English are noted for their tendency to become portly from the morbid accumulation of fat upon the abdomen. In the bush-women of South Africa this accumulation occurs upon the thighs to a very extraordinary extent, causing the most unsightly deformity.

We shall notice the other important tissues when treating of the organs of which they constitute the essential parts.

CHAPTER IV.

THE BONES.

The human skeleton consists of two hundred and eight separate bones, exclusive of the teeth—which are appendages of the skin, like the nails and hair, and hence are not properly classed with bones, notwithstanding their bone-like structure.

In man and the higher animals, including mammals, quadrupeds, birds, and fishes, the skeleton is internal, and comprises a backbone. Another class of animals have their skeleton on the outside of the body, and it consists of rings or segments joined together. Insects, worms, and lobsters, belong to this class. A class still lower in the scale have also an external skeleton, but it consists of only one or two pieces. Of this class, oysters, clams, and snails, are familiar examples. The lowest class of all have no skeleton whatever, either internal or external. The starfish is a typical representative of this class.

In the human skeleton, represented in Fig. 12, a, a is the backbone or vertebral column; b, humerus; c, elbow joint; d, e, ra-

dius and ulna, two bones of forearm; f, carpus, or wrist; g, metacarpus and phalanges, bones of hand and fingers; h, hip joint; i, femur, or thigh bone; k, patella, or knee-pan; m, n, tibia and fibula, two bones of leg; o, tarsus, or ankle; p, metatarsus and phalanges, bones of foot and toes; r, thorax, or chest; s, s, w, pelvis; w, sacrum; x, sternum; y, clavicle or collar bone. The scapula is upon the back of the shoulder. The hyoid bone is absent, being removed with the soft parts, as it has no bony attachment.

Fig. 12.

The Human Skeleton.

CHEMISTRY OF BONES.

When a chemist examines a bone, he finds that it contains only one-third of its weight of animal matter, the balance being inorganic salts of various kinds. The following table is the composition of bone according to Berzelius:—

Gelatine and blood-vessels	(organic),	33.30
Phosphate of lime	(inorganic),	51.04
Carbonate of lime	"	11.30
Fluoride of calcium	"	2.00
Phosphate of magnesia	"	1.16
Soda and chloride of sodium	"	1.20
Total,		100.00

A small portion of fat is added by some.

By subjecting a bone to prolonged heat, the animal matter may be entirely burned away, the shape of the bone being retained by the earthy matter which remains. After being subjected to this process, the bone becomes exceedingly brittle, and will be crushed by a slight force. By immersion of a bone in dilute hydrochloric acid for a time, the earthy matter will be dissolved, and the animal matter alone will be left. As in the former case, the shape of the bone remains unchanged, although it has lost two-thirds of its weight.

It will be observed, also, that it is no longer either brittle or rigid, but has become very flexible. Indeed, if it be a long bone, it may readily be tied into a knot as we have seen done with one of the bones of the leg, and as is well shown in Fig. 13, which represents a bone which has been treated in this manner.

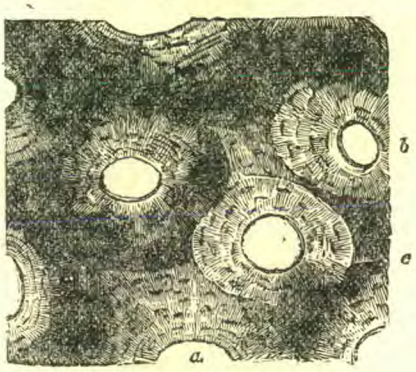
Fig. 13.

MINUTE ANATOMY OF BONES.

The minute anatomy of osseous or bony tissue is very peculiar and interesting, as studied with the microscope. By careful examination, after proper preparation, it is found that a bone instead of being a solid structure, is composed of numerous bundles of little hollow rods, which are made up of concentric plates, symmetrically arranged about the central canals, which are called, from their discoverer, *Haversian canals.* Interspersed among the concentric plates are little spaces called *lacunæ,* which are connected with the large central canals by means of minute passages called *canaliculi.* By reference to the accompanying engraving (Fig. 14), this will be more readily understood. The oval white spaces represent the Haversian canals. The dark lines radiating from each of them are the canaliculi. The small dark spots arranged about the central canal in irregular circles are the lacunæ. The canals are passages for the blood-vessels which penetrate the interior of bones in great numbers. The spaces between the rods are filled up with a cellular substance, in the meshes of which the earthy matters are deposited. This is called the *mineral base* of the bone.

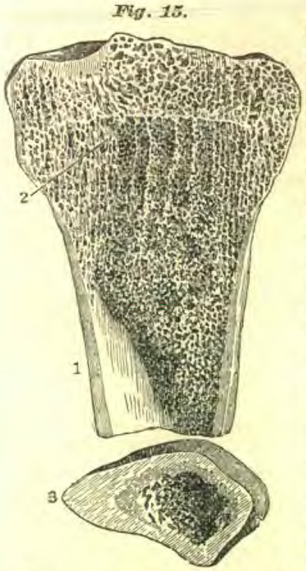
In its coarser structure, the anatomy of bone is very simple. In those bones the function of which requires bulk and lightness, rather than great strength, the microscopic

Fig. 14.



rods are arranged very loosely, so that a kind of lattice-work is formed. This is called *cancellous tissue*. Its appearance is well shown in Fig. 15, at 2. At 1, in the same engraving, is shown a portion of *compact tissue*, in which the rods are closely packed together. Even the most solid bones, however, are only solid in appearance, for the microscope shows them to be networks of minute canals, as we have already seen in Fig. 14.

Fig. 15.



The relative proportion of the cancellous and compact bony tissue varies in the different bones of the body and in different parts of the same bone, as we shall again observe. It also varies widely in different animals, to suit their various modes of life. In birds, for example, nearly all the bones of the body are hollow and very cellular, so as to give lightness to the frame, which is very important from its relation to their life in the air. Animals which obtain their food by crawling upon the bottom of rivers, and other bodies of water, have, on the other hand, bones which are remarkable for their great solidity.

All bones are covered with a fibrous substance called *periosteum*, from which they are nourished. If this tissue becomes detached or removed by any accident, the subjacent bone is almost certain to die, and serious, often fatal, disease is frequently caused in this way. This death of bone is analagous to the ulceration of soft tissues, and is called *caries*.

DESCRIPTIVE ANATOMY OF BONES.

The bones of the body are divided into three groups; viz., 1. Those of the head; 2. Those of the trunk; 3. Those of the extremities. Bones are also described as *long*, *short*, *flat*, and *irregular*.

The *long bones* are found in the extremities. They are distinguished from other bones by having a shaft with two expanded extremities. The shaft is also hollow, and contains blood-vessels, nerves, and adipose tissue. This cavity is called the *medullary canal*, and its contents, *medullary substance*. The shaft of a long bone is formed of compact tissue; the extremities are largely composed of cancellous tissue. This is well illustrated in Fig. 15, which represents at 1 the cellular structure of the extremity of a long bone, as shown in a longitudinal section, and at 3 a transverse section of the shaft of the same bone, showing the medullary canal in the center as a dark space.

Short bones have no medullary canal, and are wholly composed of cancellous tissue, with the exception of their exterior, which consists of thin plates of compact tissue. The bones of the wrist and ankle belong to this class.

Flat bones are those which are composed of two plates of compact tissue connected by a thin layer of cancellous tissue. They inclose cavities. The ribs, sternum, and bones of the skull are of this class.

Irregular bones are such as cannot be included with any of the preceding classes on account of their peculiar form or structure. The vertebræ and most of the bones of the face are included in this class.

In some parts of the body small bones are developed in tendons; these are called *sesamoid* bones. The patellæ or knee-pans are illustrations of this curious class. With the exception of the two patellæ, these bones are not included in the number of true bones.

There are numerous elevations and depressions upon the surfaces of all bones, which serve as points of attachment for ligaments or muscles. These have received numerous names with which it is unnecessary to perplex the reader.

With the exception of the sesamoid bones

and the teeth (which are parts of the skin, rather than of the skeleton), the following list comprises the whole number of bones found in the human body :—

Cranium,	8
Face,	14
Ear (in adult life 6),	8
Vertebral column,	26
Hyoid bone, sternum, and ribs,	26
Upper extremities,	64
Lower,	62
Total,	208

The Great Foe of the South.

[A NASHVILLE journal addresses the following to the young men of the South; but we think it contains much good advice for young men in other parts of the country.—ED.]

Unquestionably our most dangerous enemy is indolence. She has seduced our youth and strong men into prostration of energy. She has sprinkled fungi over our temples, sown noxious weeds in our fields, and caused thorns to choke out our flowers. This is indeed grievous. All is found in us necessary to constitute a perfect people, except the will, and, alas! that is everything.

The trouble is, our young men do n't begin right. They feed on the old folks too long. They ought to strike their root down into the ground early, and learn to draw their support from it, and not from the parent stem. Any young man who won't take care of himself ought to be made to perform the interesting ceremony of *hari kari*. His friends could then console themselves with the consciousness that, though utterly useless in life, in death his body might serve as fertilizer for stalks of corn, or, perchance, some other grain. Or if our young men muster up courage to start out after a living, they usually go to law, or physic, or divinity, impressed with the idea that the work will be light. It is our conviction that any man who enters either of these professions so impressed, is an ass of the stupidest sort. All of these are crowded to death. Men of fair intelligence must work earnestly to attain moderate success. And we have a bit of advice to fling out to young men of this sort, which is golden. Men can't work without tools. Brains are necessary for success in any of the learned professions.

Others turn to the counter, and are happy if they may be but privileged to handle the yard stick gracefully, and part their greasy hair in the middle. All these steps are but the protests of our youth against manly work.

We committed a blunder just now when we compared the foolish young man to an ass. We have always blamed Rollin, the historian, for declaring that the inscription on Sardanapalus's tomb was worthy a hog. The young men of our day who affect wine, and women, and ease, with all the abandon of their illustrious prototype to whom reference was just made, are not worthy to be compared to asses and hogs, which usually fulfill a respectable destiny unless untimely cut off by men to be made up into sausages. Who ever heard tell of horses hanging round their old folks, or getting drunk, or doing any other of the blackguard tricks that so many of our noble (?) youth are proud of?

The mechanical trades offer excellent inducements to our young men; or, vast fields are lying idle and wasting merely for want of tillage. Neither of these callings is disgraceful. They certainly ought to be preferred before loafing about groggeries and groceries. Our condition is good enough. We have a glorious climate, and blue sky, and fertile soil. We are a hardy people, long-lived, brave, honest. All that is needed to our development is muscle and will rightly applied. . . . . We eat too much; we drink too much; we sleep too much; we growl too much; in fact, we do too much of everything except work. . . . . In the midst of it all, we are growing old, and the winter is gathering fast about us when we cannot work. We do need, sadly, a sort of social earthquake, and a right heavy one, too, to arouse us from our lethargy.

Use of Stimulants by Women.

A VERY large majority of the ladies of my own acquaintance on the other side, who are a fair sample perhaps of the ladies living in London society, have acquired the habit of using wine, table-beer, stout, and frequently whisky and brandy, to a large extent, I think, owing to the mistakes on the part of my own profession in the advice which they have given. The result is that the babies of the present generation are never sober from the earliest period of their existence until they have been weaned. This is a shocking statement for me to make, but I should not be doing my duty here unless I were to make it as broadly and strongly as that. It is a simple fact. The mother's blood, practically, is entirely in common with that of the child. You know perfectly that, if a mother takes even an ordinary dose of such medicine as castor-oil, it will very often affect the baby more than it affects the mother; that one has

to be exceedingly careful in prescribing for mothers simply on that ground. Now, what does that simple fact with which all you mothers are familiar show? Why, it shows this: that the soothed condition of the body after the mother has taken half a pint of beer is really the first stage of drunkenness in that child. When I hear a mother telling me that whenever she takes a little whisky and water or brandy and water because the child is fractious, and she finds that her milk agrees with it better, I am obliged to ask her if she knows what she is doing; if she knows that she is simply making herself the medium for distilling into her babe's system almost the whole of that spirit which she takes into her own; and whether she is aware that that soothed condition of the child is really the first stage of drunkenness. The fact is, the baby is only the infinitely more sensitive extension of the mother's system; and it is more likely than any other part of the mother's system to receive the things which are injurious that are taken through the medium of the mother's diet. Well, now, ladies, bear that in mind when you are told to take wine, or beer, or brandy; understand that you are merely distilling that wine, spirit, and beer, into your child's frame; that the very mold which that child is to preserve for the rest of its life is being constructed out of blood that is alcoholized—out of a condition of the system in which intoxication is the real, substantial element for the first twelve months of its growth. I ask those of you who may have thought it your duty to recommend young women who do not know better than to take those things whether that is not a grave and important fact for you to think of. —*Dr. Edmunds.*

Unnatural Deaths.

BY R. F. COTTRELL.

IT is not my object to discuss the question whether it was intended from the beginning that death should terminate our lives—whether there is such a thing as natural death. But I use the terms in what I think is their common acceptation. When the life has not been shortened by violence or accident, but has continued until its machinery is worn out by age, or, in other words, till the natural constitution or vital power is exhausted, such may be called a natural death. But when life is terminated by violence, by the infliction of wounds, or by poisoning, and thus cut short of its natural duration, such death may be called unnatural. A quotation or two will illustrate the common use of the terms.

> "And when I must resign my breath,
> Pray let me die a natural death,
> And bid the world a long farewell
> Without a dose of calomel."

So sung Dr. Thompson, the celebrated root-and-herb and steam doctor, if my memory is not at fault. A facetious writer in an address to the fossil remains of a "pre-historic man," found in a cave near the Mediterranean, and supposed to have lived "125,000 years B. C.," says:—

> "Who was your family physician?—by what name
> Got he his sheep-skin, if he had one, and his fame?
> Was he an orthodox disperser of life's ills?
> Or a 'bamboozler,' with his universal pills,
> Who turned his hand to medicine for his daily gains, [brains?
> Seeking for patrons plus of cash and minus
> Or was the healing art unknown when you 'pegged out'?
> If so, you died a natural death, beyond a doubt."

To pass by the unnatural deaths caused by war and violence, and those by poisoning with suicidal intention, how few imagine the vast number of those whose lives are shortened by the use of poisons taken as medicine! It is the testimony of eminent physicians and professors that "all medicines are poisonous," that "all our curative agents are poisons, and, as a consequence, every dose diminishes the patient's vitality," and that "in their zeal to do good, physicians have done much harm. They have hurried thousands to the grave who would have recovered if left to Nature."

If it is true that all medicines are poisonous, and no one well-informed will dispute it; this is evident, if no more, that failing to save the life of those to whom they are administered, they must have an invariable tendency to shorten it. To suppose otherwise is to suppose that nature's laws are variable and contradictory—that at one time poisons have a tendency to kill, and that at another time they have an opposite effect, or none at all.

Now since the great majority of those who die of sickness die under drug treatment, how few are the natural, and how vast the number of unnatural, deaths! In fact, how small is the number of patients who, when past hopes of recovery, have not some opiate administered to them to "make them comfortable," medicines that relieve pain by stupefying sensibility and reducing vitality. Shall we not conclude that unnatural deaths are the rule and order of the day?

Besides this, take into the account that sickness, in the great majority of cases, is the result of the violation of the laws of our be-

ing, that almost every life is shortened, more or less, by unhealthful practices and habits of life, and it will be seen that natural deaths, if there are any, are exceedingly rare. How important then it is that we study the laws of our being, and, by obedience to physical law, prolong life as far as possible! How suicidal the course of those who go recklessly on, not caring to inquire after, and to practice, the most healthful habits of living!

U. I. M. E. Conference and Tobacco.

THE following resolutions against the use of tobacco were adopted by the Upper Iowa Conference of the M. E. church at its recent session at Charles City:—

Whereas, Tobacco is an acrid, narcotic poison, ranked by Orfila, and other eminent toxicologists, with such poisons as bohun-upas, poison hemlock, belladona, &c., and whereas, the human system can never demand the continued use of such poisons to promote its healthful action, but their effects are to deaden the nerves, destroy the finer feelings, weaken the intellect, cause imbecility, derange the circulation, injure the heart, frequently causing paralysis and even premature death; and whereas, the odor of this filthy narcotic is exceedingly offensive to many, and its use so impregnates the system that the smell is exhaled from the lungs and pores of the skin, thus rendering the user an annoyance in the cars, in the parlor, at the table, in the chamber of sickness, and even at the sacramental board; and whereas, the use of tobacco costs the people of the United States more than is expended in the promotion of the cause of Christ, the preachers and members of the M. E. church alone, in all probability, expending more for that luxury than is contributed to all our benevolent enterprises; and whereas, crime, intemperance, pauperism, and tobacco, are intimately associated, many expending for this article alone a sum which, if put to annual interest, would afford them a comfortable support in their old age; and whereas, the higher the position a man occupies, the greater his influence for good or evil, and as ministers of the gospel are expected to be examples of piety, temperance, and purity, we cannot afford to be addicted to a practice heathen in its origin, and corrupting in its influence; therefore,

Resolved, That we earnestly request all our preachers and people to abstain entirely from the use of tobacco.

Resolved, That we receive no one on trial in this Conference who uses tobacco, unless he promises to abandon its use as long as he remains among us.

Resolved, That we will elect no one to deacons' or elders' orders who uses tobacco, and that the chairman of the committees on examination be requested to report on that subject.

Resolved, That we respectfully request the bishops not to transfer any one to this Conference who has used tobacco within two years previous to such transfer.

Resolved, That as the presiding elders, from their position in the church, and being called upon so frequently to administer the sacrament, have a greater influence than any other class of ministers, we request the bishop, if it can be done without detriment to the work, not to appoint any one to that office who uses tobacco.

Resolved, That as a pledge of our sincerity, we, ministers of the Upper Iowa Conference, promise to abstain from the use of tobacco in any form from this time henceforth and forever.—*Mitchell Co. Press.*

Disinfectants and Deodorizers.

INFECTION and ill smells cause a great variety of diseases; they both arise from decom position and decay of vegetable or animal matter, or both. To deodorize is to take away the bad smell. To disinfect is not only to do this, but to arrest the progress of decay, and thus cut off the supply of a bad odor. Our grandmothers thought they got rid of the ill odor of a sick-room by sprinkling brown sugar on live coal or burning tar; this gave a strong and more agreeable odor; it overpowered the other, so that it was not perceived, but did not destroy it; both odors were really present, and the air was doubly impure, only more agreeable to the senses. Hence, to deodorize an ill-smelling room or locality intelligently, substances must be used, which, by causing a new chemical combination, destroy the odor altogether; but if the decomposition continues to go on, other odoriferous particles begin to arise requiring a new application of the deodorizer; on this account all deodorizers are efficient only temporarily; hence, the only rational method is either to remove the offending material or employ disinfectants which arrest further decay. If the material both arrests the decay and destroys or absorbs the ill smell, then it is doubly valuable. Two hundred grains of chloride of zinc in an ounce of water is a powerful agent in neutralizing bad smells and in arresting both animal and vegetable decomposition, in

ships, hospitals, dissecting rooms, cellars, privies, and water-closets, without having any ill smell of its own. For disinfecting purposes, mix one pint of the above fluid to four gallons of water.

There are three powerful disinfectants: carbolic acid, but its smell is objectionable, chlorine and permanganate of potash; these last two are quite expensive. These disinfectants act by combining with deleterious substances and rendering them harmless, while antiseptics prevent and arrest the decomposition of animal substances.

The only perfect disinfectant is habitual cleanliness and thorough ventilation; next to that is a dry heat of two hundred and fifty degrees.

The most common and available disinfectant and deodorizer is copperas, crude copperas, sold by druggists at a few cents a pound under the name of sulphate of iron, one pound to two gallons of water, to be used as often as necessary to render all odors imperceptible, acting at the same time as an antiseptic, deodorizer, and disinfectant, and if instantly thrown over what passes from the body in cholera is one of the cheapest and best means known for preventing its communication to others.—*N. J. Mechanic.*

[The above is a valuable article, and should be preserved. There is far too great neglect of disinfectants and deodorizers. For many purposes the information here given is invaluable. But for all out-door uses, earth—dry earth is altogether the best. The only difficulty there seems to be in introducing it into use is that it does not cost anything and is found everywhere ready for application. If it were found only in certain localities, and to be bought at a price, its merits would soon be recognized. For cess-pools, or outhouses, nothing else should be used. Yet often do we see people going to a distance to buy lime, when three steps would take them to good, loose earth, all ready for use.]

J. H. W.

Our Home.

THAT house is no home which holds a grumbling father, a scolding mother, a dissipated son, a lazy daughter, and a bad-tempered child. It may be built of marble, surrounded by garden, parks, and fountains; carpets of extravagant costliness may spread its floors; pictures of rarest merit may adorn the walls; its tables may abound with dainties the most luxurious; its every ordering may be complete; but it won't be a home.

Health Reform in Switzerland.

BY ELD. J. N. ANDREWS.

I CANNOT speak of much progress in this good work in Switzerland, but I can set forth the need of it, and state the difficulties in its way so far as I have observed them. In natural capacity and in goodness of heart, I believe the Swiss people to be the equals of any people in the world. But in respect to progress in the comforts and conveniences of life, I think them one hundred years behind the people of the United States. In America, people think that old customs can be improved; in Switzerland, an ancient custom has the force of law in binding men. The American people may lack reverence for the wisdom of their ancestors, and may have altogether too good an opinion of their superiority over former generations; but old customs do not hold them in slavish subjection to the manners of the past. In Switzerland, it is quite otherwise. When no tangible reason can be assigned for some absurd custom, the people say, "We are obliged to do so," and this ends the debate. I do not see how the subject of health reform can ever gain much ground in this country. However, it is always best to put forth an effort.

The dwellings in this country are nearly every one of them made to shelter the domestic animals as well as their owners. It is a very rare thing to see a stable or barn distinct from the house. Nor are the stables separated from the houses by porches, as sometimes in America—which is sufficiently objectionable—but they form a part of the house itself. And so with the outhouses also. Under such circumstances, it seems impossible to have a pure, clean atmosphere, even by the aid of free ventilation. The houses are large, stone mansions built for several families, and they are not likely very soon to be changed.

But when we come to ventilation, the case is still worse. It is not that some cruel tyrant owns all the air and deals it out so grudgingly that the people are compelled to use it very sparingly, and to make the same air, with a little pure air intermixed, answer to use several times over. If this were only the case, the free spirit of the Swiss would lay low such a tyrant in the quickest manner possible. For the lack of pure air in their dwellings the Swiss people have themselves alone to thank. Their windows, opening as doors, are very unsuitable for ventilation except when the weather is quite warm. And the most discouraging feature of the case is that they have no desire for the constant entrance of pure air. They say that if this

constant change of the air in the living rooms were of any importance, all the people of Switzerland would have been dead long ago. I have been half inclined to acknowledge the force of the remark. Ventilation by night is even more sparing than by day. The moon and stars exercise so deadly an influence upon the so-called "night-air" that this kind of air is excluded as though it would be fatal to every sleeper! And this is the practice even when quite a number sleep in one small room. If you walk the street of this city in the early twilight of the morning, you will see that every window is tightly closed. After a time, as the people arise, you will see them opening their windows to remain thus a short time, that they may secure their supply of air for the next twenty-four hours. If the editor of the REFORMER will give us a brief tract that shall bring home to the common mind the folly and the injury of such notions, and that shall make simple truth and common sense illuminate minds thus darkened, I will give it as extensive a circulation in French as my means will admit. I earnestly beg for something that shall, if possible, reach this almost hopeless case.

If we can awaken people to the importance of pure air, perhaps the value of soft water can afterward be brought home to them. At present, a reform with respect to this is hopeless. It is also unfortunate that the stoves are not constructed in such a manner that bread can be baked in them. Why they are all made thus, unless it be for the purpose of compelling people to procure their bread of the bakers, it would be hard to say. Except the few cases in which the people have brick ovens, the bakers have an absolute monopoly of the bread business. In what manner, therefore, it can ever be brought about that each family shall have fresh graham bread, rolls, gems, etc., I cannot now see. First, the desire for them must be created, and then the people will find the way to have them. Perhaps there are countries where changes in these respects would be harder; but at present I have not an acquaintance with them.

I have been surprised to notice in the streets of this city how large a proportion of the people are round-shouldered and narrow-chested. I think I am not mistaken in saying that the proportion is much greater here than in America. The trades which are followed here no doubt have something to do with this; but the position of the head and shoulders in bed is, I think, a special cause of this evil. On inquiry, I find it a general, perhaps almost a universal, custom to place under the shoulders wedge-shaped bolsters, something like eight inches thick on one side and tapering to an edge on the other, and above this one or two heavy pillows. Who introduced this pernicious custom that all the people are "obliged" now to follow, I cannot say. But the present state of things is an illustration of the warning words of the second commandment in which God says that he visits the iniquities of the parents upon their children. In other words, God gives people notice that if they adopt evil courses he will not miraculously interfere to prevent these customs and practices from cursing their posterity. In America, some people still use feather beds *on* which to lie down at night. Those who occupy such beds can, if they choose, remove the feathers. But it appears to be a universal custom in Europe to make a feather bed the *covering* of the sleeper. The most decided health reformer must surrender to feathers in the old world, at least during the severity of winter.

The people that use swine's flesh in Switzerland allow nothing to be wasted. The moment the blood spirts from the neck of the hog, the woman of the house, standing by, catches the blood in a dish, from time to time pouring it into a larger vessel which another person keeps industriously stirring. This blood is to be used for a pudding, and even the gentry eat of this abominable dish. Alas, that the curse of Babel makes it impossible for the HEALTH REFORMER to reach the people of Switzerland!

The cheese market of Neuchatel is worthy of mention. It is held in the open air on one side of quite a wide street. The condition of the most of these cheeses is such that it seems strange that human beings can be induced to eat of them. The smell is so intensely offensive that there can be no doubt that putrefaction to a considerable extent has taken place. Yet this is the stage for the cheese to reach in order to be considered a first-rate article. If this is the true criterion, no man need to be cheated in the purchase of cheese, unless, indeed, from abuse, his nose has lost the power of discriminating. The smell is very offensive even on the opposite side of the street. I speak of this to show how greatly the appetites of the masses are perverted.

America is terribly cursed with tobacco; yet there are many Americans who do not use it. In Europe this curse is nearly universal. One disgusting American custom, however, has few observers here. The chewing of tobacco is, I think, quite rare. But the gift of continuance on the part of the smokers is most marvelous.

I have often read in America that drunkenness is quite unknown in the wine-growing districts of Europe, where the pure juice of

the grape is drank almost as freely as water. The valley of Lake Neuchatel is such a region. Here can be obtained a plenty of grape juice that has never had even the addition of water or of sugar. And that the people drink this in large quantities is true from my own observation. Is pure wine a remedy for the prevalence of drunkenness? Far from it. Drunkenness is here alarmingly prevalent. In many cases, wine is the sole liquor which drunkards use in their times of debauchery. I have spoken freely, that the true condition of things among the people in general may be understood. There are examples of persons striving to lead a nobler life, and to enlighten others also. The Swiss people have maintained their civil liberty for many ages; may they sometime become free from the bondage of perverted appetite.

Neuchatel, Feb., 1875.

Social Reformers.

DOUBTLESS there is need enough in very many directions for social reform. Everybody, almost, admits and deplores the prevailing extravagance in dress and household expenses; everybody denounces the gossip, the scandal-monger, the mischief-maker; everybody longs for the millennium, and a great many people think if their particular views were carried out it would be speedily ushered in. Nearly every village has one or more apostles of reform; and these men (or women) right, it may be, in the main, in their views, contrive by their manner of advocating them to cover themselves and their doctrines with odium. They stretch upon the Procrustean bed all who pass by their way, wrenching joints apart if they happen to be too short of stature, lopping off heads if they project beyond the bed rail.

To illustrate precisely what is meant, let us introduce to our readers an old lady past three-score, who makes incessant warfare on all who come near her, enforcing her precept to dress plainly, to go without all superfluities, and give every dime thus saved to the heathen. Wouldn't the simple example without the precept be infinitely more telling? Couldn't she sugar-coat the bitter pill of self-denial she administers to everybody, with sweet silence, and thus produce far larger results?

As a companion-piece, there is another lady of about the same age who aims at precisely the same results. Moving in the best circles of metropolitan society, she wears only her own hair, which is neither very abundant nor very beautiful; she dresses neatly, but plainly, discarding all superfluities; she is abundant in almsgiving, compassionate to all in affliction, and is invariably spoken of as "angelic." Her silent advocacy of the principles that govern her life continually wins disciples and gently reproves fashionable extravagance. She is sought by the young and the old, by those who admire and imitate her example and by those who do not.

The fact is, there are very few of us who will consent without a protest to ride another's hobby of reform. We like to be left alone to go at our own pace and upon our own nag, though we are not unwilling to ride along the way with our hobby-rider, and hear him discuss the merits of his wonderful steed, reserving, of course, our private opinion of the qualities of the animal that carries us.

In proportion as men and women travel and inform themselves, do they become liberal in their views and feelings as to the rights and privileges of their fellows; and in proportion as they are intelligently liberal, are their views accepted by their associates.

If our social reformers would extend to all the same freedom of opinion and action they claim for themselves, and at the same time endeavor, by their courtesy, to win to their views those whom they would influence, the harmony of neighborhoods would be greatly increased.

We need reformers in social life, men and women of earnest conviction, who by actions consistent therewith, rather than by words, recommend to those around them the excellence of what they believe. Followers may be won rather by example than precept. The place for social reform to begin is in the heart and life of each individual, and when each one of us succeeds in being exactly right, without any doubt, we shall find that all our neighbors and friends are just right also.

[The above extract from the N. Y. *Tribune* inculcates a principle which must be recognized as important by all candid thinkers. This principle is one which is as applicable to health reform as to any other of the great social reforms of the day; and those who are solicitous for the advancement of the cause of hygiene may well consider it. It is possible, however, that the writer has recommended somewhat too strongly the non-combatant plan. Truth is aggressive and belligerent, as well as pacific. In a world where error is advocated with such a clamorous uproar, and such brazen-faced effrontery, it is often necessary to manifest a corresponding degree of vigor in the presentation of new and impor-

tant truths. But this is no apology for that class of persons who render themselves unpopular, and disgrace the cause which they profess to represent by untimely and discourteous exhibitions of their peculiarities, or bitter tirades against the views of those who differ from themselves. We may be aggressive without being pugnacious or captious. A gentle hint, an apt query, a timely observation, courteously offered, will often be far more effective than a prosy dissertation or a heated discussion. We do not favor lethargy or trepidation. Reformers must be in some degree iconoclastic as well as creative. Old images must be broken, and the temples of error must be torn down to make room for the nobler edifice of truth.—ED.]

Tea and Coffee.

NUMBER TWO.

HOW THEY ARE INJURIOUS.

THE evils which result from the use of tea and coffee are attributable to three distinct causes, each of which we will briefly consider.

1. The most prominent and characteristic effects of the use of tea and coffee are those which are occasioned by the peculiar poison which they contain, together with *tannic acid*, an irritating drug. Acting as poisonous, or medicinal, agents (as the terms are really synonymous), they produce a great variety of morbid effects, which will be more fully noticed further on.

2. In drinking tea and coffee, or any other beverage, with the meal, the processes of digestion are greatly interfered with in at least three different ways.

a. The food is rinsed down the throat without proper mastication, so that it is introduced into the stomach in a condition quite unfit to be acted upon by the gastric juice, as it is quite essential that the digestive fluid should come in immediate contact with the most minute particles of the food in order to fully perform its function. As the stomach cannot perform the work of comminution which the teeth are especially fitted to do, a large proportion of the food either passes on at once as waste material, or lies in the stomach souring, and thus preventing the digestion of the remainder of the food, and irritating the delicate membranes of the organ. Drinking tea, coffee, or any other beverage with meals, is the great cause of hasty eating, and imperfect digestion. One other result of hasty mastication is the imperfect insalivation of the food, which is a very serious deficiency, as the saliva is an important digestive fluid, and its absence imposes an extra task upon the other juices employed in digestion.

b. By the introduction into the stomach of a large quantity of fluid, the gastric juice is so diluted that it is rendered utterly incapable of digesting the food with which it comes in contact.

c. In order to remedy the evil last mentioned, the absorbent vessels of the stomach are set vigorously at work to absorb and carry away the surplus liquid, so that the work of digestion may be carried on. This is a task which involves both a serious delay, and the imposition of a large amount of unnecessary work upon the stomach, the natural result of which is exhaustion, enervation, and ultimate permanent weakening of that important digestive organ.

3. The unnatural temperature at which tea, coffee, and all similar beverages are usually drank, is very injurious to health. By the great heat, the teeth are injured, and the delicate nerves of taste are impared. But the greatest injury is done the stomach, the delicate walls of which are relaxed and weakened, so that they cannot act upon the food in their naturally prompt and vigorous manner. In this way, permanent and almost irreparable injury is often done.

MORBID EFFECTS OF TEA AND COFFEE.

The morbid effects of tea and coffee are manifested upon both the physical constitution and the mental organization of the person addicted to their use. First, we will consider the *physical effects*.

When a person drinks a cup of tea or coffee, he takes into his system from one-half of a grain to three or four grains of *theine*, the poison to which we have already frequently referred. Now what does this poison do? Does it nourish the body? No respectable authority makes any such claim. On the contrary, there is the best of reasons for believing that it does nothing at all. There is something done however; but the vital organism is the actor, not the poison.

How does the system behave toward the active element of the tea or the coffee? Instead of attempting to assimilate it, or utilize it in any manner, it recognizes its true character as a dangerous poison, an article unfit to remain within its domain, and immediately sets its servants, the various depurating organs, at work to get it out of the body as soon as possible. If the resulting commotion is only slight, there is merely a gentle increase of the activity of all the various organs of the body consequent upon the accelerated motion of the blood. In this case, the individual feels exhilarated. He is stim-

ulated, and feels cheerful and contented; and although he may have been, previously, quite weary, he now *feels* refreshed and strengthened. If the dose taken had been a little larger, the person would have been more excited, and would probably have been very loquacious. Increase the dose somewhat, and a state of complete insensibility results. The last result is not often seen; but the first and second are very common.

In addition to these effects of the *theine*, the *tannic acid* irritates the membranes of the stomach and intestines, inducing constipation, and the long train of ills which are attributable to this morbid condition.

These are the immediate effects; now what do we see as the more remote results? The various organs which have been at work in eliminating the poison have been excited to unnatural, unusual exertion in view of impending danger from the presence of something abnormal and unusable. After the work of expulsion is accomplished, they are no longer goaded on by the foreign substance, and so they quickly relapse into a condition as much below their normal standard of healthful activity as they have been stimulated above it by the tea or coffee. Then the feeling of comfort and exhilaration gives place to one of exhaustion, faintness, and restlessness. This is the reason why every tea-drinker becomes so dependent upon his cup for the maintenance of his ordinary good feelings.

But let us look a little deeper into the condition of the system after the use of tea or coffee. The organs which have been engaged in the work of casting out of the body the poison sipped from the steaming cup, are the liver, lungs, kidneys, perspiratory glands of the skin, and the mucous membrane of the intestines. In doing this work, they have been obliged to perform an extra amount of labor, while they have been not only unfurnished with a commensurate amount of additional nutriment, but have been, by overwork, deprived of the opportunity of obtaining even their ordinary supply. Under these circumstances, it is very evident that a greater or lesser amount of injury must be done the vital organs, the amount of actual damage being proportionate to the amount of poison received. If this injury were wrought only in a single instance, nature would soon repair the damage, and restore the organs to their wonted health and tone; but, when it is inflicted every day, and perhaps several times a day, the vital powers are unable to restore the wasted, overworked organs, and gradually, but surely, they are weakened and deteriorated until they become wholly diseased and unfitted for the performance of their proper functions. Then every tissue in the body becomes affected.

Let us trace this work of destruction and desolation in the vital domain a little more minutely.

1. The savory beverage containing the poison is taken into the mouth hot. The great heat injures the teeth by so suddenly increasing their temperature, and thus induces early decay. It also works almost irreparable mischief with the delicate nerves of taste. Then it washes down the food, thus preventing proper mastication and the admixture of the saliva with the food, by this means creating two very serious impediments to digestion. By preventing sufficient mastication, the teeth are deprived of the requisite amount of exercise to maintain their healthy integrity, and decay soon begins, just as an unused arm withers.

2. The scalding potion passes down into the stomach, and there begins its work of mischief. At first it irritates and excites the delicate tissues of this organ by the excessive heat. This excitement is soon replaced by as great a debility and relaxation. It also renders the gastric juice inefficient by diluting it, and still further exhausts the stomach by rendering necessary the energetic action of its thousands of absorbents to remove the great mass of fluid which is interfering with the work of digestion which is to be performed.

3. Being thus received into the circulation, by the last process, the infusion of tea or coffee with its contained poison is hurried off to the liver, the kidneys, the lungs, the mucous membrane of the intestines, and, finally, to the skin. Each of these willing servants of the body sets energetically to work in its own way to get the intruder out as quickly as possible. But while so doing, the ordinary work of the body is necessarily neglected to a greater or less extent. The gross, acrid, irritating, biliary matters, which the liver should remove, are left to accumulate in the blood. The kidneys find it impossible to perform all the work laid upon them, and they fail to remove as much of the products of decomposition as is necessary to keep the blood pure. The mucous membrane also neglects its ordinary work to some extent; and, in trying to wash out the unwelcome and destructive *theine*, it pours out from the blood a large amount of its watery portion, thus still further thickening the already turbid current. The lungs are also doing extra work, while the skin, like the mucous membrane, is draining the blood of its fluid to purge it from the narcotic poison which it bears.

Now, mark the result of all this morbid activity and disarrangement of the vital functions. The liver gets behind in its work, becomes congested, and finally torpid, inactive. The kidneys are overworked, and are liable to take on almost any form of disease to which they are subject. Diarrhea or obstinate constipation affects the bowels. The lungs gradually lose their accustomed activity and efficiency. The skin becomes clogged with the carbonaceous and biliary matters which abound in the blood, and which it finds itself unable to eliminate. This beautiful and flexible covering of the human body assumes a yellow, sickly, unwholesome appearance, and becomes of a leathery texture, so well known to physicians as the tea complexion, and which is one of the chief sources of revenue to the venders of patent lotions, "balms," and cosmetics.

But while all these devastations have been in progress, it must not be forgotten that the most delicate and sensitive tissues of the body, the nerves, have not been allowed to escape, but have suffered even more severely than the less delicately organized depurating organs. As soon as the tea or coffee was taken into the stomach, it was recognized by the nerves of that organ as a poison. These faithful sentinels immediately communicated this fact to one of the great nervous centers, whence the intelligence was generally distributed throughout the body, rousing every part of the nervous system, which, in turn, excited the various depurating or excreting organs to a great increase of action. This morbid, nervous irritation or excitement is followed by its inevitable consequence, depression. And, as the process is frequently repeated, the nerves become shattered, weakened, and uncertain in their action. Then come sick headache, nervousness, neuralgia, and every form of nervous disease.

Furthermore, the blood being filled with gross, irritating impurities, every tissue of the body is bathed in a poisoned life-current, and is consequently contaminated, diseased. The blood is also impoverished, as well as poisoned; for the stomach has suffered with the rest, and has lost its power to properly digest the food, and suitably prepare it for assimilation.

The physical condition of the body becomes that of universal disease.

Such is the pernicious influence of tea and coffee upon the physical frame. Let us now observe how the mental faculties are affected by these insidious agents.—*Health Tract No. 6.*

The American School Girl.

If any one doubt that in America people live fast, let him look over the curriculum of almost any seminary for the education of young ladies. The course of studies through which the pupils are to be rushed in two, or possibly three, years, is something frightful. Astronomy, chemistry, natural history, rhetorical exercises, geometry, algebra, histories ancient and modern, Kame's Elements of Criticism, moral philosophy, *French* always of course, Butler's Analogy, and a multitude of other ologies, form the delicate mental diet of a young girl from fourteen to sixteen or seventeen; and it must *all* be swallowed in just so many doses! To think of being obliged to perform such a feat is enough to set one wild, and the earnest ambition to do it results, in the majority of cases, in permanent injury to health, and very frequently in comparative intellectual imbecility. We have known positive dementation and semi-idiocy to follow this overstraining of the mental faculties at school. And where the pupil graduates with apparent success, she finds in after life that it was mainly her memory and not her judgment that was trained; in other words, she was *crammed*, not educated. We submit that the diplomas conferred upon these enormous swallowers, but poor digesters, of knowledge ought to read somewhat as follows: "This excellent though misguided young Miss, by making agonistic efforts of memory, prosecuted under heroic sacrifices in depriving herself of open air and exercise, and sufficient sleep, while at the same time suffering from loss of appetite and spasms of nervous dyspepsia, has been enabled to amass a considerable amount of high-sounding verbiage, by the parrot-like repetition of which she has wheedled her proud papa into paying extravagant bills, and now hopes to make a brilliant *debut* into society! Be gentle, kind friends, to her defects, since her long-abused body, staggering under an overwrought brain, is likely soon to break utterly down under fatal disease. She has done the best she could, poor thing! May the Lord have mercy on her!"

This is exactly the way in which a man who is familiar with the working of many young ladies' schools, and who is, therefore, competent to read between the lines, must interpret their diplomas. If our mortal eyes could be opened upon the invisible, we might often see the bony hand of him who carries the hour-glass and scythe reaching the diploma to the nervous and worn-out girl who covets it! It is his death-warrant summoning her to answer for violated physical laws.

Now, where is the trouble here? Not, surely, in the range or in the difficulty of the studies marked out. It is the glory of this age that young women are having in this respect an equal chance with young men extended to them; and it is also the glory of the girls that they show capacity, when allowed a fair chance, quite equal to that of the boys in mastering the higher studies. The trouble lies solely in the insane attempt to crowd into a girl's brain in two years the knowledge that she ought to be five years in acquiring. No amount of genius, nor readiness of perception, nor retentiveness of memory, can compensate for the lack of time. Subjects must be comprehended not only in their words, but their *principles*, and this can be accomplished only by deliberate and carefully matured thought-processes. To hold a problem continuously—and without being agitated with a nervous consciousness of the necessity of haste—before the attention until its principles become assimilated into the very texture of the mind itself, and are certain to abide there an eternal possession—this only is genuine and worthy education. The notion that our girls should be *finished* in school, and ready to blossom out into society at seventeen, is as senseless as it is suicidal. And for the prevalence of this notion the parents are not so much to blame as, alas, alas! the young Misses themselves.

Here is their weak spot. To linger just one year longer with their books would kill their eager desire after company, and so they would rather almost kill their bodies in the attempt to do two years' work in one, and thus get free. Let their true friends uphold the hands of those teachers who have courage to demand time, and pray that girls may have sufficient divine grace to be willing to appropriate the time which they so much need.—*Christian at Work.*

A Cheap Window Ventilator.

MANY houses, unfortunately, are built without any provision for ventilation. Such houses may be ventilated by simply opening the windows, but this usually produces cold draughts which not only render the room uncomfortable, but endanger the health of the occupants. Some one has recommended to place a strip of board three inches wide, and as long as the lower window bar, under the lower sash, thus leaving an opening between the top of the lower sash and the bottom of the upper sash, through which fresh air may enter.

I propose a modification of this plan, by which the air will enter in two thin layers, with an upward movement by which it will mingle with the warm air of the room so as to prevent sensible currents of cold air. Take two pieces of board $\frac{1}{4}$ inch thick, one inch wide, and as long as the lower bar of the window; three narrow pieces $\frac{1}{2}$ inch thick and $1\frac{1}{2}$ inches long, one end being cut with the bevel of the window-stool. Nail these pieces across one of the long slats, one at each end and one in the middle, placing the short side of each piece even with the lower edge of the slat. Nail the other slat on the opposite side of these short pieces, bringing the upper edge of the slat even with the square end of the short pieces. This will make a compound bar with half an inch between the slats, and one slat half an inch higher than the other when the whole is turned upon its edge.

Place the whole under the lower window sash, with the higher slat on the outside. The air can then pass under the outer slat, between the two slats, and enter the room over the top of the inside slat, having an upward motion which will cause it to mingle rapidly with the warm air of the room, and thus prevent any sensible draught. By thus raising the lower sash, a space will be left between the top of the lower sash and the bottom of the upper sash, through which another thin layer of air may enter the room at some distance from the layer at the bottom of the window. This air must also enter with an upward current, causing it to speedily mix with the hot air in the upper portion of the room.

This arrangement is especially adapted to secure safe window-ventilation in bed-rooms. If properly constructed and inserted, it will never cause sensible currents in the body of a room except when strong winds prevail, when we usually secure enough ventilation by the imperfect construction of our window-casings, etc.

It is respectfully dedicated to those who love pure air.—*R. C. Kedzie.*

TEXAS DOCTORS.—A queer story is told about the doctors in a certain Texas town, who were all away last summer to attend a medical convention. They were absent about two months, and on their return home found all their patients had recovered, the drug store had closed, the nurses had opened dancing-schools, the cemetery had been cut up into building lots, the undertakers had gone to making fiddles, and the hearse had been painted and sold as a circus wagon.—*American Med. Weekly.*

The Health Reformer.

BATTLE CREEK, MICH., APRIL, 1875.

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

Food and Force.

A BOSTON subscriber, in a letter of inquiry, quotes the following from a contemporary journal, and asks our opinion concerning it:

"In the latest and most elaborated teachings of Drs. Angus Smith and Pavy, it is shown that the elements of force are derived from the sugar, butter, and carbonaceous articles of diet." The author of a recent work on diet, in speaking of fats, says, "Their two great uses, then, are first, to maintain animal heat; and second, to generate force. It is very easy to see how it does the former, by burning in the body; but how heat becomes force, is not so easy to see."

Both of these statements are in accordance with the teachings of a certain class of physiologists, and the authors of them are not to be held responsible for them, since they merely echo other men's ideas in the statements quoted. But they are both found to be highly absurd when subjected to careful criticism. They are based upon the supposition that the human body is nothing more than a peculiarly constructed steam engine, in which the digestive, respiratory, and circulatory systems represent the furnace and boiler, while the muscles constitute the motory apparatus. It is held by these theorizers that the heat which is produced in the body by oxidation and other chemical changes is converted into muscular and nervous action in some mysterious manner which no one attempts to explain. When called upon for evidence of the truth of this assertion, none whatever is offered—none can be.

If it were true, as claimed, that heat is directly converted into muscular force in the human body, then it would seem that the promotion of oxidation would increase muscular force and activity in a proportionate degree. Do our friends believe that this would be the case? No. For the same individuals who advocate the theory in question also advocate the use of alcohol, tea, coffee, and other substances with similar properties on the assumed ground that they will *prevent* oxidation and so increase the powers of endurance of those who employ them.

We have no faith in any of these theories. They are based on false and assumed premises. It is wholly erroneous to regard the human body as nothing more than a complex compound of a few chemical elements. It is true that the body is composed of substances which are in turn made up of chemical elements; but the relation of these elements, and the laws which govern them are wholly different from those which appear in the inorganic world. It is much more reasonable to suppose that heat is the *result* of muscular action, than that it sustains any causative relation thereto.

But even if it were true, as claimed, that force is produced by oxidation, the statement that such substances as sugar, starch, and butter supply all the force manifested by the human system would be far from correct. Prof. A. Flint, Jr., author of the most recent and complete work on physiology in the English language, says that both strength and heat may be fully maintained, even in temperate climates, upon albuminous articles of food alone. He utterly discards the notion entertained by Pavy and Angus Smith respecting carbonaceous foods.

Softening of the Brain.

A CORRESPONDENT writes, "Will you please tell us something about 'softening of the brain,' since it is becoming so alarmingly common? I would like to learn the cause, symptoms, and means of prevention and cure, *if any*."

As our correspondent remarks, this affection is becoming very common; or, at least, the cases so called are very frequently met with. A young man is sent to college to be crammed with the endless technicalities of the dead languages, after three or four years spent in preparation at the academy. He soon finds genial companions, and with them frequents the public house to participate in sumptuous feasts consisting of a great variety of indigestible and unwholesome viands, and often extended to the

early morning hours. He soon finds himself falling behind his classmates, and is reminded of his remissness by being "conditioned" by his teacher. Alarmed by the prospect of public disgrace, he shuts himself in his room, tilts his chair against the wall, elevates his heels to a level with his head, and with a cigar in his mouth and a text-book in his hand, he applies himself to study with unwonted assiduity. His lost standing regained, he speedily resumes his habits of dissipation, in due time repeating his former experience. As the result of all these evil habits—the late suppers, late hours, unwholesome diet, spasmodic and excessive mental exertion—performed, also, under highly unfavorable circumstances, the mental faculties being weakened by excesses, narcotized by tobacco, and embarrassed by an improper bodily position —his blood becomes filled with impurities; the excretory organs are unable to perform their functions efficiently, and so allow the debris of the tissues as well as foreign matters to accumulate; the life forces being weakened, the heart's action becomes impaired, and the circulation disturbed. The thickened, impure blood, passes sluggishly through the veins, especially the minute veins of the brain. The heart's action being enfeebled, this resistance cannot be overcome, and thus the impure, poison-laden, venous blood accumulates in the brain to the partial exclusion of arterial blood. Now, since nervous action, and especially mental action, requires an adequate supply of arterial blood to ensure its satisfactory performance, it is not strange that, ere long, the young man finds his memory failing. His ideas are confused; his perceptions are obtuse; and any mental effort is only made with difficulty. He complains of a giddy feeling in his head, of a dull, aching pain, and disinclination, as well as inability, to pursue his studies. His friends become alarmed, remove him from school, and take him to some fossilized physician, who pronounces it a case of "softening of the brain from overstudy."

If a young lady at boarding school, by tight-lacing, seclusion from the sun, want of physical exercise, together with sundry other unhygienic practices in diet, and general regimen, becomes unable to continue her studies, she is at once taken home by her anxious parents, carefully shielded from all exposure to fresh air and sunlight, relieved of all care and responsibility—even of her own person, her indulgent mother acting as waiter and dressing-maid—and strictly forbidden to attempt the slightest mental exertion, for she has "softening of the brain."

If a clergyman sits in his study until his skin assumes the color of bleached muslin and feels to the touch like that of a clammy reptile, while his muscles waste and degenerate into fatty tissue and his weakened circulatory apparatus fails to propel with sufficient force the impoverished blood which is incompetent to nourish properly the tissues even when adequately supplied, in consequence of which his mental vigor is impaired, his usual vivacity and eloquence diminished—his physician whispers to him that his arduous labors have induced a threatened "softening of the brain;" and so he goes to Saratoga, or Long Branch, or Newport, or Colorado, and in a few months returns with all his faculties fully restored—his recovery being mainly due to the compulsory exercise which he has taken, and the fresh, pure, vitalizing air which he has breathed.

Not more than one in a hundred of the so-called "softened" brains are really in that condition, unless the word "soft" be used in its somewhat significant figurative sense. The symptoms so commonly connected with softening of the brain are much more likely to be associated with softening of the muscles by inactivity. The causes we have already sufficiently indicated, as well as the symptoms. The means for prevention and cure are essentially identical; for in this case, at least, the remedy which will cure the patient will keep him well. The wonderful remedy is simple obedience to all the laws of health as explained in the HEALTH REFORMER and our health publications.

Our previous remarks must not be supposed to teach that there is no such thing as softening of the brain; for such a morbid process does sometimes occur; but it is always the result of one of two causes:—

1. It may follow an inflammation of the brain substance. 2. A circumscribed softening may result from a cutting off of the blood of any portion of the brain by the pressure of a tumor, the formation of a clot in the supplying artery, or a plugging of the same by a clot carried from the heart. When genuine softening of the brain occurs, it is necessarily associated with some form of paralysis.

The idea that severe mental labor will produce organic changes in the brain, which doubt-

less originated with physicians, has been productive of a vast amount of mischief. We often hear people speak of "straining" their brains, or "stretching" them, expressions which the most trivial knowledge of the structure of the brain is sufficient to show to be absurd. The brain itself possesses only the slightest degree of sensibility. Large portions of it have been removed with impunity. The danger of injuring it by use is very slight. Indeed, mental labor is one of the most healthful of all occupations. There are vastly more brains injured by overeating than by overstudying. There are at the present moment multitudes more people suffering from too little brain labor than from too much. If all of the other organs of the body are kept in a healthy condition, the brain may be worked to any extent without damage.

Diet vs. Whipping.

WE are not about to recommend the gift of a cake or a handful of candies to a refractory child instead of the application of the traditional "birch," or other suitable punishment. We have no sympathy with this plan of bribing children to do wrong. But we wish to make a plea for the cross and fretful little ones who are so often treated with great injustice in being punished. Mothers feed their children all sorts of irritating condiments and indigestible articles of food, and then wonder at the perversity of the little ones, because they cry without apparent cause, are restless and discontented, dissatisfied with their playthings, and generally unhappy. They forget that children, even small children, only five or six years of age, or younger, have stomachs as well as themselves. Yes; and nerves, too, as well as their mammas. Indigestible food has the same effect upon small stomachs as upon larger and older ones. Too much food, or food taken too often, will as surely give rise to indigestion and suffering in children as in adults. What wonder, then, that they should manifest the same traits as characterize older dyspeptics? They are cross, and peevish, and fretful, because they cannot help being so; just as an old dyspeptic is morose and gloomy and hypochondriac. Their delicate nerves are irritated, and everything jars upon them. They are wholly wretched, and give expression to their misery in cries. They are told to "hush;" but they do n't know how to keep still. They cannot control their feelings. Then they must have their ears slapped or pulled, or they must be shut up in the closet or the cellar until good behavior is promised. Certainly it would not do to allow such a stubborn will to go unbroken! The child must be subdued!

Scenes like this are frequent enough. They are all wrong—terrible mistakes. The child feels the injustice done him, and he either resents it, or else his moral sense becomes confused. There is no more reason for punishing a child who is suffering from the moral effects of indigestion, than there would be for the execution of a lunatic who happened to commit some deed of violence in supposed defense of himself.

Parents are more than half responsible for the peevishness and ill temper of their children in the way they feed them. What a great wrong do they commit, then, when they punish the little ones for the consequences of their own fault. Aside from the moral influence which parents may exert, there is nothing which is so conducive to sweetness of disposition and evenness of temper as a simple, unstimulating, hygienic diet.

Aids to Vegetarianism.

UNDER the above heading, the article below appeared a few days since as an editorial in the New York *Daily News*. Its statements are undoubtedly true, and ought to startle every carnivorous individual in the metropolis. From the tenor of his remarks, we may fairly judge that, like one of old, the author is "almost persuaded," if he has not become an entire convert to vegetarianism. Alarming as are these facts concerning New York, there is every reason to believe that the same state of affairs exists in every large city in the country. When will the people awake to a proper consideration of this subject?

"If there ever was a good reason, apart from anatomical and physiological considerations, for the adoption of vegetarianism, it is furnished by the diseased character of the

meat which finds its way into our markets, after the long journeys it undergoes from southern pastures to metropolitian slaughter-houses. Jaded and exhausted sheep and cattle, half fed and scantily watered, and covered with filth, among which they have lain for more than a thousand miles of a fatiguing journey, supply us with nearly all the beef and mutton which furnish a large proportion of our family tables. They certainly furnish the tables of the cheap boarding-houses, resorted to by the laboring classes, who, of all others of our large population, require the most wholesome and most digestible, as well as the most nutritious, diet. This, we believe, no one presumes to gainsay. It has been proven to be an established fact, over and over again, yet no practical benefit has resulted from its admission, because no one can be impressed with the detrimental character of its effects in the deterioration of the physical power of those who suffer from it, or the injury that it inflicts on human health, and the encouragement it gives to the spread of epidemic and contagious maladies. Now we have another source of diseased meat which can be seen nearer home. It exists in the cow stables of Brooklyn, where milk cattle are fed on still-slop in dirty stables, till their teeth fall out and their tails drop off, and after giving milk from ulcerous udders for the sustenance of thousands of hand-fed babies, and the nourishment of diphtheritic and other patients to whom a diet of pure milk is now considered one of the most important agents in their cure, they are killed for beef when they no longer have strength to furnish milk, and with their impoverished and innutritious, and positively diseased, flesh, complete the damage to human health, which their pernicious milk had begun."

SMOKY SCIENCE.—It is reported by reliable persons that a noted professor in one of our medical colleges, who is also the author of a recent work upon physiology, lately remarked in a lecture before his medical class that during the preparation of his last volume he kept himself going on tobacco, and that he never could have gone through with the labors he had, without tobacco. He also remarked, "I imagine that the leaves of my last volume on physiology would make a very excellent cigar if rolled up. You can almost smell the tobacco."

For the sake of the students who are expected to spend many weary hours poring over the contents of said volume, we sincerely hope that the chronic narcotism under which the author evidently labored did not infuse itself into the book to so great a degree as the writer himself intimated; but we cannot repress the fear that facts viewed through the haze of tobacco smoke, and considered by the aid of logic blunted by the same narcotic agent, should give rise to smoky science.

We do not wonder when we hear such men extolling the excellences of the weed that every lady designates as filthy, and every chemist knows to be a deadly poison.

Those Loathsome Parasites.

THOSE horrible pests, trichinæ—the terror of pork-eaters—are not all dead yet, as the reader will see by the following extract from an article recently written to the *Sanitarian*, by Dr. E. W. Germer, Health Officer of Erie, Pa. :—

"'Doctor, what is good for the cholera? My wife got it, and the neighbors also,'—said to me on New Year's day a German plasterer, living on F street.

"I jumped from the cutter and ran to the house. There was a young woman, the mother of four little children, with all the symptoms of the cholera morbus. She had the diarrhea for several days, and was now vomiting for several hours; pulse a hundred a minute, and thread-like.

"While I was examining her, a sister of the patient came in, and complained also about diarrhea, great prostration, and swelled arms and legs, and her husband appeared, who walked like a man who was just pulled from the water with wet clothes on. He was stiff all over, he said, and awful weak, and wanted to vomit up the whole inside. The well where both families obtained drinking water was a good distance from the privy, and I was told they cleaned the well only a few weeks before.

"So I inquired about their food—and espied a pig-sty in the back part of the lot, which is about 165 feet long. Did you eat any pork? I asked. Yes, but we raised it ourselves, was the answer. In the woodshed there were two pigs salted down in a barrel. I cut a few lean pieces off—took also some sausage along; galloped home—examined the meat under the microscope, and found it full of trichinæ spiralis.

"The pigs were bought from a Western drover. Among the lot were four dead ones, and the others were feeding on them."

Dr. Germer kindly sent us a specimen of the diseased flesh a few days ago, and we subjected it to a careful microscopical examination with the result of finding that each cubic inch of muscle contained thousands of these noisome animals—so delicately formed, and yet so dreadfully destructive to life. This specimen did not contain so many trichinæ as some others which we have examined; yet the number was sufficiently great to produce the most serious consequences. Dr. G. writes us that the five patients who were thus affected are still living, and will probably recover. It is probable, however, that their future health will be more or less impaired; and, at the best, they will hereafter be obliged to reflect that all the muscles of their bodies contain myriads of living worms, which are only prevented from destroying them by being surrounded by a little sack. Such a loathsome thought is alone sufficient to make life a burden.

It would seem that trichinæ, hydatids, and tape-worm would be sufficient to deter any sane man from eating flesh of any kind, since all animals may be infected with these parasites; but it appears from recent reports that a new species of parasites has lately been discovered, which are quite as dangerous as the *trichina spiralis*. We quote the following paragraph on this subject:—

"PARASITES IN SHEEP AND CALVES.

"At a recent meeting of the Scottish Veterinary Association, the President, Mr. Williams, stated that he had examined lungs and livers of sheep and calves, which were studded over with small white blisters. These blisters, under the microscope, were found to contain worms in various stages of development. The animals thus infested showed evidence of great debility. The bodies of other animals were found to contain the ova or eggs of these parasites imbedded in the flesh, and fowls which ate some of the flesh died in consequence, suffering from the presence of both worms and eggs in their livers and intestines. Prof. Whalley also cited some similar facts, and remarked that the flesh of animals thus suffering would communicate the parasites to persons eating it as food."

And yet, in the face of these well-authenticated facts, there are those who persist in assuring the credulous public that there is no danger if the flesh is cooked sufficiently long. This is equivalent to saying that dead worms, those which have been well-boiled or fried, are not likely to produce a great amount of harm. Possibly the thought of eating food thus seasoned may be appetizing to some, but it would not suit our palate.

Waste-Pipes.

THOSE who live in large cities, where sewers are employed, are in constant danger of being poisoned with the filthy gases which are constantly escaping into their dwellings from the pestilential sewers with which the air of their kitchens and wash rooms are in immediate connection by means of the waste pipes. The "traps" which are employed to obviate this difficulty are notably inefficient. In the summer, the foul gases are forced up from the sewers by draughts; and in the winter they very naturally rise, being warmer than the external air. The same difficulty exists in small villages and country districts where the drain pipes are connected with cesspools, though in less degree. This evil is even worse in the winter than in the summer, in some respects, at least, although people usually feel secure from the influence of zymotic poisons during the winter season. The cause of greater danger is the deficient ventilation which is almost universal during the winter months. People shut themselves up in the house, prevent all ingress of pure air, and then breathe for hours, perhaps days, the poisonous accumulations resulting from combustion, respiration, and emanations from cesspools and sewers.

There is one means by which all risk may be prevented; and it is as simple as it is effective. It consists in connecting the waste-pipe with the chimney or stove pipe. The draught of the fire will thus carry away with the smoke and carbonic acid the sewer gases which otherwise would have poisoned the atmosphere of the entire dwelling. Try it, friends; and do n't wait until some of the family have suffered, perhaps fatally, from the neglect of this simple precaution. By this means not only will acute disease be prevented, but many may be saved from the annual "spring weakness" which is usually so erroneously attributed to change of season.

People's Department.

Is Health Reform Impracticable?

To say I am pleased, only gives a faint idea of my appreciation of your valuable journal. I admire it and its teachings, and try to live as nearly as I can by its guidance; but to live strictly hygienic, and practice all the laws of hygiene, I think is next to impossible with a great class of our population. The laws of hygiene imply, as I understand, not to raise, sell, or deal in any commodity that is injurious to the user. This subject has agitated my mind for some time. I will ask you to tell how a man can commence in the woods with hardly any improvements, and dismiss his many articles of flesh diet, and substitute therefor any of the many kinds of tropical fruits, or half the native fruits, when he do n't raise any himself, for he would have nothing to sell to purchase with. He would keep no cows, because butter and milk are not wholesome articles of diet; sheep could not be raised for the wool alone. Swine and poultry would also be out of the question. To be sure, there are a great many small vegetables and fruits, but there would be no demand for a great quantity; and owing to the great diversity of our soils, certain grains cannot be raised in any particular locality. For instance, wheat or potatoes will not grow on my farm well enough to hardly pay for the trouble of harvesting. If we raise corn, barley, or rye, we know when we sell it that over 50 per cent of it is made into alcohol, the curse of our nation. Now can farmers, as a class, engage in any kind of husbandry with success, and not raise any of the forbidden articles of food? because if they can't without bringing bankruptcy upon themselves, then it is a false theory and should not be adopted. And if it is wrong to eat of the flesh of the earth, then it is wrong to raise and sell to others. There are many more things to consider; but perhaps I have said more already than you will care to notice.

L. J. K.

Some of the queries raised by Mr. K. are of considerable importance, and have been the subject of much discussion among reformers. They in fact involve the question whether or not the ideal principles of health reform can be reduced to practice. For our own part, we are convinced that they can be if a certain allowance is made for peculiar circumstances. But it must be borne in mind that depraved tastes, unnatural and artificial wants —the product of modern civilization—have combined to produce many complications of the question, and to create many difficulties which would not exist if all men and all things were in a perfectly normal condition. Many times it becomes necessary to swerve a little from our usual line of conduct, or to deviate from what we conceive to be the course of absolute right. Nor do we, in thus doing, commit any violence to principles; for right and wrong are largely relative terms in relation to physical as well as to moral law. Morality teaches that to take that which belongs to another is theft; yet no one would consider as a thief the man who appropriated to his own use a few ears from his neighbor's cornfield to prevent starvation, if food could be procured in no other way. The commandment says, "Thou shalt not kill;" and yet there can be little question that there are circumstances which justify the taking of human life. So with hygiene and health reform. Meat is not the best food, but it will sustain life, and is vastly superior to no food at all. Pure soft water is far preferable to hard and impure water, yet the latter has many times been found to be much better than none at all.

But this must suffice for general principles. Let us be more specific. Can a farmer, just beginning life in a new country, get along without flesh food. Perhaps some of our friends can answer this query from personal experience; for our own part, we can see no reason why he may not. Indeed, it appears to us that he could get along much better without than with animal food. If his crops of grain are at first small, he must practice rigid economy. He cannot afford to fatten pork, or other animals. Every farmer knows that it takes several pounds of grain to make one pound of beef or pork. It is worth remembering, also, that the grain is not thus concentrated, as is commonly supposed; for according to all authorities, a pound of corn contains more than as much nutriment as *three* pounds of beef or pork. In short, then, a pound of corn or other grain, eaten in its simple form, will do more toward nourishing the body than will the pork or beef produced from ten pounds of the same grain.

It is true that in new countries there is not

usually a very great demand for vegetables and small fruits; but surely the farmer can lay in a good stock for his own use, either by canning or drying. A very small proportion of the corn annually raised in this country is used in the manufacture of liquor. Both barley and rye make excellent bread if properly prepared. They may also be eaten in other forms.

Whether it is right or wrong for a person to raise and sell that which he will not use himself is a question which every individual must decide for himself. All will agree in denouncing tobacco-raising. Many will consider it inconsistent to raise and sell hops. Not a few reformers have discontinued the raising of pork; and a very few may entertain the opinion that the raising of any kind of live-stock with a view of selling the same to be killed for food is in many respects open to objection. We hope to hear from others of our friends on this subject.

Conservatism Refined.

THE tenacity with which people adhere to custom is absolutely astounding. Whether we infer that the disposition be natural, acquired, or both, we still fall short of explaining its downright obstinacy. Could we believe ourselves machines, mere automatons, without thought or reason, then we might escape the marvel. Years ago I read an article in the *Atlantic Monthly* indicating some profoundness and much discrimination, going to show that two-thirds of the human family were lunatics. Could we adopt this theory, our wonder would at least be diminished at seeing persons through their whole lives adhering to conduct the most silly and unreasonable. Of things which are good in themselves, the masses soon tire, and turn away to things which are bad; while of these, poor humanity seldom wearies. With all deference to the more liberal views of our modern scientists, this heavy conservatism still gravitates us back to the orthodoxy of total depravity.

A few weeks since, I had the pleasure of a hygienic interview with a clergyman's wife, whose position and associations would seem to raise her above the average as to intelligence and progress. Being out of health, I advised her to discontinue the use of tea, coffee, butter, lard, and all condiments usually called seasoning.

With apparent astonishment she at once exclaimed, "La! how can you cook beans, cabbage, and such things, without pork and salt." I replied that I thought such vegetables were cooked, not by salt, pork, etc., but by fire. "Well, but," said she, "we always boil them with these things, and I don't see how they can be cooked without them." Still insisting that fire cooked, salt or no salt, grease or no grease, I failed to get her consent to my theory till her husband sided with me and against her skepticism. Next, as I expected, she knew that neither beans, cabbage, potatoes, nor, indeed, any one of the various vegetables in use could possibly be eaten without being well seasoned with salt, pork, pepper, etc. Telling her that hundreds, with myself, had learned to relish them without these unwholesome condiments did little in the way of convincing her that it might be done. After persuading her that a change from bad living to good was indispensable in the process of restoring her shattered constitution and prolonging her life, she persisted that it was impossible for her to *live* without the diet which was *killing* her.

This very morning the lady who makes our bread insisted that she must put in our coarse, unbolted wheat meal, some fine white flour to "stick it together." In vain did I insist that the gem irons would hold the dough together till the hot oven baked it. Some foreign substance must be introduced to make it better. Often have I asked these inflexible conservatives, Why not salt and pepper apples, peaches, and other fruits? and received for answer that they don't need it. Then I ask if they could relish butter without salt, and of course they answer, No. As butter comes from cream, I ask, Why not salt it? "Oh! it was not made to salt."

Could we bring the minds of this large fossilized class to realize that such habits are not from reason nor science, and should be changed, or at least acknowledged to be wrong, then our toleration were in some measure due them; but so long as the bad habit drags down the reason to its abnormal level, we are kept in the total-depravity dogma, or the *Atlantic* writer's wholesale lunacy.

Hammond, who nearly one century ago founded the *Cincinnati Gazette*, was at times overtaken with the fault of inebriety; and in the next issue of his paper would appear a leader on temperance. Being rallied for inconsistency, by his convivial friends, he would reply that for his body to reel under strong drink was bad enough, and, indeed, too bad. "I beseech you, then, said he, to allow me to keep my principles sober. If my body is occasionally defiled, let my principles remain pure. If the one goes into the gutter, the other shall stay out." Pity that such an example of refusing to let an evil habit, a depraved appetite, degrade the reason,

was not more generally followed by the people.

When soul and body join in vice, when, as the apostle has it, the wicked are given up to "believe a lie that they may be damned," there is little hope. There being nothing with which to lift the body out of the pit, it must there abide, and, indeed, sink deeper. Ephraim becomes joined to his idols, and is therefore to be let alone.

It is to be hoped, and in fact believed, that the readers of this journal will never allow any unreasonable conduct, in diet or otherwise, becloud their visions from the truth. Let us all keep up our higher natures, even if the lower at times descend. The rut should never be loved and followed because our ancestors or ourselves or friends have gone in it. To do so were to sink beneath the instinct of irrational animals, since they, when not depraved by domestication, keep up to the law of their natures.

Conservatism, in its modern use, is but a fashionable name for stupidity and shameful obstinacy. Let it not once be named among health reformers. W. PERKINS.

A Word from Indiana.

PERHAPS it would not be entirely uninteresting to your readers, to hear from this part of the world. First, then, I would say that I have been a reader of some of the most popular (or unpopular) health-reform papers of our country for the last twenty years. I abandoned pork-eating about fifteen years ago, for which I was soon called a "Jew" and a "fanatic," and charged with starving myself, and going crazy. But none of these things moved me. I saw that the people of America were killing themselves by unhealthful living; and that, unless there was a reform in the way of living brought about soon, we must inevitably all find premature graves. Hence, I have persevered, lopping off, first pork, then coffee, next tea, together with all other stimulants and narcotics, thus striving to keep pace with my increasing knowledge in matters of hygiene.

When I first commenced to advocate and practice health principles, I could scarcely get my neighbors to look at any of my papers, to say nothing about reading them, as I was bitterly opposed by those whose greatest interest it would have been to coöperate with me in my labors of philanthropy, viz., those of my own household, who particularly made it a business to use all their influence against me for a long time.

My first convert to those principles was a regular allopathic physician of a pretty extensive practice, who seemed to be an honest and sensible man and with whom I was somewhat intimate. Having had several talks with him, and finding him a reasonable man on the subject of hygiene, I concluded to make an effort to convert him to true and rightful living. And this is the way in which I proceeded. I ordered a health journal to be sent to him for one year. Although he did not read it much at first, he was soon induced by his wife to read it, and before the year was up he abandoned the practice of medicine. About the time the year was up, I met him in town one day, and asked him to subscribe for the journal, to which he replied, "Indeed, I cannot see how we can get along without it." He told me that some one had it sent to him the past year, to whom he owed a debt of gratitude he could never repay. He then noticed a smile on my countenance, and said, "Was it you that did that?" And when I acknowledged the fact, he grasped my hand with such an expression of gratitude as is only evinced by one overwhelmed with an ecstacy of joy; saying, "I can no longer conscientiously deal out the poisonous drugs to my fellow-beings."

Finally, some of my neighbors began to see that my health was improving, while that of my enemies was evidently on the decline; so prejudice began to give way, and I got some of the most thinking to read my papers some. Among this class were Esquire Hamman and wife, who lately visited the Health Institute at Battle Creek. He being our post-master, would sometimes look my papers over, when not immediately taken out of the office, and so was also induced to subscribe for the REFORMER soon after I became a subscriber to it. And he and his family are now pretty thorough hygienists.

And, by the way, I must not forget to inform the reader of their "silver wedding" which recently occurred. It was celebrated by a grand hygienic dinner, which was almost exclusively made up of fruits and vegetables, excluding all flesh-meats and grease of every kind except butter. No seasonings of any kind were used in preparing the various articles of food. There was, however, coffee prepared for a few of the guests, with *some* fine flour bread. But upon the whole, it was, as remarked by an eclectic physician who was one of the guests, "a grand triumph." At least, all with whom I have conversed on the subject expressed themselves highly pleased with the scene. JOSEPH MESSIMORE.

[Mr. M. sends us the names of several new subscribers as further evidence of his success in teaching hygienic principles by example. Thus the good work goes on.—ED.]

Questions and Answers.

CELERY, TAPIOCA, ETC.—SOUR STOMACH.—F. R. R., Springfield, Mass., asks: 1. Do you consider celery, tapioca, sago, and corn starch healthful articles of diet? also peanuts, chestnuts, butternuts, and nuts generally? 2. How is it that a person can have a "sour stomach" from ten, to one, or two o'clock at night, when nothing is eaten after two o'clock in the afternoon, if food digests in five hours?

Ans. 1. Celery has more the nature of a condiment or "relish," than of a food. Its nutritive value is very slight. We do not recommend it. All the preparations of starch are almost worthless as foods; quite so if used alone. They may sometimes be employed with other substances; but we greatly prefer to use better foods, such as oatmeal, pearl barley, hominy, etc. 2. The time required for complete digestion varies with every individual, and with the changing condition of a person's health. Food has been found in the stomach of a hard drinker wholly unchanged, one or two days after it had been eaten. If a person's digestive powers are weak, or if he eats too much, his stomach may not be able to digest the whole quantity eaten, and, consequently, the balance may give rise to "sour stomach" some hours after. Sour stomach may also be caused in other ways.

RHEUMATISM AND WILLFULNESS.—E. B., Iowa, writes that she has a boy of eight years who has been suffering for several weeks with rheumatism in one knee. During the day "he sits in the rocking chair and seems quite peart," suffering no pain unless his knee is touched; but if any attempt is made to administer treatment, "he cries and fights so much" as to make it impossible. Wants to know what we would do in such a case.

Ans. We would give the young gentleman a pack if it took us two hours to get him into it; and then we would keep him in for an hour or two, or until he was willing to submit to proper methods of treatment. Perhaps the lad enjoys being sick. Possibly he is petted and indulged too much. We heartily sympathize with children who resist the administration of drugs, which are bad to the taste, and still worse in their effects upon the system; but we can make little apology for a child old enough to be reasonable, who resists the application of such mild and soothing measures as we recommend. It can be nothing less than sheer willfulness.

NEURALGIA—BILIOUSNESS.—J. W. L., Neb., inquires: 1. Is a pain just below the heart, shooting from there up through the left lung, breast, and shoulder, and sometimes up the neck, caused by biliousness? 2. What is the cause of stitch, or catching a sharp pain over the heart, so as almost to take the breath, then is banished by pressing on part and filling lungs with air? Pain occurs frequently. 3. What treatment would you recommend for biliousness and nervousness?

Ans. 1. Quite likely it is; for "biliousness" is a term which is used to cover nearly every morbid symptom imaginable. The disease is probably neuralgia, affecting some of the intercostal and cervical nerves. 2. It may be pleurodynia, or rheumatism of the intercostal muscles.

3. Improve the general health by careful attention to diet, taking plenty of out-of-door exercise, frequent bathing, daily friction of the skin with dry hand, and fomentations over the liver, for biliousness, two or three times a week.

The Family Physician is a good work for a beginner.

NASAL WASH.—H. W. T., Minn., asks: What shall I use to keep the nasal passages clean? I have used salt and water, also carbolic acid. I shall follow your rules in regard to living.

Ans. Either one of the applications employed is unobjectionable, if followed by pure soft water. A weak solution of permanganate of potash is also excellent. We are not in favor of the indiscriminate use of nasal injections, as they frequently do much harm, permanently impairing the hearing.

BAD BREATH—LAME BACK.—E. C., Mo., asks: 1. What occasions a bad-smelling breath, particularly when first waking in the morning? 2. What may be the cause of a continual lameness in the small of the back? 3. What are your remedies for these maladies?

Ans. 1. Probably catarrh or indigestion. Perhaps decayed teeth have something to do with it; or neglecting to cleanse the teeth at night, or after eating. 2. It is probably muscular rheumatism; it may be neuralgia. 3. For the bad breath, remove the cause, whatever it may be. For the rheumatism, take a pack, followed by dripping sheet, once a week; apply hot fomentations to the painful part every other day; apply vigorous friction with the dry hand to the whole surface of the body every day; live hygienically.

HERB MEDICINES, ETC.—G. A. H., Ill.: 1. We have no faith in the medicine of which you speak. It is not used at the Health Institute, and never has been to our knowledge. 2. We see no objection to keeping flour in such a cellar as you describe, provided it is perfectly dry.

HUMBUG.—W. Z. thinks that the hair dye

which we recently mentioned is a humbug. It evidently does not meet his expectations. We know nothing of it by experience, never having had any occasion for the use of such an article. We gave it on the recommendation of a noted chemist who commended it to us in the highest terms. A day or two ago, we received a line from a lady who pronounced it "splendid." It doubtless has objections, but is certainly the best we know of, and has the advantage of being harmless. It should be applied to the hair with a tooth brush and well rubbed in.

SALLOWNESS—TAN—PIMPLES, ETC.—"Sallow," Iowa, says: 1. What is good for sallowness of the skin? 2. What must people eat who live in a country where there is no fruit? 3. Do you think sassafras good to purify the blood? 4. Is it injurious? 5. Is lemon juice good to remove tan? 6. Is it hurtful to the skin? 7. How long will it take to get rid of pimples if a person lives strictly hygienic?

Ans. 1. Improve the general health by attending carefully to all the laws of hygiene. Increase the activity of the skin by daily frictions with the dry hand over the whole body, by frequent sponge or dripping-sheet baths, and out-of-door exercise, such as walking, horseback riding, or the cultivation of flowers. Promote the healthy action of the liver and other excretory organs by the above measures, together with frequent fomentations over the liver. 2. Our rule is to always eat the best we can get, wherever we may be, taking, of course, the hygienic standard of quality as our criterion. Dried fruit can be procured in almost any part of the globe. 3. No. Pure air, pure water, and pure food are the only blood purifiers. 4. It is not dangerous; but its use is useless and absurd. 5. It is said to be; we never tried it. 6. No; unless used in great excess. 7. Just long enough to give nature a chance to remove the cause. How long that would be, depends on many circumstances.

SORE EYES.—I. L. H., Minn., writes: I have sore eyes; soreness commenced with inflammation sixteen years ago. Have been through a course of treatment in Philadelphia, caustics being used, membrane of lids being injured. Since living the health reform for the last two years, they are slowly improving. No real injury done to the sight. 1. Can I be benefited by coming to the Institute? 2. How long would I likely have to stay?

Ans. 1. Yes. 2. Your recovery will of necessity be rather slow as the disease has become so chronic. Come and stay a few months, and learn how to treat yourself at home.

CURRANTS.—J. K., Boston, Mass., asks: Are currants objectionable when put in graham gems?

Ans. No. They are often a very palatable addition, and are entirely harmless.

VERTIGO—KIDNEY COMPLAINT.—S. M. K., N. H., would like to know what would cure or help him of his dizziness. He is also troubled with disease of the kidneys.

Ans. You need a thorough course of hygienic treatment. We would advise you to go to a good health institution for a few weeks or months. If you cannot do this, send for home prescription.

TAPE-WORM.—E. H. G., Ohio, wishes to know how to remove tape-worm.

Ans. Many persons imagine they have tape-worm when they have not. No means should be adopted for the removal of the parasite until portions of it have been discharged from the bowels, or other good evidence of its presence has been received. After taking these precautions, prepare the patient for treatment by a fast of twenty-four hours. Then administer about two ounces of pumpkin seeds, first taking off the shells and bruising the kernel to a pulp with a small quantity of sugar. If a movement of the bowels does not occur in three or four hours, administer a dose of castor oil as a laxative. Pumpkin seed is regarded as the most efficient remedy for tape-worm known. If, however, it should not be successful after two or three trials, at intervals of ten days or two weeks, a decoction of pomegranate bark may be used. Dose, two or three ounces. The decoction is made by boiling two ounces of the bark in a pint of water. Koosso and male fern are also recommended.

S. B. G. should send for a home prescription.

BATHING—EXERCISE—DIET.—E. B., Cal., inquires: 1. Is it healthy to wet the whole body before retiring and after getting up in the morning? 2. Is it healthy to take a sea bath or a good walk before breakfast for a person who has no out-of-door exercise the whole day? 3. Shall a person partake of soup before his meal. 4. Shall a person use anything except cold water for his hair? 5. Is it healthy to take a walk at night? 6. To read lying in bed at night? 7. To eat oatmeal every morning?

Ans. 1. Yes; if patient is strong and vigorous; otherwise, it is not. 2. A quick bath or a short walk would not be objectionable for most persons. 3. Take soup *with* the meal. 4. No; except for cleansing it, when white of egg or fine soap may be used, with warm water. 5. The night is not the best time for walking. 6. No. 7. Yes.

DIETETICS.

Hygienic Dishes.

CABBAGE—CUCUMBERS.

OUR friends are calling for articles upon this subject; and we purpose to devote a certain space to it each month, hereafter, although we would advise all who wish to become thoroughly conversant with the various methods of preparing food hygienically to obtain a copy of the Hygienic Cook Book, for sale at this Office.

The cabbage is one of the class of vegetables which contain but a very small proportion of nutriment, being more than nine-tenths water. Notwithstanding their small nutritive value, however, they are always in good demand in their season, especially at this time of the year when they are being delivered from the frozen earth and brought to market.

Cooked with pork or beef and sundry other articles, cabbage has long been an ingredient of "boiled dinners;" while it constitutes the principal constituent of that favorite German dish, "*saur-kraut.*" It was also eaten in salads by our Saxon ancestors five hundred years ago, as it is still commonly used. We may be thankful, however, that even the complicity of modern cookery is unable to rival that of those ancient times, as would appear from some of the recipes preserved in the writings of that period. One such salad recipe which we have seen contained no less than eighteen ingredients.

Among dyspeptics, cabbage has a very poor reputation, being considered as one of the most indigestible of articles, and highly productive of flatulence, eructation, heartburn, etc. Hygienists have found out, however, that the supposed unwholesome properties of cabbage are due to the injurious substances mingled with it in cooking, rather than to the vegetable itself. When saturated with grease in a frying pan, and then still further deteriorated by the addition of vinegar, salt, pepper, mustard, and other condiments, what wonder that a weak stomach refuses to digest it, and thus allows it to remain souring, fermenting, and developing vile gases and acids which render the poor victim of atrocious cookery as wretched and miserable as could well be imagined? Even healthy stomachs sometimes revolt when insulted with such a mess, and the continued use of such food will soon impair the most perfect digestion.

Nearly all the usual preparations of this succulent vegetable are more or less contaminated with oil or grease of some kind; and it is chiefly this agent which renders it so hard of digestion. It permeates the loose tissue of the leaves, and thus prevents the proper action of the gastric juice upon them. The salt, too, does its work of mischief by hardening the vegetable fibers. The vinegar has a similar action, while the pepper, mustard, etc., debilitate the stomach, and so weaken its natural force.

Sour-krout is another very indigestible dish. When prepared in the usual way, it is not only rendered injurious by the harmful condiments employed, but is still further contaminated by the development of certain poisonous acids which are the result of a peculiar kind of fermentation well known to chemists.

Many people with poor digestive powers have discovered that raw cabbage is less likely to produce unpleasant symptoms than that which has been cooked in the ordinary way. This is simply owing to the fact that when thus eaten it is less thoroughly mixed with injurious articles than when prepared by cooking. It is an error, however, to suppose that raw cabbage is more easy of digestion than that which has been boiled. This vegetable contains a large amount of woody fiber, which is almost entirely indigestible when raw, and becomes more readily soluble in the digestive juices the longer it is boiled. This rule applies only to the hygienic method of cooking; for when salt and butter are added, the less boiling the better.

Boiled Cabbage.—Select a well-developed head of cabbage, remove the coarser outside leaves, and if there are signs of insects, lay in water to which a little salt has been added for an hour or two to drive them out. Rinse away the salt water and place the cabbage in just enough water so that when it is done there will be only sufficient to keep it from burning. Do not drain off the water once or twice as many recommend, but preserve the juice. Cover closely and boil vigorously until tender, and then let it simmer for awhile.

If it is likely to burn before sufficiently cooked, add water. If there is too much water, remove the cover so that evaporation may go on more rapidly. The condensed juice will be very sweet, and should be served with the cabbage. An excellent sauce to be eaten with cabbage may be made from stewed tomatoes by adding rusk, bread crumbs, or thickening with a little graham flour. Some consider it a good plan to enclose the cabbage in a napkin while boiling. This prevents falling in pieces.

Cabbage may also be cooked by steaming in an ordinary steamer after quartering. It is well to open the leaves and shake well in water to be sure that all insects and slugs are removed.

Cabbage may be nicely cooked, if sufficient care is used to prevent burning, by slicing fine and steaming in its own juices in a closely covered saucepan.

Cabbage and Tomatoes.—This is a dish well relished by most who have tried it. When cabbage has been boiled until nearly done, and the juice is nearly evaporated, add half the quantity of stewed tomatoes and allow to simmer a few minutes longer, using care that it does not burn.

Vegetable Stew.—In a large saucepan with a tightly fitting cover, place a pint of water. Add a half pint of sliced onions, one pint of shred cabbage, and a pint of sliced turnip. Cover closely and stew with moderate heat for forty-five minutes. Then add a quart of potatoes of medium size, and cook until the potatoes are done. Mash and thoroughly mix. If there is too much juice when done, drain it off and boil down to a sufficient quantity to make the whole of proper consistency. This dish, with the addition of pork, is a very favorite one with the Irish, but needs no such addition for hygienists.

The cucumber is another article which is looked upon with dread by all dyspeptics, and is popularly supposed to be a potent cause of diarrhea, dysentery, cholera, and all other acute affections of the bowels. This prejudice is quite as ill-founded as that against cabbage, and is alone to be attributed to the manner in which the article is eaten. It is true that cucumbers contain only a small proportion of nutriment, which is also true of all succulent vegetables; but they possess no positively injurious properties, as is so commonly supposed.

In the form of pickles, their digestion is next to impossible; and it is no wonder that they so frequently occasion painful griping and other unpleasant effects. When eaten fresh, after maceration in salt and vinegar for a few hours, and then being blackened with pepper, it is not at all surprising that they should occasion serious disease of the digestive organs. Salt and vinegar have the same effect upon this vegetable that they have upon cabbage; viz., to harden and thus render it indigestible. Simple soaking in water has a similar effect in a less degree. Cucumbers are very wisely discarded if they cannot be relished unless served in this fashion; but they can be eaten with perfect impunity, no matter how near the cholera rages, if they are eaten minus the condiments, and when perfectly fresh. The skin should be removed, and also the seeds, if they are large. No salt, pepper, or vinegar, should be added; but a little lemon juice may be dropped upon them as they are eaten if desired.

The illustrations used in this article are kindly furnished us by Mr. James Vick, of Rochester, N. Y., who is the most extensive and reliable dealer in all kinds of seeds in this country.

The Date.

THE following article from *St. Nicholas* will doubtless be of interest to many of our readers who have long since learned the value of the saccharine subject of it as a substitute for bogus syrups and adulterated sugars :—

"Dates, to us merely an occasional luxury, are to the Arab the very 'staff of life,' just as the camel is his 'ship of the desert.' The date tree, one of the large family of palms, is a native of both Asia and Africa, and will grow readily in any sandy soil where the climate is not too cold.

"The Bedouins, or wild Arabs of the desert, who consider it beneath their dignity to sow or plant or cultivate the soil in any way, depend upon gathering the date where they can find it growing wild, but the Arabs of the plains cultivate it with great care and skill, thus improving the size and flavor of the fruit, and largely increasing the yield. In some

varieties they have succeeded in doing away with the hard seed, and the so-called seedless dates, being very large and fine, are highly prized. When ripe, the date is of a bright golden color, fragrant and luscious, and in the dry, hot countries where palms grow, no better food for morning, noon or night can be found, while one never wearies of the sweet, pulpy fruit gathered fresh from the tree. But the trees do not bear all the year round, of course, and so the Arabs make what they call date honey, using for this the juice of the ripe fruit, and those who can afford it preserve dates fresh through the year by keeping them in close vessels covered over with this honey.

"Wine and spirits are also made from dates by distillation; but they are sold for the most part to foreign traders. For the Arabs are exceedingly temperate in their habits, and poor and ignorant as many of them are, a drunken man is never found among them. There is still another product of the date, one that is of vast importance to the poor Arabs in their long journeys across the desert. This is date flour, made by drying the fruit in the sun, and afterward grinding it to powder. It is then packed in tight sacks, and, if stowed away from the damp, will keep for years. This is food in its most compact form, easily carried about and needing no cooking; it has only to be moistened with a little water and the meal is ready for eating."

Effect of Diet.

DR. J. B. FINLEY was for many years chaplain of the Ohio penitentiary. He was very careful to study the characters and observe the change in the dispositions of the convicts. Of the effect of diet he says in his "Memorials of Prison Life," p. 40:—

"These men were once among the boldest of villians, but the diet, the temperance, the active and steady labor, and the moral discipline of a prison, soon soften down the most daring and reckless spirits, and sometimes effects a perfect change in their dispositions. We learn from the facts here daily presented, the great law, that the dispositions of men are made very much by their habits. Let a person eat much meat, feed abundantly, drink spirituous liquors, spend much time in idle and wicked conversation, and take no thought of governing or even checking his natural appetites, and he is almost sure to become a fearless, violent, ambitious villain; but take him now from the excessive indulgence of his animal propensities, oblige him to spend his time in silence, keep him from the use of spirits, let his diet be nourishing but not exciting, consisting chiefly of vegetables, then raise his mind to intellectual, moral, and religious topics, even though it be only occasionally, and the whole man begins to wear a new aspect—to feel a new current of emotions—to enjoy a serener and higher kind of being. Imprisonment, therefore, on any plan, is often a blessing to these desperate characters, some of whom go out reformed in soul, mind and body. We see, too, that the world at large has a great interest in the habits of the people. Savages, who live mostly on flesh, are the most ferocious of mankind; while those nations and tribes which feed on vegetables, chiefly, are generally the most peaceable, docile, and intellectual." J. M.

The Emperor Julian a Health Reformer.

THE following is copied from Gibbon's History, vol. I., p. 394. S. B. WHITNEY.

"One of his most intimate friends, who had often shared the frugal simplicity of his table, has remarked that his light and sparing diet (which was usually of the vegetable kind) left his mind and body always free and active for the various and important business of an author, a pontiff, a magistrate, a general, and a prince. In one and the same day, he gave audience to several ambassadors, and wrote, or dictated, a great number of letters to his generals, his civil magistrates, his private friends, and the different cities of his dominions. He listened to the memorials which had been received, considered the subjects of the petitions, and signified his intentions more rapidly than they could be taken in short hand by the diligence of his secretaries. He possessed such flexibility of thought, and such firmness of attention, that he could employ his hand to write, his ear to listen, and his voice to dictate, and pursue at once three several trains of ideas without hesitation, and without error. While his ministers reposed, the prince flew with agility from one labor to another, and after a hasty dinner, retired into his library until the public business, which he had appointed for the evening, summoned him to interrupt the prosecution of his studies. The supper of the emperor was still less substantial than the former meal, his sleep was never clouded by the fumes of indigestion. . . . . He was soon awakened by the entrance of fresh secretaries, who had slept the preceding day; and his servants were obliged to wait alternately, while their indefatigable master allowed himself scarcely any other refreshment than the change of occupation."

SEASONABLE HINTS!

Sanitarium for April.

WITH the approach of milder weather, and the loss of the cool, invigorating, vivifying air of winter, there comes a general complaint of lassitude, "biliousness," headache, and general weakness. While this may be in part due to the frequent showers of this month and the sudden increases of temperature which occur, the main cause is the excessive indulgence in clogging, carbonaceous foods which is customary with most people during the winter months. Fat pork, lard in pies and cakes, fried dishes of various sorts, together with large quantities of sugar, sirup, molasses, honey, and rich preserves, are vastly more responsible for spring "biliousness" than any atmospheric or climatic change. In the days of blood-letting it was fashionable to submit to an annual opening of the veins to remove a portion of their turgid contents. Now, a few doses of purgative pills or powders, a half-dozen bottles of some "tonic," "bitters," "blood-purifyer," or other quack compound is more customary. All these so-called remedies are enemies to life, and inevitably damage the system, no matter if the apparent effect may be temporarily beneficial. Frequent ablutions, at least three or four a week, total abstinence from animal fats, great moderation in the use of sugar, salt, and milk, abundant exercise in the open air, the free use of fruits and nutritious grains, with plenty of sleep, are the essentials of the proper treatment of "biliousness" and the many ills connected therewith.

Suffocation of Babies.

LAST month we called attention to the peril to which infants are often subjected by being deprived of a sufficiency of air. Since then a friend has sent us an account of two cases of death from this cause, which recently occurred in his own neighborhood. In one case the infant was smothered in a few moments on account of being so closely covered by the bedclothes after its parents arose in the morning. In the other case the little one was suffocated during the night, its parents awaking to find it dead in the morning. This subject certainly deserves serious attention; and we hope all mothers will take warning. Infants have as good a right to breathe pure air as older persons.

TOBACCO POISONING.—Those who advocate the use of tobacco as an aliment will please notice that a recent number of the London *Medical Record* describes the death of a young man who wagered that he would smoke twelve cigars within two hours. At the end of the ninth he grew dizzy, the symptoms becoming more decided until the twelve were smoked. He was then attacked with vomiting, which continued until he died."

Condiments for Cattle.

"THE use of condiments for cattle, by which it is supposed that appetite and digestion are stimulated and invigorated, is shown by Mr. J. B. Lawes, the great English chemist and experimenter, to be not only without benefit, but a positive disadvantage. He states that his conclusions formed long ago, that loss and not profit was to be expected from their use, remain unchanged after renewed experiments. Money spent for manufactured cattle foods, condition powders, and other medicinal appetizers, may, therefore, upon this testimony be considered as worse than thrown away."

The above extract, from the *N. Y. Tribune*, ought to be somewhat suggestive to those dietarians who advocate the necessity of condiments as an element of human diet. If other animals do not require anything but exercise and abstinence to stimulate their appetites, even for the simplest food, why should man, when his bill of fare abounds in variety and richness?

THE best gymnasium is a wood-yard, a "clearing," or a cornfield.

Literary Notices.

THE GREAT CONVERSERS, by Prof. Matthews, is one of the most entertaining and instructive books which have been recently presented to the American public. The author's style is exceedingly felicitous; and he handles his pleasant theme in so graceful a manner that the reader is constantly delighted with new surprises of the richest gems of literature and conversation that have come down to us as fragmentary shadows of the master minds of all past ages. A vast number of subjects are touched upon, and the amount of information conveyed in the most charming manner is simply enormous. If such books were more generally circulated and read, instead of the pernicious trash which fills the shelves of booksellers and the columns of our popular magazines, one great means of improving the race would be in operation. S. C. Griggs & Co.: Chicago.

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.

To our Agents.

NOTWITHSTANDING the "hard times" of which we hear in every part of the country, our agents have thus far met with excellent success in securing subscribers. Thousands of new names have been added to our lists; and still they come. The busy season is now rapidly approaching, which is less favorable for this kind of work; but there still remain a few weeks in which much can be accomplished by making a suitable effort. Those who engage in this work are doubly paid for all their efforts; for not only do they receive ample remuneration for their labor, but they have the pleasure of knowing that they are working for humanity—for the benefit of their fellow-men. Who that has enjoyed the benefits resulting from hygienic living does not wish to do something toward acquainting his friends and neighbors with the same truths?

☞ Those who are interested in educational matters will be pleased to learn that there has recently been established in this city a College which is conducted upon hygienic principles, the president and professors being thorough reformers. The higher branches usually taught in such institutions, including Greek, Latin, French, German, and other languages, are taught by able and experienced instructors. A primary department is also connected with the College. Here is a fine opening for those who wish to place their children under a most excellent moral and hygienic influence. The College already has a large attendance.

☞ In Bible Hygiene in this number the reader will find a continuation of the evidences which show how from the beginning Bible teaching and Bible history have favored the principles of health reform. The bearing of a great many incidents related in the Bible, on the subject of health, is too often overlooked by the common reader. It is not only instructive, but interesting, to trace these out as is so clearly done in "Bible Hygiene."

☞ The article from Switzerland, by Eld. Andrews, contains some interesting facts bearing on the temperance question which we have been anticipating that we should sooner or later hear. Those who advocate the use of wine will do well to note what he says on this point. The whole article will be read with interest.

Healthfulness of Michigan.

AT the present time people are eagerly seeking after those localities which from their natural healthfulness afford the best prospect of long life to their inhabitants. Thousands of invalids have gone to Colorado and California. Many more have sought a home in Minnesota; while others have chosen the warmer climate of Florida. Some have sought in foreign lands what they imagined to be a more salubrious climate than our own varied country affords. But if we may credit a recent report of Dr. Baker, Secretary of the Michigan State Board of Health, we may find in the peninsular State a climate quite equal, even superior, to many of those which have been so eagerly sought by invalids. According to this report, the death rate in Lansing, one of the principal cities of the central portion of this State, in 1874, was only 10.2 per thousand inhabitants. In Knoxville, it was 11.4; in Jacksonville, Florida (1872), 13.4; Pittsburg, 26.46; San Francisco (1873), 19.33; New York (1874), 27.62; Denver, Col. (1873), 17.28; New Orleans (1872), 30.6; Memphis (1872), 46.6. The death from consumption was also much less than in any other of the localities mentioned, being only 1.6 per thousand.

These facts are worthy of notice by those who are contemplating a change of residence for the sake of health. Battle Creek is one of the most healthful cities in the whole State, besides being one of the most pleasant; and the Health Institute is located in the most healthful and delightful portion of the city. It is a most inviting retreat for the sick and suffering. Send for a circular.

☞ Dr. Lines has called our attention to the fact that in our reference to his practice, last month, we should have made the statement concerning scarlet fever instead of diphtheria. The epidemic occurred two years ago, also, instead of last fall. Dr. Lines treated a large number of cases in the recent epidemic of diphtheria with equal success; and it was this fact which led us into error in referring from memory to facts which he gave us in conversation.

☞ We learn with regret of the death of the Rev. Geo. Trask, who has for many years been a most enthusiastic worker in the anti-tobacco cause. His labors have resulted in reclaiming hundreds from the filthy habit. His numerous publications will still be circulated from the Trask Tract Depository, Fitchburg, Mass.