

"placing at right angles with his first furrow, thus measuring the amount he had to plough. Hence, the "pole" or "perch" of 16 1-2 feet, which at first sight seems a very singular unit to have selected.

"But this width is convenient for turning the plough and also for sowing, (when this was also broad cast). And the most convenient piece of land for arable purposes, was a furlong in length and a perch or pole in width."

In describing the career of the Potato beetle, Prof. Tower relates that during the rush of the gold seekers to California, in 1849 and 1850, the emigrants lost, and threw away potatoes which took root and grew until there was a continuous line of them from Council Bluffs to the canons of Colorado. The Beetles which had been previously confined to Colorado took advantage of this and invaded the east.

This accounts for the reason why Potato Beetles were not known here previous to the above dates.

Though we can never "remount the river of our years" he who loves nature is always young.

The Baobab of Africa (*Adansonia digitata*), named after Adanson, a traveler of the 17th century, is said to be the largest tree; it does not grow so high as the gum tree or the Sequoia, but to a height of 70 feet, and covers twice that diameter with its branches. It is calculated by De Candolle to have attained the age of 6,000 years.

Nature is beneficent, she not only supplies us with all that the body requires, but refreshes the souls of those who love her, with food for reflection and gratitude.

That man misses a good deal of the charm of life who sees nothing in the Horse but his money value, nothing in the sheep but wool and mutton, nothing in the fields but sacks of grain, nor in the meadows but tons of hay.

Leaves are well called the lungs of the tree; to look casually at a leaf one could scarcely imagine that this could be examined by means of a microscope, they

exhibit a marvelously complex structure, on the skin or epidermis are a number of fine hairs seated on a layer of cells flattened, and below these are lengthened cells, which are supposed to regulate the quantity of light entering the leaf. Under these, are layers of rounded cells with air spaces between. Among these are hollow fibre-bundles which form the skeleton of the leaf, the under surface of the leaf is formed by another layer of cells and hairs, having openings or "stomata," leading into the air passages. These stomata are so small that there are millions on a single leaf; and the whole is a marvelous contrivance of nature for the aeration and elaboration of the sap ere it is assimilated by the tree.

## The Dairy.

### CHURNING.

General knowledge of churning may be said to be entirely of a practical nature, at the same time there is no doubt that theory can and does help many to understand the process more thoroughly. If theory went hand in hand with practice a little more, the changes which take place in the churn during churning, from the solidifying of the fat of the individual fatty globules of the milk, to the appearance of the little lumps of butter about the size of pin-heads, and the individual circumstances which influence the firmness, and percentage of water, in the texture of the raw butter, would be better understood. Nearly all the rules for churning have been drawn from practical experience alone.

Experience demonstrates that butter of the best quality and having the best keeping properties, contains about 13 or 14 per cent of water. It is neither soft nor oily, nor on the other hand is it hard or friable, but possesses an average degree of softness and a characteristic texture of grain, by which its origin from countless quantities of individual fat globules and small lumps