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OUR PHYSICIAN, NATURE: OBEY AND LIVE.

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General Articles.

Bionomy.—No. 3.

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OUTLINE OF GENERAL PHYSIOLOGY.

To the superficial observer the phenomena of nature is a vast conglomeration of bewildering and disorder. But the philosopher beholds with overwhelming delight and awe the profound order, the inexpressible beauty, and the infinitely wise adaptation to use, of all natural objects and phenomena. The wonderfully complete and supreme reign of HARMONY throughout every department of the universe with which he is acquainted, causes him reverently to exclaim,

"All are but parts of one stupendous whole,
Whose body nature is, and God the soul."

One of the most obvious arrangements of natural phenomena is that which classes them into Chemical, Mechanical, and Living, or Biotical. It is with the latter, particularly, that we have to deal in this article, but in order to get a clear understanding of what it is, it is well to have a knowledge of what it is *not*; and this may be accomplished by knowing what constitutes chemical and mechanical action, thus enabling us to compare these phenomena with those of life, and so learn wherein they agree with, or differ from, each other.

Chemical Action consists of the combina-

tion of the *elements* of one substance with a certain fixed proportion of those of another substance, resulting in the *destruction* (not annihilation, but decomposition), of both such original substances, and the *construction* (not creation, but combination of elements), of a third substance different from either of the original substances. Chemical Action is *not* the action of one compound *body* in relation to another, but of the *elements* of such bodies.

Mechanical Action is the action of one body in relation to another without regard to their elements, resulting in the motion of such bodies, either *toward* or *away from*, each other. Mechanical and chemical action differ from each other, and yet they agree in this particular; that the action in either case consists of either *conjunction* or *separation*, or a tendency thereto.

Life, Vital or Biotical Action, is the action of an organized being; also, the aggregate of the actions of all organized beings. The simple, or elementary actions, of living beings, the operation of a single organ, apparatus, or system, is called a *Function*. As an organ is a *peculiar arrangement of inorganic elementary substances with special reference to an aggregate function or use* (see Bionomy—No. 2, Vol. iii, No. 8, of the HEALTH REFORMER), so a *Function* is a peculiar arrangement of chemical and mechanical actions with special adaptation to an aggregate use. That is, as the ultimate elements of every organized substance are inorganic, so the function, or aggregate action of such organically-arranged compound must be the sum of the elementary actions of such inorganic elements, and an analysis of such function must result in reducing it to ultimate chemical and mechanical action. As there is no such thing as a simple, indestructible organic elementary substance, so there can be no such action as a simple, elementary function. But as all organic substances can be reduced to inorganic elements, by analysis, so can all functions, or

biotic actions, be reduced to chemical or mechanical action, but such analysis necessarily results in the destruction of the function, just as the analysis of an organic substance, reducing it to its ultimate inorganic elements, destroys the organized substance. An organ is not an inorganic substance, neither is a function a chemical or mechanical action.

Again, as an organized substance is not simply a compound of inorganic elements, but a peculiar *arrangement* of such elements with special adaptation to a certain end, so a living action is not simply a compound of chemical or mechanical elementary actions, but a peculiar *arrangement* of such elementary actions with especial adaptation to a certain use.

Lastly, as this peculiar arrangement of elementary actions is the result of the peculiar arrangement of inorganic elements of an organized substance, and as the arranging of these inorganic elements so as to form an organic substance, is a biotic action, it must result from this reciprocity that *every organized substance is the product of some other organized substances*. A point or fact thus reached by deduction, already well established by observation, certainly has great weight in establishing the truth of the general principle from which the deduction was made.

Though vital or biotical functions are not chemical or mechanical actions, and though they differ from each other in many particulars, they have some analogy, and this analogy I wish my readers to remember particularly as having great weight in establishing the truth of my theory of vital forces to be set forth in my next article. I stated in another part of this article that chemical and mechanical actions differed from each other, but yet that they agreed in this: "That the action in either case consists of either *conjunction* or *separation*, or a tendency thereto," of the bodies, or elements of bodies acting in relation to each other. This same thing obtains in the actions of living beings, the functions of organized bodies, that is, every action of an organized substance, an organ, or a living being, results in conjunction with, or separation from (or a tendency thereto), the substance in relation to which such organized body acts. In short, the functions of all living beings consist in the *use* of substances usable, and the *expulsion*, or rejection of things nonusable, or incompatible with the organic and functional integrity of the organism. This conjunctive and separative tendency in the actions of chemical elements in relation to each other; of mechanical bodies to other mechanical bodies, and of living bodies to chemical, mechan-

ical, or other living bodies, must have a *cause*. In my next this cause will receive attention. Meanwhile let us proceed with the outline of General Physiology, which, to be sure, can be but a mere sketch, but nevertheless of use, as we shall hereafter see.

General Physiology is that branch of Natural History relating to the phenomena of life as observed in all living beings in the aggregate, or such phenomena as are common to all living beings, or organic substances.

Special Physiology relates to some special department, division, class or species, of living beings. A history of the actions of an individual living being is called a *Biography*.

There are three grand functions, or rather classes of functions, corresponding to the three organized systems, called the organic, relative, and mental, functions.

1. *The Organic Functions*, which consist of acts of transformation; construction and preservation of tissues; rejection and expulsion of non-usable, and surplus usable material; reproduction, &c., includes the whole of plant life, and part only of animal and human life. The organic functions common to all of these divisions of living beings are classed as follows:

Individual Functions,	{	Absorption,	Reproductive Functions,	{	Copulation,
		Circulation,			Impregnation,
		Assimilation,			Gestation,
		Aeration, &c.			Parturition, &c.

2. *The Relative Functions*, which consist of sensation and voluntary motion, are common to animals and humans, but always absent from plants. They are thus classed:

Voluntary Motion—absolute and relative.

Sensation—feeling, taste, smell, hearing and seeing.

3. *The Mental Functions*, which consist of spiritual actions in relation to the individual; other individuals; properties and actions of things; laws of such phenomena; morality, &c., are common to man and beast in some particulars, but in others they are wholly absent from animals, found alone in humans, and thereby constituting, mainly, his *humanity*. The Mental Functions are, *Propensities*—Individual and Social; *Intellect*—Perceptive and Reflective; *Sentiments*—Individual, Social, Intellectual and Moral; *Impulses*—Spiritual.

Makanda, Ill., March, 1869.

PROF. AGASSIZ says that fish diet is the best to promote the growth and development of the human brain. "If this is so," says the *Cincinnati Times*, "public officers should be required by law to eat fish occasionally, and school children should be fed on it."

THE IMP OF THE LEAF.

WHAT an innocent thing am I, ha, ha,
Who suspects my power and skill,
While I'm fitting about from leaf to leaf,
And silently working my will, ha, ha,
And silently working my will?

These broad, strong leaves, I laugh to think
Of the fat land they exhaust,
And I tip my brothers a cunning wink,
For we know full well the cost, ha, ha,
We know full well the cost.

I love the growth of the noble plant,
It cheers my very soul,
And I chuckle to think of the mighty host,
Who are waiting to pay the toll, ha, ha,
Who are waiting to pay the toll.

Oh, the precious weed! how it tempts them all!
All alike, the young and the old,
While I sit and grin, in my fire-proof skin,
To think how they all are sold, ha, ha,
To think how they all are sold.

There's the lovely "plug," the sweet "fine cut,"
And the "pig-tail," good and strong,
The smell of the stuff, is rank enough,
To come from where I belong, ha, ha,
To come from where I belong.

Then the choice cigar! with a wild huzza,
I dance in the curling smoke,
It does n't hurt me, not a bit you see,
So I have the best of the joke, ha, ha,
So I have the best of the joke.

Oh, the delicate snuff! one pinch is enough
To make my nose ecstatic,
And if you prefer to "dip," oh! well,
The taste is a little erratic, that's all,
The taste is a little erratic.

It's all one to me, I do n't care a flea,
How you use the delectable treasure,
For I have the fun when the work is done,
And you have—repentance at leisure, ha, ha,
You have repentance at leisure.

Then grow, noble plant, spread wide your broad
leaves,
And eat up the bountiful land,
For there will always be plenty of "softs," you know.
To create a steady demand, ha, ha,
To create a steady demand.

And I will prepare the essence so rare,
That bewitches the young and the old,
For there is n't a doubt, they'll ever find out
How sweetly they all have been sold, ha, ha,
How sweetly they all have been sold.

Pork Unclean.

WE read in the Scriptures that Moses was a wise man, and that the Lord commanded him to write and tell his people what they must eat and what they must not eat, saying unto him, "Stand thou by me, and I will make thee an instrument of communication with my people;" and that he wrote the law under the influence of inspiration, and must have told the truth when he declared in several places, as if to emphasize the fact, that the "Swine is unclean, and of him ye shall not eat, neither you in your day, nor your posterity forever!" It fact, the word *scrofa*,

or *scrofula*, in the Latin, when translated into English, means "a sow!" and hence, this terrible disease has received an appropriate name, from the early belief that the disease was peculiar to the *swine*, and, as Lugol in his essay on *scrofula* and its origin tells us, was derived from "sleeping with the hog!"

How any human being can pretend to be a Christian, and reverence what the Scriptures so plainly and explicitly declare in reference to this vile and unclean beast, and then eat him, I have always been at a loss to understand! Let any one, whether he be Jew, Christian, or heathen, examine the carcass of this filthy brute while living, or dissect it after death, and he will soon find abundance of evidence that Moses must have been inspired, when he declared him to be unclean. Look at his skin, covered with mange, tetter, and scurf, from one extremity of the body to the other, and so irritable and itchy that the poor beast is often crazy to find some convenient log or fence to rub himself against, in the vain effort to obtain relief from its itching sensations. Examine the inside of his fore legs, a few inches above his feet, and look at the open sores or issues provided by nature to drain off a part of the vile, scrofulous ichor from his corrupt and filthy body. Fill a small syringe with *quicksilver*, and then introduce its pipe into the open mouths of these sewers, and inject the mercury, and it will run along these pipes, and enable you to trace them to every part of his body. Place your hand around the foreleg, near the body, and press down slowly toward the feet, and as you do so you will see the corruption flow from the open mouths of these pipes, like the drainage from a sewer.

Sometimes when a fat hog wallows in his filthy sty, these little openings become filled up and closed, so that the scrofulous matter cannot escape from the system, when the animal at once sickens, and would soon die, did not his owner very humbly get over into his pen, and with a bucket of warm water and soap wash and scrape them open, until they begin to discharge again, when the sick hog soon recovers from his illness, and is saved as food to satisfy the hungry cravings of some epicure. Is it not wonderful that Christian men and women will eat these *soused* sore legs, and tell you as they smack their lips with a relish, that they are the sweetest and most *juicy* parts of the dirty beast?

Having examined the *outside* of the hog, if you still disbelieve that he is "unclean, and of him ye shall not eat," suppose you take a look at his interior, and the deeper you go, the dirtier you will find him. Dis-

sect and examine carefully his neck, and look at the numerous gray scrofulous lumps, or enlarged lymphatic glands, filled with tubercular deposits, and if the animal is only old enough, many of these scrofulous lumps will be softened, and filled with greenish or yellow matter, as the result of scrofulous ulceration. Now remove and examine his lungs, and if the animal you examine is upwards of one year old, his lungs will nearly always contain numerous deposits of gray and yellow tubercles, and if not slaughtered too soon, as food, will die of true pulmonary consumption. Remove his liver, cut through it with your knife, and you will find numerous yellow lumps of scrofulous or tuberculous matter, often in a state of ulceration. Remove the small intestines, and examine the numerous purple colored and enlarged mesenteric glands, often greatly increased in size, and filled with scrofulous deposits, and enveloped with fat, which the butcher so unceremoniously removes, glands, tubercles, fat, and all together, and afterwards "tries out," in the big iron kettle, removing the scrofulous extract or *essence*, called lard, for the purpose of *shortening* pastry, and frying doughnuts, &c. Is it not amazing that Christian women will insist upon it that pastry made out of such materials is far *nicer* than when made with good sweet cream and butter?

Verily it is true, as the great Lawgiver has told us, the "swine is unclean." Indeed, *animal instinct* teaches all the lower animals this important fact, and makes them avoid the hog as food. No beast or bird of prey will eat a dead hog. They may lie dead in the fields or by the roadside, and no animal will touch them, unless driven to do so by the pangs of hunger and despair. No domestic animal will eat *raw pork*, unless driven to do so by starvation. Instinct teaches them all that it is *unclean*. Indeed it is an old saying, that "dog will not eat hog, nor hog eat dog!" It takes a *man* to do that! But perhaps some will say that under the *law* the hog was unclean, but under the *gospel* it was purified. Oh, no! the Saviour of men did not come into the world for any such purpose; and besides, from the very nature of the circumstances, even the *gospel* could not make that *clean* which was in its very nature *unclean*. If the swine was unclean in the time of Moses, he remains unclean until this day. Now, Dr. Johnson tells us, "that if a man drinks beer, he will think and feel beer," and if so, then a man who eats hog will feel *hoggish*, and act like one! In other words, the whole nature and character of an animal may be changed by the quality of his food. If, for

instance, you feed a tomato worm upon tomato leaves, it will grow up a great, coarse, clumsy worm; and passing through its chrysalis state, come out a butterfly with little beauty or attraction in its appearance; but if you feed the same worm upon different food, the leaves of the rose, and the petals of beautiful flowers, when it passes through its chrysalis state, and comes out a butterfly, it will be of surpassing brilliancy and beauty in its plumage and in its armature. And so of the silk worm. Feed it upon inferior diet, the leaves of the forest, and it will sicken and perish; but feed it upon the leaves of the mulberry, and it thrives and grows, until it finally wears its life away spinning its gossamer silken thread! The same is true of the hog: feed one upon hard corn, another upon swill, another upon distillers' slop, and another upon nuts and mast in the forest, and their flesh will be totally different, as any butcher will tell you. In fact, the diet any animal lives upon will modify its constitution and character for better or worse, as the case may be. Feed a human being on pork and garbage, and he will be inferior in health, constitution, and endurance; feed him upon beef and bread, and in constitution, health, endurance, and disposition, he will be superior. All of our prize fighters and athletes, when they would secure great strength and endurance, eat beef and bread for food. Experience has taught them its superiority to pork and sausage. [Substitute fruit and vegetables for the beef, and the result is better still.—Ed.]

But some will say, "Our grandfathers ate pork, and were healthy, and lived to a good old age." Well, suppose they did so, and our fathers did the same, and we still eat it, and if it was good diet then, we would be as healthy and vigorous as our grandfathers, and our children more so! Now, is it not quite notorious that the reverse of this is true, and that living upon this unclean and improper food, there has been a gradual *deterioration* of the race in consequence? Jews eat no pork, they reverence and obey the law, and are wonderfully blessed with remarkable exemption from scrofula, and its kindred diseases. As a race, they are distinguished for their clean, sharp features; and a "skin as clear and transparent as that of a Jewess," is a compliment to any lady's beauty. Scrofulous people may be distinguished for their muddy, sallow skins, and puggy, pear-shaped noses, covered with buds, pimples and blossoms, so commonly seen among gross livers.

Very few persons in this country have had a better opportunity to observe and study the

habits of the American people in different parts of our country, for the past twenty years, than the author; to observe the diet of people in different localities, and witness its effects upon health and character. In Vermont, New Hampshire, Maine, and other New England States, the inhabitants send their beef cattle to Boston market, and live principally upon pork as meat, the year round, and myriads of them are afflicted with scrofula, salt rheum, tetter, ring worm, "humors in the blood," consumption, &c. In the far West, pork is the principal meat consumed by the farmers and laboring classes: ham for breakfast, roast pig for dinner, and sausage for supper, and "hog all the time!" And what is the effect of this unclean diet upon their constitutions, healths, &c.? Look at many of their wretched wives and children, with their rheumed eyes, and enlarged glands, sore ears, &c., for an answer. While the Western farmer works in his fields in the open air, he is comparatively exempt from its baneful influence, and it is chiefly upon the health of his wife and children that its terrible effects may be seen. The late Dr. Brainard, of Chicago, told the author a few years since, that it was estimated by competent medical authority, that nearly one-fourth part of the entire population of the State were afflicted with scrofulous sore eyes, with enlargement of the glands at the edges of the lids, &c. This form of chronic ophthalmia is very common throughout the West.

How any human being can read what the inspired writer says in regard to the use of this kind of food, and then deliberately close the sacred volume, and presume to invoke God's blessing upon a plate of ham and sausage, swimming in grease, I am at a loss to understand. Whenever I see a Christian do anything of that sort, it always reminds me of an intelligent and conscientious friend, a clergyman. Being seated at the table with one of his deacons, and having roast pig for dinner, the deacon requested him to ask a blessing. The clergyman looked steadily at the roast pig, and then raised his eyes toward Heaven, and not knowing hardly what to do or say, when he remembered the law, "the swine is unclean, and of him ye shall not eat," finally exclaimed, "O God! if thou canst bless under the gospel what thou didst curse under the law, bless this pig!" Adam Clarke, the great commentator on the Scriptures, leaves us his testimony as to the value of pork, as food for Christian men and women, for, says he, "Were I compelled to offer a sacrifice to the Devil, then I would offer a pig stuffed with tobacco!" Indeed, no sac-

rifice to the *Devil* could be more appropriate, since we never read any where in sacred or profane history of a hog being offered as a sacrifice to the one true and living God, or even to the false gods, except with the deliberate purpose of *defiling* the altar, and ignoring the sacrifice.—*The Physiologist.*

Random Thoughts.

SACCHARINE PRINCIPLE VERSUS SUGAR.

As the sugar topic seems to keep up in interest, perhaps something may yet be said to enable those who believe that sugar is food, to see the matter in a different light. A few lines of clear, straight, logical reasoning, will settle the several questions involved.

It is claimed that the saccharine principle of fruits, and sugar, are the same, identical; that if the one is food, the other is also. Is such a claim correct? Decidedly not. The saccharine principle of fruits is the result of physiology. It is the result of a process of *development*. Sugar is the result of chemistry. It is the result of a process of *destruction*. Can a physiological result and a chemical result be the same? The thing is a farce on the face of it. To claim that by opposite laws, principles, and actions, viz., *development* and *destruction*, we can obtain the same result, shows lack of acquaintance with the principles and laws of physiology and chemistry.

All food is the result of physiology, and no product of chemistry is food. Sugar being a product of chemistry is not food. The saccharine principle of fruits, being a product of physiology, is food. If it be true that sugar is food then what is to prevent us from manufacturing other food chemically?

SLEEPING, &C.

New converts to the cause of Hygeia are generally interested and inquiring as regards this subject. For such, and others who may be desirous to profit by a few remarks and suggestions, I pen these few lines. The first question that arises is: Is it best to sleep alone? Most certainly, it is more healthful in every respect. What! would you have a man and wife sleep in separate beds? By all means. If two persons sleep in the same bed, each inhales the exhalations of the other; the excrementitious matter from the lungs and skin. This they cannot avoid doing. But, it is urged, do they not derive a benefit that is equal to the detriment, viz., the blending and interchanging of the magnetism? No doubt persons of opposite sexes, and especially husband and wife, derive benefit from magnetic interchange, but all this benefit can

be had without the detriments, aforementioned, by sleeping in separate beds, in the same room. Magnetism being one of the most subtle of forces does not require contact of body to commingle. It pervades matter and space to a large degree.

If a man and wife are together much of the time in the day, they had better sleep in separate rooms. If they are not together much of the time in the day, they had better sleep in the same room, in separate beds, and the beds a respectable distance from one another. The German mode of sleeping (for husband and wife) in separate beds, side by side, is vastly superior to sleeping in the same bed, under the same clothes, &c., as they do not breathe the exhalations of each other's bodies.

Beds should be placed so that upon waking the light will not strike the eyes. Numbers have their eyes injured by a neglect of this.

The clothes that are worn during the day should not be hung up or kept in the sleeping-room. Those who cannot afford the comforts of a dressing-room can place them on a chair or rack outside the bedroom. Sleeping-rooms should be sleeping-rooms, and not the place to hang up clothes, as they often are in the domicils of the poor. Better breathe an inferior atmosphere in the day-time than at night. Proper sleeping apartments are of more importance on the score of health, than the regimen.

T. W. DEERING, M. D.

Healthfulness of Woman's Dress.

MAN'S dress is allowed to fit his body, but woman's body is compelled to fit her dress. His chest and waist need no compressing—they were created perfect, and so are allowed to develop naturally, as God designed them; but she—her Maker's "last, best gift to man"—in fashion's eye a sad mistake was made in her creation. The beautiful, rounded waist, so full, so perfect, with room within for all the vital organs to play their part in the great drama of physical life, is so "very ungentleel, so vulgar!" And so the little girl, whose form up to the age of thirteen or fourteen years has been left to grow as free and as untrammelled as her brother's, must now begin to pay attention to her figure. The short dress is lengthened down to sweep the floor; the childish waist, so comfortably loose, is laid aside forever; and encased in whale-bones, if not in corsets, with a dress so tight that an attempt to take a free breath would endanger every hook and eye upon it, but which fashion says fits so neatly, the process of *improving God's handiwork* begins. The

muscles of the chest, denied development, become enfeebled by disuse, and gradually shrink away, causing the waist to diminish in size; the heart labors ineffectually to properly circulate the blood through the arteries, capillaries, and veins; the ribs, forced downward and inward, press upon the vital organs, often crowding the abdominal viscera out of position; while the poor lungs, crowded, stifled, unable to more than half expand, become the ready seat of fatal disease.

As she grows older, additional stays are deemed essential, corset strings are tighter drawn, the dress fits still "more neatly," and by the time she has arrived at womanhood, the goal is won! She has reached the genuine wasp-waist standard, and fashion describes her figure as "elegant." An "elegant figure!" Shades of *Venus de Medicis* preserve us! Lamented Hiram Powers, what a sad mistake you made when you fashioned the Greek Slave! An "elegant figure;" and what has she in addition? An aching head, weak back, disordered liver, and shattered lungs. And yet, with effects following as surely in the wake of their causes as the sunshine follows the shade, she cannot see that her dress has anything to do with her sickness.

Not one woman in a thousand will acknowledge that her dress is tight. "See how loose it is!" she tells you, as, holding her breath and taking up a fold in front, she deems that you have convincing proof; when if her dress were but unfastened, and she were to breathe naturally, it would barely reach together within three inches. From the crown of her head to the sole of her foot, there is hardly one article of woman's dress that is really what it should be.—*Rural New Yorker*.

HUNGER A MONITOR.—If eating had no other end but to satisfy appetite, one might perhaps believe that by perseverance the habit could be got rid of. But hunger is the inner admonisher that tells us there is something wanting within the body, and that we must supply the deficiency. That we grow thinner from privation of food, that we are cold and our forces diminish, while on the other hand our weight and bodily powers are kept up, and even increased by taking nourishment, are facts which every one can observe in his own person. But what we do not comprehend is, that in spite of this renovation our body does not remain as it was, but gradually dies away.—*Liebig*.

HE who avoids small sins does not fall into larger ones.

An Experience.

IN trying to practice the principles of health reform, my experience has been such during the past four years that it may not be amiss for me to say a word about it to the readers of the HEALTH REFORMER.

Previous to the time that I was led to believe and practice these principles, though I had always protested against the errors of society, to some extent, in eating, dressing, liquor-drinking, tobacco-chewing, etc., and been guarded against acquiring certain habits common to many, disease manifested itself in my system in various ways; and almost constantly, a close observer could see in me indications and tendencies usually resulting from wrong practices or improper living, which threatened speedily to make of me a broken-down man, a wreck. My family, composed of a kind companion and three little girls, was frequently afflicted with ills common to those who pursue a wrong course of living, and was the cause of increasing anxiety to me.

Some of our troubles were: with me, liver complaint, dyspepsia, and frequent attacks of chronic dysentery, still I kept *doing* with all; with Mrs. B., erysipelas, neuralgia, and a growing tumor in her side; and with the children, frequently, sores about the ears, eyes, nose, and mouth, diphtheria, and sudden ailments, especially nights. In sickness we frequently resorted to drug medication for relief, and often had to pay a round doctor's bill.

Having reached the age of thirty years, I had but fairly entered upon active life, and we felt an ardent desire of being useful in the world, and not burdensome to others. As we realized our condition, and our attention was seriously called to the subject of health reform, the consistency and reasonableness of hygienic principles appeared to us more vividly than before; and we eagerly grasped the truth relative to the laws of our being, the application of those laws in the preservation of health, and the treatment of disease.

Our first efforts in living the reform more strictly were made in the autumn of 1864. We at once dropped the use of swine's flesh, grease, spices, and vinegar, as articles of food, and left off eating between meals. Shortly after, we discontinued eating butter, flesh meats of any kind, except a little fish very rarely. Sugar, milk, and salt, we used very sparingly, and took to eating food composed mainly of grains, fruits, and vegetables, and but two meals a day—still nothing between meals. Since then no drug medication has been used in our family; and we have been

careful to dress properly, and to sustain right relation to hygienic agents. The following briefly shows some of the benefits that we are deriving from this way of living:

We, as a family, enjoy much better health, and are relieved from many inconveniences which we encountered in our former way of living. The children do not tease to eat between meals; their sores have all disappeared; they enjoy sleep nights; and we have no occasion to hear them cry, "O mother, do give me some water;" "I am sick at my stomach;" "Oh! I am vomiting;" "How my bowels do ache!" etc. Nothing of this kind. And that they are not starved by being temperate is very evident. For instance, the eldest girl, aged twelve years, weighs one hundred and ten pounds; and I could report as favorably of the other two. In the fall of 1867, Mrs. B. suffered much from the enlargement in her side, which had troubled her for nearly eight years, and which had reached a very critical point in its progress, and seemed to baffle the skill of able physicians. She at that time went to the Health Institute in Battle Creek, Mich., where she spent seven months; and I am happy to say that, by the blessing of God, the tumor has very much diminished in size, and her other ailments are fast disappearing. More might be said here on the benefits that we are deriving from living properly; but time and space will not permit. Suffice it here to say that I am thankful for the light of health reform, and for what is being done in disseminating this light. Success to the health reform and its advocates.

In conclusion, I would say that some, it is true, who are apt to move fast, push matters to excess, and, by their extremes, raise the prejudice of some against right principles. Such need to be held back, and to be taught the way more perfectly. But, at the same time, I have often observed that there is a much larger class who are fearful and slow in living the laws of health. Because they do not see immediate results from their practice, or because they feel some inconvenience while making changes in their living, they rashly conclude that they cannot derive any benefit from this way of living, and *relax* the efforts they are making in a right direction.

Reader, "let us not be weary in well-doing; for in due season we shall reap, if we faint not."

A. C. BOURDEAU.

Bordoville, Vt., Feb., 1869.

To live nobly, we must be noble; and we become noble by resolutely banishing every unworthy thought and feeling.

Editorial.

Wonders of the Microscope.



THE cause of science is greatly indebted to the microscope for many of its most wonderful discoveries. Especially is this true of the great science of life. Some of the most intricate problems of anatomy and physiology, which would otherwise have remained a profound mystery, have been solved and thoroughly demonstrated by the aid of the microscope. Millions of objects, invisible to the unassisted eye, have been discovered, and the relation which they sustain to life clearly discerned. In addition to its contributions to science, its discoveries have opened up an almost infinite source of gratification to the lovers of the wonderful and beautiful.

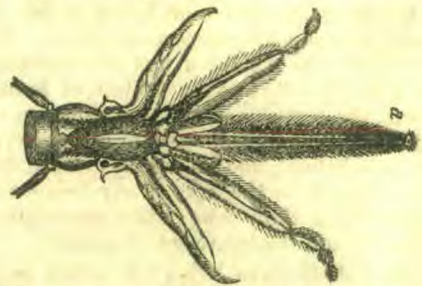
In contemplating the vastness of creation as exhibited in the celestial world, a certain writer has been led to exclaim, "An undevout astronomer is mad!" With equal propriety might we assert that the wonders of the terrestrial world, as revealed by the microscope, can hardly fail to excite feelings of admiration and awe for the Creator of all things, unless it be in minds of doubtful sanity.

Heretofore the familiar study of these wonders has been confined to the privileged few; the high price of the complicated instruments forbidding their popular use. But the invention of Mr. Craig has placed an instrument of wonderful power within the reach of all. When our attention was first called to the Craig microscope, we supposed it to be some simple toy for the amusement of children; but an examination of its claims, and a demonstration of its power, has convinced us that it is indeed an extraordinary instrument. Although somewhat acquainted with

the science of optics, we could hardly conceive that a single lens of such power could be brought into practical use. As an illustration of its wonderful magnifying power we will say, that we have in our collection of mounted objects, a slip of glass, in the center of which is a circular greyish spot, about the size of a very small pin-head. To the naked eye, this is all that appears; but place it under the Craig lens, and, presto! it is resolved into a group of portraits of fifteen statesmen and generals, every one of which is distinctly recognizable, and these are grouped around a tablet containing the Lord's Prayer, every word of which is plainly readable; the whole comprising 268 letters and fifteen portraits, in a space less than the size of a small pin-head! This is a photograph on glass, and is an illustration of the wonders of the photographic art, as well as of the microscope.

The chief value of the microscope, however, is the facility with which natural objects may be examined, and the wonders of creation explored. We present herewith a few illustrations, showing the power of this instrument. The cut at the head of this article represents the Craig microscope in use. With the right hand the looker regulates the mirror; with his left hand he steadies the instrument. Boxes for the microscope and prepared objects, and some objects out of their box, are seen on the table. The looker uses his right eye as most convenient.

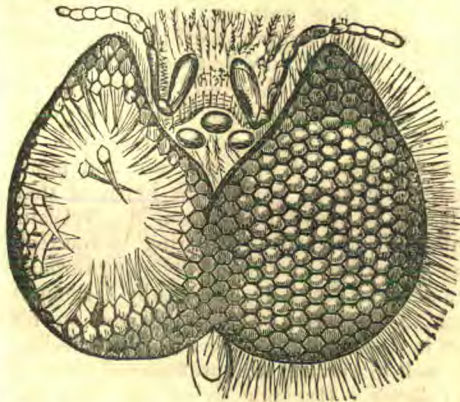
The following illustration gives an idea of how the tongue of a bee looks when magnified by the Craig lens:



a is the hollow tube through which the sweet juice or honey is sucked. The rings of which the tongue is made up are better shown in the microscope than in the engraving. The reported division of the tube into three parts, stated by naturalists, is corroborated by the longitudinal line seen under the lens. The other large appendages shown appear to be feet for enabling the bee to support itself while sucking up the nectar, and also for enabling it to back out after getting all it wants.

Equally wonderful is the examination of various familiar objects in nature. The pollen of flowers, minute leaves of twigs and trees, and the wings and feet of insects, are revealed with astonishing clearness and symmetry. As an illustration of this, take the foot of a fly. To the naked eye, looking cursorily, it appears like a small straight pen-stroke, 1-16th of an inch long. But, seen through the Craig lens, it reminds you of a lobster's claw, each hair, or feather, of the foot, of which many are shown, looking many times larger than the whole foot does to the unaided view. Several joints, two large claws, and two pads, are seen, the uses of which have formed, and may still form, a subject for interesting study and research.

But perhaps the most wonderful of all, as illustrating the wisdom of the Creator in providing for the wants of his creatures, is the view of an insect's eye, illustrated below.



By making, with a very fine, sharp instrument, a thin section of an insect's eye, and examining it in the Craig microscope, the numerous lenses, or differently-facing small eyes into which the eye is divided, are shown. The insect's eye being fixed stationarily in its head, has the compensatory power of seeing objects perfectly in one direction through any one of these discal facets, without turning its head in the several directions.

The processes of crystallization and evaporation are shown also in a general, interesting, and wonderful manner, by placing a drop of the alcoholic solution of camphor on the under surface of the Craig lens and watching the result. The remarkably-strange manner in which the alcohol moves about as the evaporation proceeds, and the final precipitation of the crystals across the field of view when the liquid has sufficiently passed off, is very interesting and suggestive.

But want of space forbids further descrip-

tion of this instrument. It should be in the hands of all, as it affords an exhaustless fund of instruction and amusement. For prices, &c., see last page. W. C. G.

For Conscience' Sake.

WHEN the claims of the health reform are presented to the attention of a certain class of people, and urged as a matter of duty, many are ready to flee to some text of Scripture which affords them a fancied security for their sinful course; as though the laws of God, as exemplified in nature, could be contrary to his written word. Of this class are those easy-going souls who, having been at least partially enlightened on the importance of the diet question, are ready to stifle their convictions, and indulge their appetite, defending themselves by quoting Paul to the Corinthians (1 Cor. x, 27), where he says, "Whatsoever is set before you, eat, asking no question for conscience' sake." This quotation would come with better grace from such, were it not for the fact that, when seated at a hygienic board, they are the very ones who do ask questions, regardless of conscience, demonstrating that the plea is only one of convenience and appetite rather than of conscience.

But what is the real signification of Paul's language? Does he mean to teach that we must have no choice in our food? that we must eat all the death-producing abominations that are placed before us? all the compounds of hogs' grease and other unclean substances, the very names of which are an abomination? Must we conclude that his excellent advice elsewhere, relative to cleanliness and purity of body, is to be construed so as to forbid scrupulousness in regard to the food we eat? Most assuredly not; for in the very same chapter he exhorts us to eat and drink to the glory of God, which we certainly cannot do by devouring the abominable dietetic compounds which modern cookery would place before us.

The context plainly indicates that the question Paul wished to settle was mainly of a ceremonial nature. The question which was not to be asked for conscience' sake, was whether the food had previously been offered in sacrifice to idols; the nice distinctions which seemed to prevail on such matters appearing not to be shared by all the converts to Christianity. And, more than that, there are conditions involved which do not often of necessity have an application to those who urge this plea. Paul says, "If any of them that believe not bid you to a feast, and ye be disposed to go,"

&c. Now if any of our readers are troubled with tenderness of conscience in such matters, and especially if their consciences are so tender that they cannot ask questions, but not sufficiently tender to prevent them from eating improper food, we will *tender* them this advice: "If any of them that believe not" in the laws of health invite you to a feast, the safest course in the matter is not to "be disposed to go;" and until you are placed in just such circumstances as these, the plea of "no questions for conscience' sake" will be of no practical use.

W. C. G.

Hygiene Triumphs.

FACTS are always more instructive, and often more wonderful, than fiction. This has once more been verified by the practice I have recently had among the sick of my neighborhood. While the people here are about as intelligent and progressive as any, they have learned but little concerning the laws of health; living and doctoring more by habit than reason. Like all tribes of our race, they follow custom too closely, and well-attested facts too loosely. Indeed they encourage the prevailing prejudice against all innovations. Nevertheless, my lecture on health, while visiting them last June, was listened to with hopeful attention; and the tables of a few families improved by the introduction of graham bread, diminution of tea, coffee, and salt pork. Some, moreover, began to doubt the propriety of the drug practice, and were almost ready to try a more simple and pure way of healing. When once explained, they could no more assent to its foundation principle, viz., that the first disorder may be cured by a second—the old disease by a new one. Having already learned that two wrongs never make one right, that evil spirits are never cast out by Beelzebub the prince, they soon perceived that allopathy, homeopathy, botanic, eclectic, and all other forms of drug medication, proceeded on this false assumption.

Shortly after arriving upon our farm, (Green Mountain Township,) about the 1st of October, I was called to treat a little boy with fever. The parents were much excited, since they had lost their first two children under the old practice. As the patient went into a pack, his uncle happened in, and protested, in no very courteous terms, that the child would be killed. The next day the little fellow was better, and the second, running about, well.

In a week or so after this, I was solicited

by a neighbor to step in and see two young men, one suffering from a malignant and painful type of inflamed eyes, the other from indigestion, fever, and inflammation of bowels. Both were under drugs. The eye patient was intelligent, and had read enough of modern hygiene to entertain no prejudice against its principles. I told him that a week's treatment would probably restore his health and sight. They both engaged me, and with hard water and but few additional facilities, the treatment began. In five days the patients were up and ready for work. In the mean time, Mr. Powers, with whom they lived, came down with the same eye-disorder, and was, in the same time, restored by the same treatment.

Afterward I was called to treat an excellent man who had suffered for three months under drugology, resulting in dropsical feet and ankles, while his limbs were so paralyzed and drawn up at the knee joints as to prevent him from walking. Besides, he had dyspepsia and scrofula settling dangerously on his lungs. At my first call, his botanic doctor came, and cheerfully yielded the patient, saying that he was through with his course, since it would do no more than relieve the pain. I took the case, and promised, if the lungs proved less impaired than I feared, to have the sick man, Mr. McClain, walking in a month. Adhering to the regimen prescribed, and cheerfully going through the different forms of hydropathy I thought best to administer, the patient was on his feet in a week or ten days, and is now feeling too well to tolerate the professional visits of any doctor. Hygienic living has taken the scepter from the hands of all restoring attendants.

Next I was employed to attend a leading citizen of LeGrand. He had suffered for two or three months with dyspepsia, bilious and nervous disorders, aggravated, as I thought, by the quinine and other drugs two different physicians had administered. From his long use of tobacco, tea, coffee, condiments, pork, &c., I feared that much patience and time would be needed in his restoration. By the aid of his hygienic wife, late Mrs. Prof. Guthrie, graduate of Antioch College, he discarded at once all past unhealthful habits, going heroically at the treatment prescribed, and in ten days called for my bill, saying that not the *whole*, but the *sick*, needed physicians. By his new mode of living, he must soon be the most healthy man in that community.

Once more: I was called to see Mr. C. B. Summers, an old and good member of the

Green Mountain Cong'l church. He was down with asthma, typhus fever, and dyspepsia. As in other cases, the reign of tobacco, tea, pork, condiments, &c., had at last overpowered him. Having engaged to teach a school, to open in ten days, he was badly discouraged at the sound of *typhus*. The tongue, the breath, and the pulse, indicated a very serious disorder. When told that he might be able to commence his school on time, he and his family manifested surprise and joy. His treatment fairly commenced on Saturday, and on Thursday he rode a mile to Thanksgiving services, and Sunday was again at meeting, and at his daily labors on Monday in better health than for years before.

The above I publish, not by any means to sound my own trumpet, but to encourage all who are striving in the great reformation we in common advocate. Let none forget that "truth is mighty and will prevail." Only teach it wisely, live it patiently, and the cause sustained by it can never go down.

Permit me to say in conclusion, that any good person who may wish a *most desirable* home in the West, can find one in this vicinity, and will be aided thereto by calling on, or addressing, the writer.

W. PERKINS, M. D.

Marshalltown, Iowa.

Adulterated Coffee.

DR. DALTON'S revelations in the *Galaxy*, concerning the adulteration of coffee in the New York market, are peculiarly interesting in these days of chemical investigations. He says:

If the buyer of ground coffee could feel assured that the article he purchased was only adulterated with chicory, he might perhaps continue to use, and in the course of time even become accustomed to it without having his appetite for the beverage disturbed; but while the coffee adulterator is chuckling at the cheat he practices on the consumer, he is in turn the victim of the chicory dealer, who, profiting by the example of his customer, adds to his chicory refuse carrots, parsneps, turnips, spoiled biscuit, corn, peas, beans, acorns, burnt sugar, sawdust, red earth, burnt rags, oakum, or rope yarn, exhausted tan, or oak bark, tar residue, and other similar appetizing substances. It is not, therefore, wise to take the advice given by some that we add chicory to the coffee we have ourselves roasted and ground; for, in the first place, it is of no use whatever, except to deepen the color, which may be done

just as well by a little burnt sugar, and, secondly, we may be adding some of the very suggestive substances mentioned above.

The samples of adulterated coffee that I have examined, have generally contained large quantities of bread, which is probably as harmless as anything that could be used for the purpose, and perhaps the cleanest, if we could only feel sure that it had not passed through the garbage pail on its journey to the coffee dealer.

Another very common adulteration is by roasted rye, which, if of good quality, would also be perfectly harmless; but it is evident that as it is the object of the sophisticator is to swindle his customer, he will purchase the cheapest article he can find, and since good rye commands a good price, he will use an article that is either spoiled, or perhaps spurred or ergot rye, the properties of which are so well known that it is not necessary to mention them here, except to state that often they are not entirely destroyed by the heat to which the grain is subjected in roasting; and this may be the cause of those serious accidents or troubles that result in the breaking down of the health of married women.

The Body a Machine.

WHAT we know of life does not help us to comprehend death, which still remains an inscrutable mystery. The animal body is a warm body, which emits warmth continually, and the heat thus lost must continually be replaced. It is, moreover, like a machine which daily performs a certain amount of work. The heart, or the muscles of the heart, work on uninterruptedly to keep up the circulation of the blood: the muscles of the chest to keep going the respiratory organs; and those of the entrails to maintain the wormlike motion of the organs of digestion. These are daily performances with which the will has nothing to do, while the mastication of our food, the motion of our limbs in walking and running, or otherwise working with them, are all dependent on our volition. The animal body has often been compared to a locomotive, in which, by air, water, and fuel, working together, warmth and force are generated. Indeed, air and water are necessary conditions for the generation of heat and strength in the animal body, and food therefore may in a sense be considered as fuel; it has, however, other purposes also.—*Liebig*.

THE writer does the most who gives his readers the most knowledge, and takes from them the least time.

HARRY'S ADVICE.

Oh! mamma, tell me, will you, please,
When I'll be old enough
To wear my hair in puffs and curls,
And frizzles out so rough?

I'd like to use the crimping pins,
Wear pearls and jewels fine;
How soon shall I be old enough?
Oh, dear! I'm only nine.

And, mother, dear, why may I not
Wear corsets, like aunt Jane?
And great, long, dangling earrings, too,
And dresses with a train?

And pretty, little, flattering veils,
That make one look so fair;
And feathers in my bonnet too,
All fluttering in the air?

Why need I always be a child,
And go to bed at eight?
Aunt Jennie sits up every night,
So very, very late.

What's well for her, I am quite sure,
Would be as well for me;
Now try it, mother, just this once,
And see how good I'll be.

Then Harry, three years older, spoke;
He felt so wondrous wise,
He thought to make the matter plain,
And watch her quick surprise:

Why, sis, you're foolish; do n't you know
How terrible it is
When little girls to women grow,
And wear their hair afriz?

How all your flossy curls must change,
So harsh and straight to grow?
They'll burn your hair, and sear your head,
With irons hot, you know.

They'll prick your little shell-like ears,
With a needle's biting sting;
And squeeze your plumpness all away
With an awful corset string.

And should you sit up late, you'd have
Such dreadful dreams at night,
You'd cry to be a child again,
Or for morning's golden light.

And then, you know, you could n't run,
Nor slide with me down hill;
Now think it over, and decide
To be my playmate still.

Oh! Harry, Harry, is it true,
Must ladies suffer so?
Oh, dear! what can a poor child do?
I hope I'll never grow.

—Independent.

It is a great advantage to keep quiet, gracefully and naturally. Self-control is the best evidence of a cultivated intellect and a clear conscience. It is a great pleasure to meet those who wisely listen and observe—who review what is said, without prejudice, and with or without advice commit no errors. Nothing is so difficult to do, nothing so rarely done.

THE salt of money is almsgiving.

A Vegetarian Survives Disease without Drugs.

EDITORS HEALTH REFORMER: Having been afflicted with disease in a degree seriously impeding my working ability, as long ago as 1848, I consequently made a trial of vegetarianism, with a view to the cure, or, at least, to a mitigation of its severity. The trial was made at the instance of a vegetarian neighbor, then residing in the town of Waukesha in this State, now a resident of Cobden, Ill. Of course, the longing for the fleshpots would return at times, and unbidden; but I have steadily continued to subsist on an exclusively vegetarian diet—with very slight exceptions, consisting in tasting meat, sometimes *once* and sometimes *twice* a year, and no more—from that time to the date of this writing.

My health improved materially in the course of six or eight months from the first adoption of a *natural* quality of diet. Time does not admit of further detail on this stage of experience.

I have been, and still am, a very hard worker, even at the heaviest operations connected with farm labor, and also in clearing up farms before cropping the land. In 1849, laborious stone-drawing and brush-piling induced very severe inflammation of the kidneys, particularly the left. A friend, now, and then, a vegetarian, was sent for. Dr. Shew's "Water Cure Manual" was referred to. Cloths wet and cold, from frequent dipping in cold water, were continually applied for four to five hours, by which time I became greatly exhausted, and slept a little while. The second day after, I felt so well that I went to work; a relapse was the consequence. I was again treated in the same way, with almost absolute fasting in both instances, and, after three days' quiet, returned to very heavy labor, as before.

Having been familiar with hop-growing in early youth, I put out a small hop-yard in 1852; and in drying the hops, in September, 1853, I inhaled so much carbonic acid from the charcoal used in drying them, that a severe form of fever and ague was the consequence. I commenced shaking the day the drying of the hops was completed, and shook severely *every day* for fifty-one days, without a day's intermission. Neither doctors nor drugs were employed; and I soon recovered my wonted degree of strength after the fever had ceased, and pursued my vocation.

At that time I had not adopted the motto which is now, and has been for fifteen years, the guide of my life; and which I inculcate

to a family of nine children, and hope and believe they will firmly adhere to when I shall be no more; which motto is, never to engage in any business or vocation that is directly or indirectly injurious to mankind. Walking in the light of this maxim—though owning a wood with plenty of poles, and residing where help is accessible—I have not been affected with the hop-growing mania, so fearfully prevalent in this State in recent years; neither have I sold any poles to others, to facilitate hop-growing, thinking I now perceive virtue in consistency.

In 1858, when sorghum was first introduced in this State, clarifying the syrup was not well understood. I ate a little—and a little too much, as it proved—that was not sufficiently clarified. The result was a severe case of dysentery. Shew's "Water Cure Manual" was again referred to; and his prescription of fasting, till the flux had ceased, and occasionally using injections of tepid water, was faithfully adhered to for forty-eight hours, when the bleeding ceased. I was so reduced by the bleeding within the first twelve hours that my head bent down because I had not strength to hold it up. Two neighbors who had held me up, left after about twenty-four hours, giving my case up as hopeless. Never yet wanting to die, I hoped on, and persevered in fasting; and on the fourth day from the first attack, I rode by the house of one of the men who had given up all hope for me. I had faith in water, nature, and vegetarianism. They had not; nor did they care to investigate.

The man last referred to was a very bad neighbor in that he would not take care of his stock. The continual inroads and trespasses of his swine, sheep, geese, cattle, and horses, consumed much of my time. This was the summer of 1858. I was much worried and vexed at such conduct. The consequence was a severe attack of typhoid fever, attended with three days of delirium. I ran out into the road, and three men were required to hold me. I suffered severely for over eight weeks in the heat of summer. For a period of eighteen days, I tasted no particle of food. Doctors attended with their drugs, and friendly neighbors with their homeopathic wee pills. No drug was admitted to my already much exhausted system; for, anticipating such ignorant officiousness, my wife had been instructed to turn a deaf ear to all meddlers, and refuse to administer drugs or medicine, and even to allow me to die in a natural way if that should be my time to depart.

I still live to say, that I was reduced forty-

five pounds in weight by that run of fever. Green peas being abundant when I became convalescent, I ate too freely. A relapse of two or three days' duration followed. It was soon turned from grief to gladness, however. I ate about a pound a day, but regained my lost flesh at the rate of one and a half pounds daily, the difference between weight of solid food eaten, and increase of weight, being made up of water, resuming its proper proportion in the substance of the dried tissues of my body. In three weeks' time, I was well, without a drug or any rheumatic drug-aches in my bones, and a subject of much surprise of course.

In the spring of 1867, I had some worrying experience, which again resulted in inflammation of the left kidney. I walked to the house, about half a mile distant, in much pain and with difficulty. Finding the door fastened by the children, I burst it open with my foot, my pain being intense, and threw myself upon the bed. Cloths continually wet in cold water, and often changed, were faithfully applied for a period of two and a half hours, by which time I had gone to sleep exhausted. I returned to work a little next day, but ate no food. The second day I was as well as usual. So much for successfully treating disease without drugs or slops of any sort, and faithfully adhering to a non-stimulating diet!

During the twenty years I have been a vegetarian, another rule has been faithfully adhered to; viz., to refuse admission into my family either of novels, unless a very good moral lesson was inculcated by them, alcoholic beverages, cards, or tobacco. I ignore all four, with the exception stated, and have trained up a large family in the same habits. Now my prayer is, May they persevere to the end. If they do, I am confident they will find that natural diet, and naturally-derived mental food, together with pure, simple, and natural amusement, will be much more conducive to the perfect performance of the bodily functions, from which alone the highest pleasures of existence are derivable, than any less simple and natural form of diet, or any less pure and more costly modes of so-called pleasure or amusement can be. In brief, the highest pleasure of life is enjoyed by a healthy person's feeling conscious of fully performing his duty. And this is only practicable by conforming unremittingly to the laws of nature alike in diet, rectitude, in pleasure; for not otherwise can we live on till the era of natural old age.

J. W. CLARKE.

Twin Hills' Farm, Green Lake Co., Wis.

A Dangerous Practice.

[The following article, from the *Battle Creek Journal*, is a blow aimed at a fearfully-prevalent evil, and we are glad to see our cotemporary devoting considerable space to reformatory subjects.—ED.]

MR. EDITOR: A few weeks since there appeared in your columns one or more articles upon the subject of Infanticide. We fully indorse what was said in reference to this great crime, alike against God and humanity, and stand pledged to support any measure calculated to diminish, or even to check, this great and growing evil. But there is another evil, not far removed from the above, to which we desire to direct the attention of the readers of your valuable journal—an evil which pervades our society to an alarming extent, and which is, perhaps, no less pernicious in its effects. We allude to the very common practice of administering alcoholic preparations to infants and young children. Domestic practice consists, almost entirely, in the administration of such preparations as supposed remedies for the various ills, both real and imagined, to which infant flesh is heir, and indeed alcoholic preparations enter too largely into the practice of most regular physicians. Almost every nursery is supplied with brandy, whisky, and certain popular preparations, composed chiefly of an inferior quality of rum.

With these the child is dosed, more or less often, and in larger or smaller quantities, during its infancy, whenever the parent or nurse imagines it ill, or in any way indisposed; and worse still, these are very frequently resorted to by mothers to calm the ruffled temper, to hush their crying, and bring sleep to the little eyes, and thus relieve the mother and nurse of this trouble, and allow them to pursue other engagements which they deem of more importance than the care of the helpless child. In such cases, the little, and often unoffending, infant, is forced to swallow a stupefying dose of liquor, and laid in the cradle or bed to take a drunken sleep, when very often the offending cause is a disarranged pin, or, as is often the case, the child cries for water, which infants seldom get, or to some such causes as these, which might by a little effort on the part of the nurse, be discovered and removed. We think if our mothers were aware of, and could fully appreciate, the evils of the practice, it would be fully abandoned, or at least become much less frequent. We think the observation of our professional brethren will sustain us in the assertion, that very many infants in every community are kept in a state of semi-intoxication, more or less constantly during

the first year or longer, after their birth. What must be the effect of such treatment, so obviously unnatural? Its effects are twofold, physical and moral.

The primary effect of alcoholic liquors upon the system is that of stimulation. This effect, however, is evanescent, and is soon followed by a corresponding depression, and always leaves the system in more or less of an exhausted condition, according to the degree of stimulation. Again, stimulants simply call forth the strength already resident in the system, while they furnish none; herein they differ from wholesome food, which alone gives permanent strength and vigor; hence, alcoholic liquors take the life and strength which they do not and cannot give back. How deleterious, then, must be the effect of such preparations upon the tender child!

At this early age, the system is exceedingly susceptible to the influence of stimulants, the smallest quantity producing more or less disturbance of the delicate brain and nervous system, and in this way often becomes the exciting cause of many of the nervous affections of childhood. Besides, the young and growing child needs all its strength, derived from the natural and only diet which nature provides for it, and without which it cannot live, aided by watchful care and intelligent nursing. It has not only to retain its strength, as in the adult, but must, if in health, add daily thereto, constantly growing stronger and stronger.

Now, if alcoholic stimulants simply take the strength, as they unquestionably do, and can give none, as most assuredly they cannot, then it is very obvious to the most careless thinker, that they must exert a serious influence upon the infant.

Thus we see that such medications may become, and are, the source of untold evils to the child, by causing disease, and by robbing it of the strength it is constantly in need of. If the records of infant mortality were critically examined, a large proportion of deaths could be traced to alcoholic preparations as the primary cause. But the moral effects of this treatment are no less dangerous and pernicious. We do not hesitate to say that by such a course, pursued during childhood, the foundation is often laid for drunkenness in more mature years. This is not, perhaps, generally believed, or, if believed, is usually overlooked, and not deemed of sufficient importance to claim much attention. O thoughtless mother, if you knew that such seeds, sown in your infant treasure, would ripen into fruit that would poison both soul and body of your darling, you certainly could not permit them

to be planted in that innocent heart. It is characteristic of alcoholic stimulants that they excite an unusual appetite, which nothing else will satisfy. Time and disease will not obliterate, or scarcely diminish it, as is attested by lovers of intoxicating drink or habitual drunkards, who, after years of total abstinence, by a single taste of their once-loved beverage, find their old appetite at once revived, and often to such a degree as to be irresistible, plunging them again into their former misery and degradation, from which they seldom have power to rescue themselves.

May not this be, and is it not, the case with those who, in very early life, have been forced to drink largely of this disease and death, and in whom this unnatural appetite was thus established, and can we not find in this a solution of at least one of the mysteries of intoxication—why so many young persons upon their entrance into society, and for the first time, perhaps, are induced to drink of the “drunkard’s cup,” experience such an uncontrollable appetite for alcoholic beverages that nothing short of “dead drunkenness” will satisfy their insatiable thirst?

Now in view of the above remarks, supported by facts, and corroborated by every day’s experience, is it not time that a reform should begin just here? Do not innocent, helpless babes, thus made the victims of disease and wretchedness, call for redress? and are our skirts, who look approvingly upon this evil, clear of the drunkard’s blood?

Many reforms are needed in society, and where can reform begin more appropriately than at the very “fountain of youth,” and, by purifying that fountain, make the stream of life pure also; by abolishing intoxicating liquors and alcoholic medication from out the nursery, and teaching our children to avoid such dangerous and deceptive things, we shall strike at the very root of much of human suffering and human misery, and then will parents find that the proverb of the “wise man,” “Train up a child in the way he should go, and when he is old he will not depart from it,” is more true than is generally believed.—*Physician.*

Wonders of Modern Surgery.

THE following is a brief summary of an article in a late *Atlantic Monthly* on the recent discoveries and improvements in surgery:

By the local application of a sufficient degree of cold, insensibility can be produced in any desired part, so that a man with a most exquisitely-painful wound on the arm, or felon on

the finger, can now look down, in his perfect senses, upon the knife as it enters his own body, and performs the most difficult operation without giving him the least pain. A French surgeon has invented an instrument he calls the “*ecrassur*,” or crusher, to perform operations dangerous in surgery, on account of the loss of blood from the smaller vessels, if performed with a knife. It is formed of a fine chain, gathered into a loop, which encloses the part to be removed, and by turning the screw the chain is tightened till the parts are separated. The blunt chain so turns up and twists the ends of the blood vessels that hemorrhage is prevented.

The eye is now examined by an instrument called the ophthalmoscope, by which the depths of the globe of the eye can be readily and fully explored, and through its aid a great deal of what has been written and conjectured about diseases of the eye has been found to be wrong. The intricate passages of the ear, the nose, the whole of the windpipe and passages of the lungs are now carefully explored.

Perhaps one of the best results of modern science has been through what is called “conservative” surgery, the rule of which is to save all that probably can be saved from the amputation knife. Many of our brave soldiers complained of the reckless haste with which, in the war, some surgeons would cut off arms and legs on account of trifling wounds. This complaint was often just. But one of the most distinguished surgeons in the world has lately written: “At King’s College it is rare to see an amputation; in nine cases out of ten, excision (or the cutting out of the deceased portion of the limb) should be performed in its stead.”

A boy at the West was caught under a fallen log, and had his leg broken and twisted upon itself at right angles with his thigh, the bones protruding through the flesh, and no doctor near. He lived, and after weeks of suffering, was taken to a hospital. Modern conservative surgery, instead of amputating the limb, as the old-fashioned surgery would have done, sawed off the protruding bones, turned the leg back again to its place, and put on an instrument to keep it of equal length with the other, and now the boy stands, runs, and jumps, with two sound legs.

HE who sins against man may fear discovery, but he who sins against God is sure of it.

No man is so learned but he may be taught; neither is any man so illiterate but that he may teach.

DR. TRALL'S
Special Department.

Mothers Wanted.

AMONG the prominent topics now being discussed in the daily and weekly newspapers, and in the monthly magazines, is the failing health of American women. Another subject has lately been introduced into this discussion: the alarming and general prevalence of feticide. The statistics of the last census show that in the older States, particularly in New England and New York, native Americans are dying out; that is to say, the native-born population is steadily decreasing. All of the increase of population is due to the foreign element, more especially the Irish and German. It is noticeable also, as another fact to be deplored, that marriages among native Americans have largely decreased within a few years. One of our city dailies says:

In all the States alluded to, the females of a marriageable age are, at least, a quarter of a million in excess of the men of the same age, and the number of those willing, but unable, to become mothers is annually increasing. At the same time infanticide is largely increasing; the crime is becoming one of painful frequency; and a certain species of it is practiced in the first families, and the drugs and implements for committing such murders are publicly sold everywhere. How to preserve her looks, and how not to have children, seem really to be the chief thoughts of women nowadays. The domestic economists have suggested the expensiveness of the married state as another cause for the decrease of marriages and births; and the physiologists have mentioned the neglect of physical exercise, and wrong fashions, as another. Maternity has also become most unfashionable of late years; and this idea, trivial as it may appear, is the cause of the murder of many innocents.

But, unfortunately, while the causes of this sad condition of affairs are well understood, none of our cotemporaries profess to be able to indicate the remedy. All seem to understand that fashion, extravagance, and riotous living, are the causes of the evil; but no one suggests any practicable method of relief. Indeed, the very papers which are so eloquent in depicting these evils, and deploring the consequences, are foremost in educating the public sentiment against any reform whatever. Nothing is ruining the health of American women, and rendering them not only unwilling, but unfit, to bear children, more than fashionable dress; yet these very journals are constantly cultivating the fashionable mania by their elaborate re-

ports of Parisian *a la modes* and snobbish descriptions of the ladies' "rich," "ravishing," "fascinating," "splendid," "admirable," and *recherche* dresses at balls, parties, churches, weddings, and other public occasions. If our co-laborers in the field of reform are really in earnest, let them unite with us in writing fashions down, instead of writing them up, and then deploring their ascendancy. When American women become healthy, they will desire children. Until then, they should not have them.

Meat vs. Grain.

THE New York *Tribune* of a late date contains the following item:

In the past, the chief study has been to take the greatest weight of grain from land; in future the chief care will be to take the greatest weight of meat from an acre.

This is true, too true; and "pity 'tis, 'tis true." We are sorry to see so intelligent and influential a paper as the *Tribune*, so frequently urging our farmers to give more attention to the production of beef, pork, mutton, poultry, butter, and cheese, and so seldom encouraging the cultivation of grains and fruits. It is true that, on the score of immediate gain in the matter of money-getting, the advice is well given. But, considered in reference to the ultimate good of humanity, our country, the next generation, or even the farmers themselves, its tendency is most pernicious. If the principle recommended, should be generally adopted, our people would become nearly carnivorous. It is the general expression of medical journals of all schools, of physiologists, and of physicians generally, that our people already consume much too great a proportion of animal food. Why, then, should they be constantly reminded that animal products constitute the most profitable farming? Is there no consideration but the almighty dollar applicable to agriculture?

The same paper contains the following:

When a tun of wheat is marketed, it leaves nothing behind but \$5 worth of straw. When a tun of meat is sold, it has left behind it nine-tenths of the manurial value of the food consumed in making it.

A proper system of agriculture would return to the earth *all* that a crop of wheat takes from it. The economy of animal manuring is found only in the fact that animal food sells at so much higher prices than vegetable. Were all the people vegetarians, subsisting only on the "natural food of man," they could not afford the expense, and would not tolerate the dirt, filth, and drudgery, of

keeping animals for fertilizing purposes. It is because a tun of meat will sell for \$240, while a tun of wheat will only bring \$40, that short-sighted economists prefer stock-raising to grain-growing.

The Profession Moving.

FOR several years the medical profession has been in a sort of ferment, or concoction, or electuary, or stew, with regard to the various forms and systems of medical practice which it pleases to denominate "quackery," or "irregular." The Eastern medical journals, some ten years ago, were quite agitated on the subject of having statutes enacted to suppress all but the old, regular, ancient, fossilized, poisonopathic school. But the Legislatures, for some reason or other, could not be made to see the propriety of compelling everybody to employ doctors, whether they believed in them or not, and so, for several years, the matter has been as quiet as a burgundy-pitch plaster. But, in the Western States, the profession seems not inclined to be snubbed. In Ohio the Legislature has lately been importuned to do something to sustain the supremacy of druggery, and in Missouri a bill has just been reported requiring all applicants to practice medicine in that State to undergo an examination before a board of physicians and surgeons, and to receive a certificate, if qualified. Persons practicing in violation of this act are to be fined \$1,000.

Go ahead, gentlemen. It is easy to understand the *animus* of the proposed law. The "board" will, of course, represent the dominant party, and that is allopathy; and the result will be that none but such allopaths as the clique permit, can cure a man of a cold, a woman of a cramp, or a child of the mully-wumbles, without being liable to take a fee of a dollar—we beg pardon, without being liable to pay \$1,000 for the privilege. But, whether such a law be passed or not, it will not be regarded by the people; and if enacted and its enforcement attempted, it will be a godsend to the community in opening their eyes to the selfishness and tyranny of that system of medical practice of which the late Professor Gregory said, after having taught it for a quarter of a century: "Ninety-nine of every hundred medical facts are medical lies, and medical doctrines are, for the most part, stark, staring nonsense."

WEIGH every step that you are about to take, whenever passions become involved. How often do things assume a different aspect when fairly considered.

An Original Idea.

WE propose to unravel one of the mysteries just now exercising the thoughts of the newspaper press of the city of New York to an unusual extent. Disorder, assaults, robberies, and murders, are no unusual occurrences, in this city; but of late they have been somewhat more frequent and bold than usual, so much so that our leading dailies seem sorely puzzled to understand the cause, or to indicate the remedy. Indeed, the removal of the cause does not appear among the remedial suggestions. The *Evening Post* has the following paragraph:

THE REIGN OF DISORDER.

It is rapidly coming to the issue with us, which is the stronger, society or organized crime? We have a large and vigilant police force, and yet this force seems inadequate to the repression of violence. Individual safeguards are necessary for security—the more systematic and effective as the personal risk is greater. Bank officers in the daytime must be watchful against surprises, and jewelers may have to shoot ruffians at noon across their counters.

"Where are the police?" This is the only question raised by the astute editors, when the report of a new outrage comes to their office. In the *Tribune* of the same date is the following item:

MEETING OF THE BOARD OF EXCISE.

The Board of Excise met yesterday, Commissioner Bosworth in the chair. Sixty-eight new licenses were granted to sell liquor.

Put that and this together, and see if the riddle is not solved. These sixty-eight new licenses to sell liquor are in addition to six or seven thousand already licensed. Who that can read, does not know that crime and disorder go hand in hand with liquor-selling? Is any editor of a New York paper so oblivious of history as not to know that, ever since the infernal liquor trade was a licensed business, the increase of vice and crime has been in precise ratio to the amount of liquor sold? Then why not direct their efforts against the cause, instead of railing about the effects? Why not propose to abolish the dram shops? This remedy would be effectual at once and forever, and nothing else will. "Where are the police?" Indeed! no, Messrs. editors, *why* are the groghops?

More Trichinosis.

SOME persons have disputed the existence of this disease, while others have declared that the "pork worms"—*trichina spiralis*—are nothing to be deprecated. But eight

cases have recently occurred in this city and Brooklyn which seem to be conclusive on both points. Four of the cases proved fatal, and on examining a portion of the muscular tissue microscopically, it was found to be thickly studded with *trichinæ*. A special interest, to the physician, attaches to these cases, from the close resemblance of the symptoms to those of typhoid fever. Some of these cases were mistaken for typhoid fever, and treated as such. All of the patients had partaken of ham and sausages at a German boarding-house, which food was either taken raw, or but slightly cooked. These worms, like the "measles"—another insectivorous parasite that infests the lives of all highly-fattened animals—are not destroyed by the ordinary process of boiling, but it is supposed that thorough baking will be the death of them. But why should any one expose himself to be devoured alive by myriads of worms breeding in his flesh? The scavenger hog—"cursed under the law, and never blessed under the gospel"—was never intended for human food.

The Devil and his Imps.

THE newspapers and medical journals are again agitating the hackneyed theme of the adulterations of alcoholic beverages. The *World*, having obtained specimens of brandy, rum, gin, and wine, from various druggists in the city, and from our first-class hotels, where 40 and 50 cents per drink are charged for brandy, &c., had them analyzed, and found them all sophisticated, or adulterated. But what of it? So long as dram-drinkers do not fear the greater alcoholic poison, they will not be frightened at the lesser drug poisons. If they can swallow the big devil, alcohol itself, they will not hesitate to swallow his little imps. For thousands of years, a controversy has existed among the learned—physicians, physiologists, divines—with regard to the relation of alcohol to the living organism, some contending that it is vitalizing, and others that it is devitalizing. And the question, so far as they are concerned, seems as far from a satisfactory solution as ever. The present position of the majority of the medical profession is that it is vitalizing as a medicine, and devitalizing as a beverage, as though its relation to the vital organism depended on the circumstance of health or disease. It is time that this absurd notion was dispelled from the human mind. Certainly a learned profession ought not longer to entertain and teach a theory that is in opposition to science, and destitute of common

sense. The relations of living structures to everything else in the universe is as fixed and unalterable as are the laws of nature. Nor does the fact that living structures are in a normal or an abnormal state, change or modify, in the least, their relations to external objects. Air, water, and food, are always normal and never poisons—whether they are used, or abused—whether persons are sick, or well. And alcohol, tobacco, and drug medicines, are always poisons, and never normal, however used, or abused, and under all circumstances of health or disease. "We cure one disease by producing another" (*Payne's Institute of Medicine*), is the rationale of all drug medication, and it is just as applicable to the alcoholic poison as it is to its associate of the drug shop or the rum shop.

Pickling the Hydrophobia.

SEVERAL cases of hydrophobia having lately occurred in Brooklyn and other places on Long Island, a Dr. Francis Butler, in the *New York Herald*, recommends, after "vomitives and purgatives," nearly killing the patient in salt and water. His language is:

Saturating the whole body with salt, by keeping the animal wholly immersed in a full salt-water solution until he is almost beyond recovery, then reanimating by rubbing, will seldom fail to produce the desired convalescence.

But this applies to dogs; now let us see how the remedy is to be adapted to humans. Dr. Butler says:

The patient *might* be immersed in salt water till a reaction could be produced in the system by restoration, after a sousing bordering on drowning itself.

As the living bodies of fresh-water animals refuse to be "saturated" with salt, we do not see the virtue of the remedy. Nor does the incomprehensible doctor give us any clew to an understanding of the manner in which "reaction" is to be produced while the patient is immersed in the salt water; and so we are left to the unpleasant reflection that the whole pathology and therapeutics of hydrophobia, as propounded by Dr. Butler, is very like the bosh and gibberish that we find in medical books on the same and similar subjects.

And now, a word of common sense on the subject. It is undoubtedly true—we regard it as a truism—that, immersing a hydrophobic patient in tepid, or moderately warm, water, and rubbing the skin gently with the bare hand, or with soft towels, will assist the body in its efforts to eliminate the poison, and thereby conduce to the patient's recovery.

The patient may be kept in the bath as long as he is not chilly, and the pulse does not falter at the wrist. But keep the salt away. The purer the water is, the greater is its solvent property and its eliminating capacity.

Living and Dead Matter.

J. S. KILBOURN writes from Jamestown, Wis.:

"Dr. Trall: You say that, in the relation of living to dead matter, *all* action is on the part of the living. Suppose that a stone fall from the top of a high building, and strike a man on the head, and fracture his skull, and scatter his brains, is this a *vital* act? Suppose a man is shot through with a bullet, or has his head severed from his body by a train of cars, are these *vital* acts? Please give the philosophy of these actions in the HEALTH REFORMER."

The acts are *mechanical*. A mechanical action is merely change of position of bodies in bulk, without change of properties, or molecular arrangement. If a falling stone, or a flying bullet, or a railroad train, impinges upon, or against, a man, and displaces his body, or any part, or parts, of it, the action is mechanical. But if pain, heat, redness, swelling, inflammation, fever, or spasm, affect the injured part, this action is *vital*. The questions above propounded are *outside* of the relations between living and dead matter. They are effects of the law of gravitation, which applies equally to all matter, living, or dead.

Answers to Correspondents.

CURING WITHOUT MEDICINE.—S. O. P.: "Dr. Trall, *Dear Sir*—As you teach that drugs do not cure disease, and that they are curable without medicine, that is, by means of hygienic agencies, how do you explain the fact that when arsenic or quinine is administered, in large doses, in cases of intermittent fever, the disease promptly disappears? If it is not cured, what becomes of it?"

The disease is cured, and so much the worse for the patient. We do not teach that drugs do not cure disease. On the contrary, we hold that drugs *do* cure disease, and that is just why we object to them. Disease should not be cured. The true healing art aims to cure the *patient*, not the disease. The disease being itself "remedial effort," should be *regulated*, so that the effort may be successful in restoring the patient to health. You may cure the disease by killing the patient. But, cure the patient, and the disease will take care of itself. It has nothing more

to do, and will cease to exist. The world has been mistaught on this subject for three thousand years, and the medical profession still entertains a false theory of the nature of disease.

HYDROTHORAX.—M. M.: "The patient is 37 years of age; very much bloated, especially in the lower extremities, with varicose veins; no cough nor expectoration; breath short; pulse feeble and frequent; can sit up most of the day. What are the diagnosis and prognosis?"

The patient has dropsy of the chest, and is probably incurable. If the lower extremities are livid or discolored, and pit on pressure, we should regard the case as hopeless.

OVARIAN DISEASE.—M. A. R.: The case you describe is chronic inflammation of some, or all, of the pelvic organs, probably more especially in the left ovary. It may be the precursor of ovarian tumor, and should be promptly treated. The wet-sheet pack once or twice a week; a tepid ablution and hip bath daily, with the wet girdle when there is heat in the loins, are the bathing processes applicable to the case.

"ACUTE FOLLICULAR BRONCHITIS."—Dr. P.: This is a new term for an old disease. Late authors have applied it to typhoid pneumonia of the nervous form, or what medical books term *peripneumonica notha*. It should be treated as inflammation of the lungs with low fever, precisely as our books recommend for influenza.

DEAFNESS.—O. M.: "Dr. Trall, *Dear Sir*—My little girl, ten years of age, is entirely deaf in one ear, and hears very little with the other. She had scarlet fever four years ago; was doctored the usual way with drugs; had running at both ears for several months, for which a variety of remedies have been tried with no benefit, perhaps with injury. Can she be cured?"

The prospect of cure depends entirely on the extent of the disorganization which has taken place in the structures of the ears; and of this we cannot judge without an examination with a speculum. A majority of such cases can be relieved, and in some the hearing can be wholly restored. Tepid or warm water is the only local application that should be made.

CHRONIC RHEUMATISM.—F. F.: "R. T. Trall, M. D., *Dear Sir*—What is the cause of, and the remedy for, chronic rheumatism in the knee joint?"

The immediate or proximate cause is ob-

struction in the dense tissues of the part, owing to impurity of the blood. Before we can indicate the proper treatment, we must know the symptoms, which you do not state. A general plan is, to apply cold wet cloths to the part affected, so long as there is heat, pain, and swelling. Of course, the whole system must be attended to in the matters of diet, bathing, &c.

MERCURIAL SALIVATION.—R. R.: "What is the hygienic treatment for a patient who is badly salivated?"

Keep the room and the patient as warm as comfort requires; give him abundance of fresh air; sponge the surface with moderately warm water two or three times a day, and let him take frequent sips of warm water. Thin gruel is the only food admissible, until the drooling ceases.

TURKISH BATHS AND DRUGGERY.—Dr. C. A. S.: Those who run the Turkish baths in this city, do prescribe drugs to their patients. Their "hygienic" pretensions are mere sham and humbug. Some of their patients who were "certified" as great cures, were soon after in their graves.

SYNOVITIS.—J. F.: The pain and lameness in the knee joint is owing to chronic inflammation of the synovial capsules, and should be treated accordingly—wet bandages, occasional packs, strict diet, &c.

SQUINTING.—A. S. R.: We are prepared to perform the common surgical operation for the relief of this complaint.

SCIENCE VS. FACTS.—How often people say that such and such a dietary is indispensably requisite to physical nutrition. Perhaps it is predominantly animal, but stubborn fact says that half the human race live on vegetable food. All the analyses of Leibig and Pereira, and Dr. Prout, and the rest, supposing them to militate against such a hypothesis, would be of no account in the face of such evidence. A set of plump muscles, well-knit nerves and sinews, and vigorous viscera, are better than chemistry to decide upon a question of this character. Science has often had to hold its peace before the verdict of history.—*Rev. J. L. Corning.*

COURAGE consists not in blindly overlooking danger, but in seeing it and conquering it.

AN insensible heart is the Devil's anvil; he fashioneth all manner of evil upon it, and the blows are not felt.

Items for the Month.

THE CRAIG MICROSCOPE.—As announced last month, we are now prepared to furnish this valuable instrument to our patrons. We can send it by mail, postpaid, for \$2.75. Mounted objects, \$1.50 per dozen. Photo-microscopic objects, 50 cents each.

Our readers will notice the advertisement of Dr. Vail's "Granite State" institution, at Hill, N. H. From a personal acquaintance with Dr. V. we are enabled to commend him as a skillful and experienced practitioner of the true healing art. Although not of the radical order, his institution ranks high among the successful "Cures" of the country, and is one of the best in New England.

We are indebted to the *World's Crisis*, of Boston, for the following neat compliment. We fully appreciate it, because the editor of that paper is a thorough-going, and consistent reformer, which doubtless has much to do with the great amount of labor he performs in writing, traveling and preaching.

"THE HEALTH REFORMER for February is at hand. As usual, it is filled with good things, that everybody should read. One has very properly called it 'The Life Preserver.' It is a superior paper of its kind, and should be in every family. It is published monthly, at the low price of \$1.00 per year. We recommend it to our readers, as worthy of their patronage."

THE GIBBERISH OF QUACKERY.—How any person with even a sprinkling of common sense can read the advertising pages of our newspapers, without being disgusted with the shallow pretensions of quack-medicine venders, is a marvel. It would seem as though their silly advertisements ought to prevent the sale of their wares, yet it is an absolute fact that the more foolishly absurd their statements are, the more people do they humbug. As a specimen of this kind of nonsense read the following description of somebody's patent plasters, which we clip from a weekly newspaper:

"Being a preparation from Frankincense, Rubber, and Burgundy Pitch, they seem to possess the quality of Accumulating Electricity and imparting it to the body, whereby the circulation of the blood becomes equalized upon the parts where applied, causing pain and morbid action to cease."

If the scamp had said that they possess the quality of accumulating and retaining the excretions of the skin, which ought to be allowed to pass off, the simple truth would have been stated. But the dear, credulous public want to have a story quite incredible or absurd, in order to swallow it, and so the quacks mix in a little *electricity, morbid action, &c.*, to make the whole go down.

GRANITE STATE
HEALTH INSTITUTE,
HILL, N. H.

MEDICAL STAFF:

WM. T. VAIL, M. D., (Physician-in-Chief)
 MRS. E. M. VAIL,
 JOHN A. TENNEY, M. D.,
 MISS MATTIE A. WILLIAMS, M. D.

Dr. W. T. VAIL has been at the head of this Establishment for more than 17 years.

Mrs. E. M. VAIL has been connected with the medical direction of the female department for 7 years.

Dr. J. A. TENNEY has now entered upon his 4th year.

Miss M. A. WILLIAMS has been connected with the Establishment about 3 years.

The physicians of this Establishment have had a large and very successful experience in treating a very great variety of chronic diseases.

They have taken multitudes of patients who had been a long time sick, who were greatly reduced in strength, who were full of chronic weaknesses, aches, pains; who could not walk, who could not sleep, who could not eat;

Patients whose bowels were constipated, whose livers were diseased, whose stomachs were disordered, and who suffered untold tortures after taking food;

Patients who had weaknesses in the back, in the sides, in the limbs, in the bowels, in the lungs, between the shoulders, and at the back of the neck;

Patients who had chronic sore throats, chronic catarrh, chronic bronchitis, chronic inflammation of the eyes externally, chronic inflammation of the eyes internally, amounting in some cases to a complete loss of sight;

Patients afflicted with humors, eruptions upon the skin, internal humors, humors in the throat, lungs, eyes;

Patients with affections of the heart, palpitations, irregular beatings, imperfect closure of the valves;

Rheumatic patients; stiff in the knees, feet, hands, elbows, shoulders, neck, back;

Patients who were nervous, fidgety, desponding, hypochondriac; unsound in mind and in body; almost ready to take on insanity and go to the mad-house;

Patients who had become chronically sick from a long course of drug medication; who had partially lost the use of their hands, feet, arms, legs, from this or other causes.

In short, they have taken multitudes of chronic sufferers of almost every kind, and restored them to perfect health.

They have treated large numbers of women who could not go up and down stairs without great pain and distress; who could not walk even on level ground; who could not ride without great suffering; who had great pains and weaknesses in the lower part of the back, or in the bowels; pains between the shoulders and through the chest; pains and weaknesses in the sides; great heat and burning sensations about the head and eyes; the cares of whose families had become a great burden to them, or who had been reduced quite to helplessness and despair;

Women with all sorts of periodical irregularities; undergoing extreme suffering and torture with each returning menstrual period, and reduced oftentimes to extreme debility from long-continued suffering of this kind;

They have treated large numbers of this class with perfect success. They have had opportunities to become perfectly acquainted with this class of diseases, and know just what remedies to administer.

They have treated hundreds of young men, of middle-aged men, with nervous debility or exhausted vitality, accompanied with peculiar weakness and infirmity, in which the stomach, liver, bowels, nerves, brain and genital organs, very often all, sympathize or participate. They understand these cases. They have had long experience in treating them. They have had great success.

The "Granite State" is kept as a cure and a home for sick people, and all its arrangements are made primarily to subserve this great end. Persons, however, who are willing to live hygienically, will find it a pleasant place of resort, especially during the summer months.

The charges for board and treatment are reasonable, and much cheaper than at many other establishments (see circular).

Patients who are able, and wish to do so, are allowed to reduce their expenses somewhat by services rendered.

Hundreds of patients who have been at this Establishment for treatment, have taken great pleasure in recommending it and its physicians to the sick and the afflicted, and testimonials of this kind will be sent on application.

This institution is THOROUGHLY HYGIENIC.

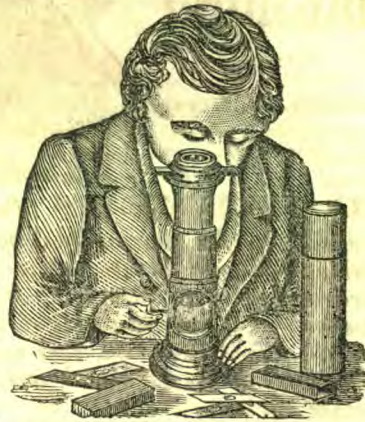
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As a GIFT or present to a friend or child, it is unsurpassed, being elegant, instructive, amusing, and cheap.

There is no other lens made like this. It magnifies about 100 diameters, or 10,000 times, and, owing to its simplicity, it is invaluable for physicians, scientific men, students and schools; and for every one who is a lover of the beautiful things of nature; for it opens up an unseen kingdom to the view of the inquiring mind.

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It should be for your mutual interest to buy and employ the VERY BEST Threshing Machines in use. The Farmer desires to have his grain threshed, cleaned, and saved, to the best advantage, and the Thresher should desire to obtain the best and most improved style of Machine, in order to meet the Farmer's wants, and at the same time do the work expeditiously and with profit. Consideration is asked to some of the claims advanced in favor of the Nichols & Shepard Machines over other kinds.

SOME OF THE POINTS OF EXCELLENCE AND SUPERIORITY.

The Plan of Separation, is entirely different. No "Canvas Apron," "Raddles," "Beaters," nor "Pickers," are used. The Straw is thoroughly agitated by means of "lifting fingers," that begin to shake the straw the instant it leaves the cylinder, and can be adjusted (even while the Machine is running,) so as to give the straw *any necessary amount of shaking*, thus insuring a perfect separation, in all kinds and conditions of Grain, and equally when the Machine is "crowded" to its fullest threshing capacity, as when threshing at ordinary speed. A marked advantage over other kinds, which have but limited facilities for separation at best, and act on all kinds of straw in the same manner.

The Superior Separating Qualities

of the "Vibrator" thus furnish a large additional profit to the Thresherman from increased earnings, and at the same time it is safe to say that the extra saving of grain to the Farmer, over the best of other Machines, is far more than enough to pay all the threshing bills.

The remarkable simplicity of construction of the "Vibrator," as compared with other machines, is very striking. It uses but 10 Pulleys and face wheels, where others have 35 to 45; only 19 Boxes, where others have 26 to 34; only 9 Shafts, where others have 13 to 16; only 3 Belts (besides stacker belt), where others have 7 to 10; only 2 Cog Wheels, where others have 6 to 8, or more; only 19 Journals and places to be lubricated, where others have 32 to 40, or more. The consequent ease of management, durability, freedom from breakage, cheapness of repairing, ease of draft, and adaptation to general use, are strikingly manifest.

This Machine Leaves no "Litterings" or "Scatterings"

under the Machine. The dirty and unprofitable "cleaning up" necessary with others, is entirely avoided in the "Vibrator." When the last bundle is fed, the work is all done, and the Machine ready to pull up. Another good item of profit, as well as comfort, to Farmers and Threshermen.

The Fan Mill is large and capacious, with ample blast to take out all the foul stuff, and clean the grain fit for market, and yet not "blow any over." Grain dealers and millers frequently pay an extra price for grain coming from this Machine.

The Sieves are very large (measuring over eleven square feet of surface), and can easily take care of all the grain that comes to them. Never require "poking" or "scraping," and do not "clog" nor fill up. They run for hours and days without the watchful care so necessary with many others.

The "Vibrator" cannot be "clogged" or "choked up" by any thing that can be fed through a cylinder. Hence it is peculiarly adapted to handle long or wet Straw, "Headed" Grain, Long Oats, Barley, Rye, etc., where other machines often entirely fail, or work imperfectly.

For FLAX and TIMOTHY SEED, it is decidedly advantageous, having no Beaters, Pickers, nor Shafts, to "wind" or impede the free passage of the straw. It THRESHES, CLEANS and SAVES, these seeds equally as well and easy as it does Grain, and only requires a change of Sieves to change from one to the other.

Many farmers say it is more profitable to employ the Nichols & Shepard "Vibrator" at full prices than any other Thresher for nothing, and they generally command an extra price per bushel

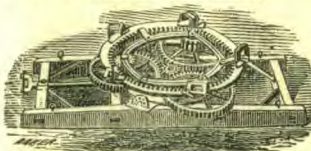
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"TRIPLE GEAR" HORSE POWERS!

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Parties having worn-out or broken-down Powers of other makes, are invited to try this and see the difference. The "Vibrator" Machines are sold on a broad, unvarnished Warranty. They stand on their own merits, and ask no favors but an impartial trial. For more full particulars about these superior machines, call on our Agents, or apply to us, for Illustrated Circulars and Price List, (sent free on application,) giving full description, and numerous testimonials from parties that have used them.

Address NICHOLS & SHEPARD, Battle Creek, Mich.



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Is mild and pleasant, and the air is pure and bracing. THE SCENERY IS TRULY GRAND AND DELIGHTFUL, having a full view of the Blue Mountains, from the Delaware Water Gap, to west of Harrisburg, a distance of over one hundred miles, and overlooking Lebanon Valley, the city of Reading, numerous villages, and the finest fruit and grain-growing districts in the State. The walks and rambles are dry and clean, extending for miles in various directions, with all that can be desired of groves, sun, and shade. The buildings are new, and the bath rooms large and airy, supplied with an abundance of

PURE SOFT WATER,

Both hot and cold.

We do not give drugs in our practice. We are ardent lovers of the true healing art, and our faith tells us that to cure the sick is not to poison them with drugs. We have "Hygeia" enthroned at the Hygeian Home, and her laws we teach and obey. DR. A. SMITH has been a

SUCCESSFUL PRACTITIONER

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Michigan Central Railroad.—Time Table.



GOING WEST.

LEAVE.	MAIL.	DAY EXP.	EVE. EXP.	NIGHT EX.
Detroit,	7:20 A.M.	11:10 A.M.	5:25 P.M.	10:20 P.M.
Battle Creek.	1:45 P.M.	3:53 P.M.	11:03 P.M.	3:13 A.M.
Chicago, Arr.	9:05 P.M.	10:02 P.M.	6:30 A.M.	10:03 A.M.

GOING EAST.

Chicago,	5:00 A.M.	8:00 A.M.	4:30 P.M.	9:00 P.M.
Battle Creek..	12:03 P.M.	1:45 P.M.	10:03 P.M.	3:13 A.M.
Detroit, Arr.	5:55 P.M.	6:30 P.M.	3:45 A.M.	8:30 A.M.

Palace sleeping cars on all night trains. Trains connect at Detroit with the Great Western Road, for all points East.

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THE BEST COOKING STOVE

EVER MADE.

First Grand Prize Medal

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FIRST PRIZE AT THE

LOUISIANA STATE FAIR, 1867.

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On arrival of trains of the Michigan Central, Detroit and Milwaukee, and Michigan Southern Railroads, *Four Express Trains Leave Detroit Daily* (Sundays excepted), for London, Paris, Toronto, Niagara Falls, Buffalo, Rochester, Ogdensburgh, Burlington, Elmira, Albany, New York, Boston, Philadelphia, Baltimore, Washington, and all intermediate places.

Philadelphia, Baltimore and Washington Passengers will find this route, via Rochester and Northern Central Railroad, the shortest and most direct to those cities.

Only one Change of Cars between Detroit and Baltimore.

Fare always as low as by other lines.

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During the Season of Navigation, daily connections are made with Lake Ontario Steamers at Hamilton and Toronto. By this line passengers have FIRST CHOICE OF STATE ROOMS at Hamilton.

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Graham's Science of Human Life,
Price \$3.00. Postage 50 cts.

Dr. Jackson's "How to Treat the Sick
Without Medicine,"

Price \$3.25 by mail, postage paid.

Jackson on Consumption,

Price \$2.00. Postage 28 cts.

Jackson on The Sexual Organism,

Price \$1.75. Postage 16 cts.

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Women,

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How to Live, by Mrs. E. G. White,

Muslin \$1.00. Postage 12 cts. Paper 75 cts. Postage 6 cts.

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