

suppose we must be content with ploughing in the dung as deep as the soil will permit; but in gardens, every bit of land will pay for bastard-trenching once in three years. It is of immense service even in England's moist climate, but here, where our hot sun exerts its power so early in the season—think of 92° F. in the shade in May 1889!—nothing will help land to resist its desiccating influence so surely as trenching deeply. By burying the manure down below the top spit we prevent the danger of too excessive growth of leaf. The great object of this mode of preparation is to give the plants at first starting as free a range for their roots as possible, that they may become firm by being established in the upper layer of soil, and when they are in full vigour of growth and require additional food to support them in forming their seed, they may find it ready for them at their very toes. When once the plants are fixed in their new abode, and have obtained a firm hold on the soil, it matters not how hard the land becomes.

"We have plenty of land in this country, as a friend of mine remarked to me the other day: "What can it signify, if I sow my swedes at 36 inches or 24? "I think it signifies a good deal, and so we will not give the enormous space to the strawberry plant that we sometimes see here, but content ourselves with two feet apart for the rows, and eighteen inches between the plants in the row.

The general plan of setting out strawberry plants is to jam them in anyhow, but it will pay to spread the roots out carefully and press the earth firmly round them: don't hurry, though the seasons are short. When up, keep the hoe going and remove all runners as fast as they appear. Mulch between the rows with strawy manure in the fall, but rake it off clean in spring, and replace it with clean straw: bad flavour in the fruit is often caused by mulching during the with grass, growth of the blossom which rots in damp weather, encourages the presence of snails and slugs, and smells, ough!

I said, keep the runners cut; but when you want plants, do this: when they begin to push out, allow a sufficient number to come out from the side of the rows, and as they approach maturity, lay stones on them close to the rooting place, or peg them down: they will grow all the better for this. And a better plan still is to peg them into small pots, filled with fine earth, and sunk into the ground up to the rim.

When the harvest is over, cut off all the large *old* leaves, this will admit light and air to the *young* leaves, for on the free growth of these the formation of good crowns for the next year's use depends. By encouraging the young leaves root action is promoted, and the embryonic buds are formed that next summer will develop into fruit.

I do not think the *mat*-plan judicious. I prefer renewing the bed every two, or at furthest, every three years. After well mulching in the fall I always recommend my friends to cover the bed with hemlock or other boughs to retain the snow.

As to forced strawberries; in our garden at Chislehurst, Kent, we always grow about 200 pots, placed in the hot-house, close to the lights. These plants ripened their fruit about the end of March, when strawberries in Covent Garden market were fetching about 50 to 60 cents an ounce (1845), and though very pretty to look at, on their bed of vine-leaves, at dessert, they had about as much flavour as a turnip.

Ah! if the farmers on the sunny slopes of the Eastern-Townships would only go largely into strawberry-growing, what fruit we might have, to say nothing of the profits they might make! Those lovely trickling streams of limpid water that meet one's eye all along the road from Sherbrooke to Coaticoke, seem intended by nature for the irrigation of innumerable beds of this delicious berry. But though I

have pressed this upon my friends at Compton for many years, I do not hear of any one having tried the experiment.

The generic name of this plant is *Fragaria*, whence the French call it *Fraise*. There are several species, named principally from the country or district whence they derive. Only one is indigenous in England, the Wood-strawberry, a very tiny fruit that I have often found in isolated spots under bushes or thickets. The *Hautbois*, a larger fruit, is clearly an escaped prisoner from gardens, and is not unfrequent in woods and under hedges. It is really a native of North-America. Those usually grown in our gardens are regarded as varieties of these species, and of the *F. Caroliniana*, the Pine, or *F. Ananas*, and the Chili, all from America, as their names denote.

It is generally thought that the straw used as a mulch has something to do with the name of this fruit; but I prefer the derivation which deduces it from the word *stray*, from *strae*, to wander about; the latter is what is commonly called Anglo-Saxon, but, in deference to Mr. Freeman, I prefer calling it old English.

Smoke-consumption.—I took the liberty of pointing out to Mr. Tuck, when talking to him about the new portable steam-engine bought for use on the Messrs. Dawes' farms, of which mention is made in a former part of this number of the Journal—see p. 148—, that the smoke from the chimney when the engine was at work would not only be a nuisance to the men engaged in threshing or chaff-cutting, but, if unconsumed, would be the cause of unnecessary expense in the outlay for coal. Smoke is neither more nor less than the unburnt particles of fuel. With ordinary bituminous coal not only may the volatile hydrocarbons, which sometimes yield 20% of the heating-power, pass up the chimney unburnt, but nearly $\frac{3}{4}$ of the coal may be wasted by the conversion of the carbon into carbonic oxide instead of carbonic acid.

There is a great difference of opinion even about the apparently simple question of how the fuel should be fed in. One purely scientific man says that the fresh coal should be laid on *the front* of the fire; another one, of great practical experience, that they should be mainly piled up at *the back* of the fire; while Mr. Wye Williams, a great authority on the subject, would spread the coal evenly over the furnace-bars.

I learned my furnace-work from Dr. Ure, some forty years ago; and it is this: In the fire-place door I have a hole out of about 3 inches long by 2 inches deep; this can be closed by a sliding door: any smith will make it for a dollar, or less. The fire well started, I push back the lighted *braise*, or embers, in a sloping position towards the chimney, feed on more coal at the mouth of the furnace, in a heap, and open the small door, more or less, as required. The moment this is done, the smoke, which previously was pouring abundantly from the chimney, will be no more seen: shut the small door, and the smoke will be as rise as ever. When the fresh charge is brightly burning, close the small door, and when a fresh charge is required, proceed as above. As I had three 8 horse power portable engines in constant work, in England, for some years, the saving of coal was of some importance to me, and I found this, whether theoretically right or not, worked a great economy in the consumption of fuel. The desired objects are attained, that is, the smoke passing over the lighted *braise* is consumed, a saving of fuel is effected, and the nuisance of the men being half-choked and the beams of the barn being covered with soot, is entirely obviated.

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In connection with the article from the pen of Mr. MacCarthy, I reproduce the two accompanying engravings of