

ly my own. What, then, would have been my wisdom? Clearly, to reserve these rough sketches of my intellect for secret service, and not to set them forth for show; to veil from the vulgar eye the unseemliness of my mind, while in its rudiments; to employ in its "airy portraiture" for exercise, in order that it might so learn to labor finally for use; just as the young painter will work off a hundred sketches for the fire, before he can finish one for public exhibition. In the mean time, I should have holden to the old adage, "*Loquendum ut vulgus, sentientium ut docti.*" I should have talked and demeaned myself like mere matter-of-fact men, until I felt that I had risen to the level of the men of mind, and had attained the mastery of their method. I should have let my raw fruit hang and sun itself upon the tree, till it was penetrated with ripeness, and would come away easily upon the touch of a little finger. I ought not have torn it off violently and with difficulty, while its humors were yet crude, to the laceration of the parent tree, the torture of my own inward man.

Science.

The first Saw Mill.

The old practice in making boards was, to split the logs with wedges, and inconvenient as the practice was, it was no easy thing to persuade the world that it could be done in any better way. Saws were afterwards introduced for the purpose of preparing timber and boards, and "saw-pits" were then invented for the action of the two-handed saw. This mode of sawing logs, was greatly in use in New England, where water power could not easily be obtained, in the early part of the present century—and probably, there are places yet, where they are known and render useful service. Saw mills were first used in Europe in the 15th century: but so lately as 1555, an English ambassador, having seen a saw mill in France, thought it a novelty which deserved a particular description. It is amusing to see how the aversion to labor-saving machinery has always agitated England. The first saw-mill was established by a Dutchman, in 1663; but the public outcry against the new fangled machine was so violent, that the proprietor was forced to decamp with more expedition than ever did a Dutchman before. The evil was thus kept out of England for several years, or rather generations; but in 1768 an unlucky timber merchant hoping that after so long a time the public would be less watchful of its own interests, made a rash attempt to construct another mill. The guardians of the public welfare however, were on the alert, and a conscientious mob at once collected and pulled the mill to pieces. Such patriotic spirit could not always last, and now, though we have now here seen the fact distinctly stated, there is reason to believe that Saw-mills are used in England propelled by both water and steam power.

A Rival to Caloric Already.

The Genoa (Italy) correspondent of the *Newark Advertiser*, writes that a complete revolution in the means of steam navigation and locomotion is anticipated from a recent invention by Dr. Carosio, of Genoa. He has, it is said, succeeded in constructing an apparatus for the decomposition of water by electro-magnetism, which will introduce the gases thus generated into the engine, in a way to save all the expense of fuel! His invention has been approved by savans and practical engineers, and a company has subscribed the means of giving it a full experiment. Means have also been adopted to secure patents in all other countries. An agent was about to leave for this country to present the matter to the patent officers.

Fire Engine.

The Cincinnati steam fire engine was publicly tried again in that city on the 1st inst., and the best fire engine in the city was brought out strongly manned to compete with it. In ten minutes the steam was up, and the engine in operation. The firemen went to work with the ordinary engine, confident of beating the new fangled affair. The signal was given—puff! puff! went the steam engine, and away spirted the water. The firemen bore down and up in succession, and strained every nerve, but gave up exhausted. The steam engine continued unceasingly for half an hour to throw a vast body, in a solid stream of two

hundred and twenty-four feet. It then threw two streams of water for half an hour longer, to show its power to keep up steam, and finally, to prove that fire may be extinguished in confined places by steam alone, without deluging a building with water, a section of India rubber hose was attached to the boiler, and steam passed off through it. It sent forth a vast volume of steam sufficient to saturate the air and penetrate into every crevice where fire could possibly lodge, completely extinguishing it. The machine ran up hill, down hill, and was perfectly manageable in every respect.

Value of Green-houses to Invalids.

Dr. A. H. STEPHENS, of Astoria, N. Y., long so eminent in his profession, furnishes the following interesting fact to the *Horticulturist*:

"Having for many years suffered from a pulmonary complaint, I am led to avail myself of your *Journal*, to offer some observations on a subject lying midway between our respective callings. Some ten or twelve years since, in visiting the green-house of Mr. Niblo, then my neighbor in Broadway, during the winter, I found the atmosphere exceedingly congenial. It abated my cough, rendered the expectoration loose and easy, softened the skin, and induced a comfortable state of feeling, approaching to exhilaration. Wishing to have such an atmosphere at command, I constructed a cold grapery, in which, whenever it has been convenient, I have passed the hours of reading and study. The climate of a cold green-house in a sunny day of the winter or spring, is a Florida climate, and is entirely different from that of an artificially heated atmosphere. I venture to recommend it under most circumstances to pulmonary invalids, in preference to the more expensive plan of removal to the South, involving, as it does, much discomfiture, interruption of business, hazardous exposure, and entire separation from friends."

The Farm.

THE FARMER'S LITTLE SON'S GARDEN.

A little garden I have got;
It is a small, but pretty plot,
I had it from papa.
And he has given me seeds to sow,
And roots of flowers that soon will blow;
And they will yield me—that I know,
A posy for mamma.

I love to dig with my small spade,
And weed the beds that I have made;
And in hot weather, I
Must water all the roots around,
Or else my flowers will soon be found
All drooping to the thirsty ground,
And very soon would die.

My Heavenly Father loves to see,
His children prize the gardens. He
Made all for our delight.
The fairest garden e'er was seen,
Of sweetest flowers and purest green,
And shady trees o'er all to lean,
Was Eden, heavenly bright.

I'm told the good may often meet
Within the garden's still retreat,
Our God, although unseen;
I'm told that love still brings Him nigh,
And though a little child am I,
Oh, make me good, that I may fly,
On Thy kind arms to lean!

From the *Carleton Sentinel*.

Mr. Editor,—If you consider the following observations worthy of a place in your paper you can make use of them. I have like many others in the world, been years trying to find out the cause of the failure in potatoes, I have seen many causes assigned for it by different persons, but none of them to me has been satisfactory; but I feel quite sure in my own mind that I have found out the real cause of the great evil, and likewise a remedy. In the first place reason teaches me that the cause is a natural one, which would undoubtedly take place sooner or later. Potatoes, if I have been informed right, were first found growing wild on the banks of the Andes, in South America, where they had been growing for ages unknown, consequently their natural element was to remain in the earth, but taking them from the earth, and exposing them for eight or

nine months in the year to air and heat of cellars, their natural health and vigor has become sickened and disordered—reason should teach any man that anything taken from its natural element cannot thrive long and will naturally sicken and die; this, Sir, I believe to be the only and real cause of their failure; some may ask why some fields will fail and others not; there is likewise a natural cause for that. I have noticed for some years that the distemper takes place immediately after heavy showers of rain, now you have frequently seen after heavy showers a sulphurous mineral standing on the water, where it stands in puddles in many places, and I find wherever showers fall charged with this when it penetrates the earth and comes in contact with the potato it is like yeast in dough, it sets it immediately in operation—these showers don't extend generally over the country and fall heavier in some places than others, and some escape altogether; this I believe to be the cause why some escape and others not. Now for a remedy:—In the first place we could get new seed where it was got first, without doubt that would be good, but it would be attended with a good deal of expense, and it would be a long time before it could be spread generally throughout the world, but experience has taught me an easier remedy, viz: I have for three years past taken potatoes in the Fall and buried them in the ground similar to planting—dug them up in the Spring and planted them, and in the Fall they had no signs of rot or rust. When you dig your potatoes dig shallow ditches not more than one foot deep, or nine inches will do, fill them half full of potatoes, cover them over with earth similar to planting, mixing the earth well through them, leave the surface of the earth level to keep out the frost, the cooler they are kept and escape the frost, the better, dig them up in the Spring and plant them—follow this method a few years and I have no doubt you will restore them again to perfect health. By keeping them in the earth where they naturally belong, it extracts the poison or disorder from them and restores them again to their natural health—your seed potatoes should be kept in this manner—this has proved to be the result with me. ISRAEL CALKING.

Wicklow, March 24, 1853.

The Cultivation and Preservation of Fruit.

There are three considerations which are absolutely necessary to the successful cultivation of fruit trees, viz:—

The appropriate soil and location;
The proper preparation of the soil; and
The judicious selection of varieties.

By the appropriate soil, and location, is meant that which is naturally suited to any particular class of fruits. Nearly all our fruits will succeed in a deep mellow loam, but the cherry, the peach, and even some kinds of the apple, will flourish on a soil where the pear will survive but for a short time. Some varieties require a warm soil and southern exposure; others will succeed with a northern aspect, and under less genial influences. Some prosper in the Eastern, Middle, and Western States; others only in one of these regions. But the subject of soils and location occupies so wide a field of research, that we cannot enter upon it at length during this discussion.

In relation to the proper preparation of the soil, all intelligent cultivators agree that thorough sub-soiling, or trenching, is not only the most judicious system, but in reality the most economical, in the end. The first great principle, however, to be attended to, is complete and perfect drainage; for wherever water is permitted to remain, no tree can long continue in health. Stagnant water is as injurious to vegetable life as the miasma and malaria of pools and marshes to animal life. The drainage must not only be perfect, but its depth must be such as to prevent entirely the roots from reaching beyond it in search of food. This being accomplished, the soil should be thoroughly worked with manure to the depth of fifteen inches at least; and if trenched, the upper soil should be placed at the bottom, and the lower soil on the surface, where it will become disintegrated and prepared by the influences of the atmosphere as food, or can be enriched, as necessity may require. Under such circumstances, the roots of trees will have room to search for nutrition, as wanted, and the loose and friable condition of the soil will enable the atmosphere to permeate through it, and the rains to penetrate, and pass off, when too profuse, into the drainage, so that no water

can ever remain to injure the roots, the disastrous effects of which on trees are everywhere visible in low, moist lands.

For the want of the proper location and preparation of the soil, I am of opinion that more than one-half of all the fruit trees which have been planted in New England for the last twenty-five years, have either died out, or have failed to produce vigorous and durable subjects; and I hesitate not to express as my belief, that those which have survived would, with the requisitions above-named and care in transplanting, have attained double their present size and productiveness. Without a compliance with these principles, our advice would be not to plant, and thus save both time and money.

We cannot refrain also from alluding to the great care which is requisite in the removal of trees from the nursery. Of all careless things done in the way of cultivation, nothing is more to be censured than the barbarous manner with which trees are too frequently raised, or rather stripped out by main force without digging, thus destroying not only the small, tender roots, but splitting and mutilating the main ones. I rejoice in the belief that this practice is less common than formerly, and that it has in some of our best nurseries been reformed altogether.

Now it is principally on the young fibrous roots that newly transplanted trees must depend for receiving nourishment, and just in proportion as these have been destroyed, will be the development of new wood, and the ratio of its growth; for every branch has its correlative in the root, and wherever a tree has been deprived of its roots, the branches must be reduced in proportion, or it will take a long time before equilibrium can be restored and vigorous and healthy action again resumed.

The same injurious consequences will result from crowding and doubling back the roots of a tree into a hole just large enough to contain them, or from deep planting—for roots, like human beings, delight in the healthful influence of light and air. Trees should therefore be planted shallow, and we have met with good success where they were planted nearly on the surface and soil brought to cover them. For newly transplanted trees, nothing is more beneficial than mulching the roots during the hot summer months. This may be done with coarse litter, refuse hay, or any substance which will shade the ground, and allow the rains to pass through.

As to the judicious selection of varieties, I have to remark, that the only safe course is to choose such sorts, and only such, as by uniformity of character in various localities, particularly our own, have proved to be hardy, productive, and of good quality. Experience has shown that many kinds which have been highly lauded in the catalogues of the day, are not suited to our region, whatever may have been their excellence in other places. More than three-fourths of all the foreign varieties which have been introduced within the last thirty years, are unworthy of cultivation, or are not adapted to our location. Much disappointment has therefore been experienced from this source, as well as from selecting varieties which have no other excellence than a fanciful or crackjaw name. To remedy this evil, and to diffuse correct information on this point, I have, in compliance with frequent solicitations, prepared a list of approved varieties in the various classes of fruits. In submitting this list, I have regarded the combined character of both the tree and the fruit; for instance, the health, vigor and fruitfulness of the one, and the flavor, size, and beauty of the other.

Agriculture.

As Agriculture is one of the arts essential to the existence of society, it was cultivated in the earliest ages of human history. Cain was a tiller of the ground; Abel was a shepherd, Noah planted a vineyard. That this art was carried to great perfection in ancient Egypt, is evinced by the dense population which that remarkable land must have sustained, in the age when the pyramids were in progress, and Thebes was in its glory. The poem of the Works and Days, by Hesiod, is a description of early Grecian Agriculture, and the Georgics of Virgil, the Natural history of Pliny, and the fragments of Columella, and other writers, which have come down to us, show in what high estimation this art was held in ancient Rome; where generals and dictators returned to the plough, after the triumphs of the battle field.