Scientific.

THE LAWS OF HEALTH.

PLEASANT OCCUPATION, AND THE POWER OF MOTIVE.

Many persons of both sexes, but particularly females, suffer for want of steady employment. One of the most useful rules concerning health is. "*keep constantly employed.*" It is not necessary to work to excess; such a thing is possible, but not very common.

In order, however, to reap the full healthful benefit of acting, we must have elevated motives. A person who only works because he must work, will not grow very largely in health and vigor. He may avoid sickness, and that is nearly all; but having an important end in view he not only receives benefit from the proper exercise of bone and muscle, and the proper agitation of the internal organs, but gains much in addition from the stimulus and pleasure of expectation. An individual is much less fatigued by performing labour which pleases him, than by performing the same amount of labour in which he takes no sort of interest.

Now there is a large portion of mankind who suffer from a want of pleasant and powerful motives to activity. This, as we have intimated, is more particularly the case with females, than with males. The former often labor without motives, at least with feeble motives. Like Samson grinding in the prison house at Gaza, they work because they are compelled. Such exercise does little good, and often more harm than good. On this account they have less of constitutional vigor, and less health. They may have activity and sprightliness of body and mind, but these are by no means incompatible with a feeble constitution. One reason why the conjugal state is in many cases more healthy than celibacy, is because the former, notwithstanding its numerous trials and perplexities, which inflict much wear and tear upon the human constitution, is accompanied by the stimulus of expectancy, and of elevated motives. Its work is not task work.

The love of gain, so far as health, is concerned, is better than no motive at all. The love of pleasure, if we can get no higher motive for exertion, is more beneficial than compulsory labor; better, even, than laboring from mere habit. It is supposed by some that all the benefits which accrue to industry are gained when they labor from mere habit, feeling neither pain or fatigue. It is indeed better for the creature of habit—who is little better than a machine—that there be no friction, no mental opposition, but to expect much improvement is useless. It is not enough that there be no *deterioration* by friction or otherwise; man is intended to be a creature of progress.

The desire of pleasing others, or the love *of reputation* is a higher motive than either of those I have named; and therfore more beneficial. Under its influence the feeble grow strong, and the strong attain to a higher degree of health. Some are industrious from this motive, whom no other motive can reach.

But there is a smaller number still who reap the blessings which God, in his providence, has appended to incessant activity, because they have regarded in every movement, *His holy will and pleasure.* This desire of pleasing God by industry is the highest motive to exertion which can be conceived. It does not necessarily exclude the love of man and the desire of securing his approbation; nor does it entirely exclude the love of pleasure and of gain; it simply holds these lower motives in subordination, if not in abeyance. They who are in continual activity, because they are under the full influence of all these motives, are found to possess the most mental and bodily health and vigor.

But the worst condition of humanity, in male or female form—I speak still with regard to health—is found were there is no motive at all to labor either with the hands or the brain; so that the miserable lump of earth (for it scarcely deserves a better name), drags out an existence which it were difficult to say is most blameable or pitable. Alas, how many thousand of females never enjoy high health for a moment of their lives for this reason that they never have enough of active, pleasant employment with sufficient motive to keep their thoughts from preying upon themselves. But the subject is too vast for a single column of a newspaper. It deserves a volume.—*Watchman & Reflector.*

New Remedy for Short-Sightedness.

Dr. Turnbull is the inventor of a new remedy for short-sightedness, an imperfect condition of vision which is one of the "class diseases" of civilized society. We have all of us probably noticed that short-sighted people very often partially close their eyelids, in order to make distant objects more clearly perceptible. The doctor, in making this observation, began to reflect on the physiology of the case; and as the iris, in such instances, is more or less unusually dilated, it occurred to him that any medicinal agent that would act upon the iris so as to cause it to contract, would correct the defect. He also naturally enough reflected, that as the cause of short-sightedness depends on the convexity of the cornea, as well as on the convexity of the lens, the effect of contracting the iris would be to extend the axis of vision, thereby diminishing apparently the convexity of the cornea; the effect of which must be to make the rays of light pass in a direct line through an approaching plane, and thus bring distant objects within its range.—The truth of this theory was established by the result. The doctor found that the tincture of ginger and the tincture of pepper, made of a certain strength, and rubbed over the forehead according to his directions, produced contraction of the iris; and after this has been applied, and the plan of treatment he describes persevered in, short-sighted persons have completely overcome the imperfection, and been enabled to lay permanently aside their concave glasses. The value of this discovery is greatly enhanced by its simplicity, and it certainly deserves a fair trial by the profession.

A Simple Cure for Dysentery, which has never Failed.

We insert the following from the *Caledonian Mercury*, a standard Edinburgh paper, which does not publish trumpery. The plan is simple, and easy enough of trial:—

"Take some butter off the churn immediately after being churned, just as it is, without being salted or washed; clarify it over the fire like honey. Skim off all the milky particles when melted over a clear fire. Let the patient (if an adult) take two table spoonfuls of the clarified remainder twice or thrice within the day. This has never failed to effect a cure, and in many cases it has been almost instantaneous. It has already succeeded in nearly one hundred trials, and to many who were supposed to have been at the point of death, it has given instant relief."

To Make Indelible Ink.

This article is now extensively used for marking linen. The shopman's price is usually two shillings per bottle; but those who wish to use it can manufacture it much cheaper. To two drachms of nitrate of silver, add a weak solution of tincture of galls (four drachms,) and mix them thoroughly by shaking. This is an indelible fluid, and withstands the effects, combined or separate, of heat and suds. Another recipe is—nitrate of silver, one drachm: purest gum arabic, half an ounce, dissolved in half a pint of purest rain water, caught in a perfectly clean vessel, in the open air. To write legibly with this ink, the cloth must first be dipped in a solution of one ounce of salt of tartar, in an ounce and a half of water, and exposed to the sun until perfectly dry, before the ink is applied. Nitrate of silver may be made by putting silver into nitric acid (acquafortis) by which it is dissolved.

Use of Gutta Percha in House Repairs.

Hitherto the remedy to make good defects occasioned by shrinking, &c., has been to put in between the joints slips of wood, putty, &c.; but this cannot be depended upon, as in case of further sinking it drops through—neither is it waterproof. I propose that gutta percha be used. Thus: warm the gutta percha till it becomes glutinous, then with a heated iron or chisel point all along the joint, and it will be found that the adhesiveness of gutta percha is such, after two or three minutes, that the whole surface becomes as one board, the great merit being that there is no occasion to use any solution or cement to make the gutta percha unite to the wood-work, as is the case when applied to leather and other purposes; but there exists such an affinity between the two, that, for example, supposing a hole six inches square were cut in the flooring, with nothing underneath for support, and to make good the same a new piece were let in, well set all round in gutta percha, it will so unite with the boards, as to enable that portion to bear as great weight as any other part. What has been said of making good the space between the floor boards will equally apply to all joiner's work, as in the panels of doors, and a shake in them has hitherto been without any effectual remedy. Also to the skirting running round the rooms, which is so often to be found leaving the floor boards, &c. The great feature gained is, that gutta percha not only fills up the space, but at the same time hardens and unites the whole.—*The Builder.*

The Farm.

FARMERS' SONS.

A writer in the Plough, the Loom and the Anvil, thinks that "farmers' sons should attend at least one course of lectures in a *Medical School*, before they begin the responsible and arduous duties of farming on their own responsibility." By this means they will be able to gain such scientific knowledge that will be of the greatest service in after life.—For to be a successful farmer some knowledge of Chemistry is necessary—and in the rearing of animals occasions often occur in which the knowledge of Anatomy, Physiology and Surgery, which could be obtained from a single course of medical instruction, would be the means of saving the life of many valuable animals. We think the suggestion is a good one. for we know of no other occupation in which there is more opportunity for the exercise of this kind of professional knowledge. The intelligent farmer would thus be enabled to perform understandingly many operations which he must otherwise do blindly, or call in the aid of some ignorant pretender whose whole skill resides chiefly in his unblushing effrontery.

Agricultural Geology.

BY JOSIAH HOLBROOK.

Rocks are the oxydes of metals. Silex, the most abundant ingredient in rocks, mountains and soils, is the oxyde of silecium. This oxyde constitutes nearly one half of the solid matter of our globe. It is the principle element of quartz, in all its varieties, which are exceedingly numerous, and some of them very beautiful. Quartz is the only mineral found everywhere. Sand is pulverized quartz.—Pebbles are fragments of quartz, rounded by attrition. Gunflint is quartz, breaking with a conchoidal (shell-like) fracture. Jasper is red quartz, with a fine compact texture. Amethyst is purple quartz, frequently found in six-sided crystals, which is the common shape of quartz crystals in its different varieties. Agate is clouded quartz, in numerous varieties, some of which are much used for watch seals, finger rings, breastpins, and other ornaments. Cornelian is quartz of a fine texture and of a yellowish red color. Chalcedony, bloodstone, catseye, and many other gems are varieties of quartz.

Most, perhaps all, the gems used in the breast plate of Aaron, the high priest, were quartz of different textures, colors, and hues. The precious stones presented by the Queen of Sheba, to the King of Israel were probably quartz. The stones mentioned in the book of Revelations as forming the streets of the New Jerusalem, with all the gems referred to, were but varieties of the stones used for paving our street, and of the earth moved by the plough and the hoe of the farmer, and of the dirt carted for filling our docks.

The colouring matter giving most of the beautiful hues to gems, and an endless variety of colors to quartz, is the oxyde of iron. The oxyde of silecium and the oxyde of iron are hence united in this same most abundant mineral in the world.

Next to quartz, feldspar, or clay, formed by the decomposition of feldspar, is the most abundant element of soils. This, too, is composed of several oxydes of metals in chemical combination. Feldspar is also very extensively united with quartz in the formation of rocks, not by chemical combination, but mechanical mixture. The feldspar and the quartz can be separated by the hammer. Not so with the oxygen and silecium, forming silex. Chemical agency alone can separate chemical combinations. Such combinations in rocks, soils, and other mineral bodies are exceedingly numerous, complicated and delicate. The most common stone that meets the eye in any part of the world is composed of two oxydes. The oxygen and the metals are each united by chemical affinity, and then the two oxydes are again combined by the same agency to form a "*common stone*," evidently worthy of more respect than it *commonly* receives.

An experiment: Pour upon a little peerlash in a tumbler some strong vinegar. An effervescence will follow, producing a carbonic acid. A burning candle immersed will be extinguished, showing that carbonic acid is fatal to combustion. It is equally so to life.—*National Intelligencer.*

Keep not too much Stock.

It is frequently a great error in farmers to winter, or attempt to winter, too much stock. When we have large crops of hay, it does not spend so well as usual, and one is very liable to be deceived as to his means of wintering stock. There is but very little old hay in New England, and much of the large crop of the present season had but little sunshine on it before it was cut; there were several weeks mostly cloudy weather just before having commenced; of course it was very deficient in sweetness and nutrition. And a large part of the grass that was cut late had but little sunshine on it after it was cut, and a great deal of it was poorly made, or injured by storms.

When there is a very large crop of hay, it is not good economy to keep animals enough to consume the whole the first winter, for a scarcity of hay often follows, which, occurring when there is a great amount of stock in the country, must reduce it to very low prices. In this respect, every individual must judge and act for themselves; and we throw out these hints for reflection, for we frequently hear of cattle dying of starvation in the spring, or suffering so much from short allowance that they are but very little profit the coming season.

At the present time, stock is in good demand, and one who has a surplus of animals, can reduce them to a suitable number for wintering without sacrifice. Those who attempt to winter too much stock, depending on buying hay, often find, late in winter and spring, that many are in the same situation: and it is truly one in which misery does not love company.—*New England Farmer.*

CARROTS FOR HORSES.

It is admitted by every one who is at all acquainted with the great nutritive qualities of the carrot, that as a winter food for horses, to use in small quantities daily—say half a peck to each horse—with their dry food, and especially in the absence of green provender—it is of the utmost value. It not only possesses fattening qualities equal to oats—taking bushel for bushel—but it secures to the horse in the winter season, fine health, a loose skin and a glossy coat of hair, which it is impossible to produce except by the use of the carrot.

To those keeping horses who do not raise their own carrots, we would hint that now is the time to produce a supply, while they are being harvested. About twelve bushels to a horse would be sufficient. They should be buried in the usual way, and taken out, a bushel at a time, as they may be wanted.—They will in this way keep plump and fresh as on the day they were taken fresh from the field.—*Germantown Telegraph.*

DUTCH METHOD OF MAKING BUTTER.

After having milked their cows, the Dutch leave the milk to get quite cold before they put it in the pans. When placed there in, they do not permit it to stand for the cream to rise more than four hours. Then they stir it together more intimately, to combine the milk and cream, and continue thus to do at least two or three times a day. If it be agitated in this manner, as occasionally happens, till the whole be quite thick, the butter thus obtained is the most highly esteemed. As soon as it acquires the usual consistency, it is churned commonly about an hour till the butter begins to form; cold water is then added, proportioned to the quantity of milk, for the purpose of facilitating the separation of the buttermilk. The butter being properly come, it is taken from the churn, and repeatedly washed and kneaded in fresh water, till the buttermilk is all expressed, and it no longer retains any tinge of white. By this simple method not only far more butter is made from the same quantity of milk than in any other way, but the butter itself is firmer, sweeter, and continues longer fresh than the generality of butter; while the buttermilk is infinitely more agreeable to the palate.—*Blake's Every Day Book for Farmers.*

GOOD REMEDIES.

For drunkenness, drink cold water; for health, rise early; to be happy, be honest; to please all, mind your own business.