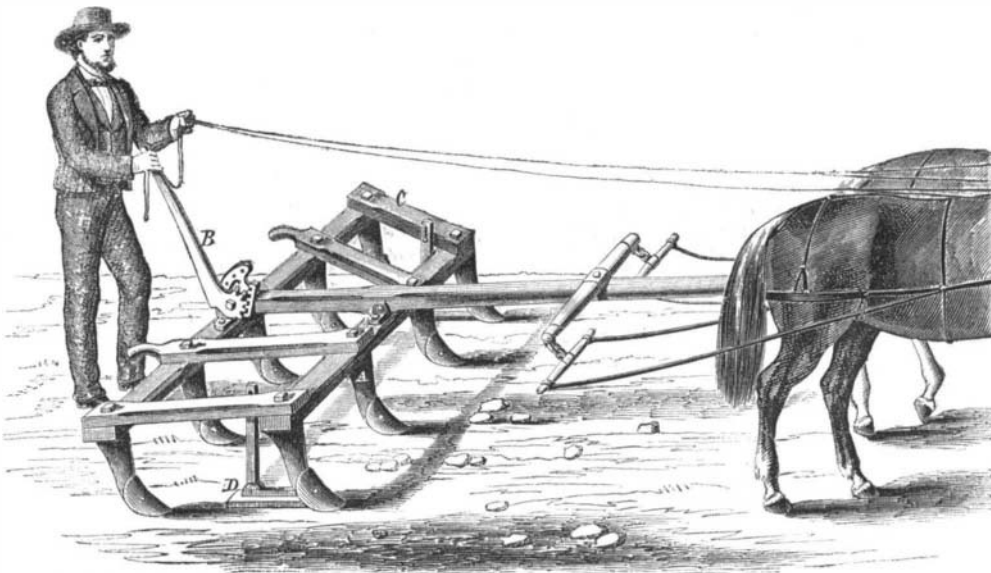


**Improved Cultivator.**

The object of this invention is to obtain a cheap cultivator, of light draft, that shall embrace all the good qualities of the common two-horse wheel cultivator; and at the same time be better adapted to the culture of orchards, vineyards, and hopyards, by dispensing with the wheels and regulating the depth to which the implements work from the bottom of the furrow. A tool is thus produced that can be drawn close to a tree or plant without injuring it. When the distance between the trees or plants is not sufficiently wide to admit of working two horses, the pole can be removed and a pair of thills inserted. When it is desired to have the teeth, A, penetrate to their greatest depth, the lever, B, is depressed; this causes the back part of the frame, C, to rise, consequently the shoe, D, is elevated from the bottom of the furrow, permitting the cultivators to penetrate the earth until the back teeth are brought on a level with the front ones, and the shoe again presses the bottom of the furrow plowed. Or if it is desirable to have the cultivator work near the surface, the lever is raised, thus throwing the back end of the frame down, making a fulcrum of the back end of the shoe, and causing the cultivator to be inclined upward, until it again finds its level. It then passes smoothly along and is not disturbed by small elevations or depressions in the surface of the earth. The patent for this invention was obtained through the Scientific American Patent Agency on June 10, 1862; further information respecting it can be obtained by addressing the inventor, P. S. Carhart, Collamer, N. Y.

**CARHART'S PATENT CULTIVATOR.**

sixteenth of an acre of ground devoted to its culture will supply the personal wants of any farmer who indulges in its use. The soil should be put into good tilth—plowed deep and rendered quite mellow. A light sandy soil or loam, well supplied with rolled stable manure, raises the finest tobacco. A strong-flavored tobacco is raised from what is called "a rich strong soil." A quantity of wood ashes mixed with the soil kills insects and promotes the growth of the plants.

First of all, a seed bed is made; and the seed for sowing is mixed with ten times its weight of fine earth and some wood ashes. The seed is then sprinkled evenly over the bed and it is not raked in, but simply beaten down gently with a spade. This seed bed should be in a sheltered position, and when

a half inches in length, and should be looked after every day.

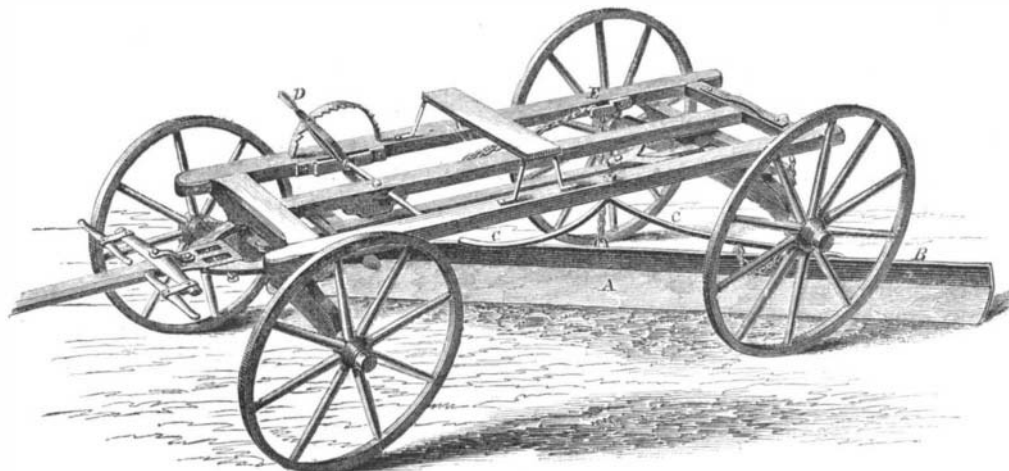
When the plant begins to head it should be immediately cut back, so as to leave from six to ten leaves; suckers then begin to spring out at the junction of the leaf and stalk, these should be nipped off (some, however, let them grow until six inches long, then pick and dry them, thinking them more choice for various purposes than the larger leaves), as if allowed to exist they will take much from the full development of the main leaves.

Planting is done in May, hoeing and overlooking in June, July, August and September; cutting and housing in October; in the other months, pulling the leaves off the stalks. In the Southern plantations a man and woman are allowed three acres to manage. When ripe the stalk should be cut off near the ground. When tobacco is ready to cut up, it must be attended to, or it will spoil; especially if frost is expected there should be no time lost.

Tobacco of commerce is generally divided into three qualities. The lower leaves or those which touch the ground, are liable to get dirty and torn; but on the higher parts of the same stalk two different sorts of leaves are generally found, one yellowish and one brown. These should be carefully separated and put up in bunches somewhat thicker than a man's thumb and tied round with a thong made of the leaf itself. The bunches should be slung in pairs across poles and put in the drying-house. Too much heat will spoil the whole crop. More depends upon proper drying than any other part to determine its market value. The heat of the drying-house should be moderate and the drying should be slowly conducted. The very finest qualities of leaf tobacco will be destroyed if they are subjected to a high heat in the drying-room.

**MAPLE SUGAR.**

When cane sugars obtained such extraordinary prices in the market we fondly hoped that the mildness of the season, the increased advantages in the shape of evaporating pans and other appliances in the way of manufacturing, together with the attention and importance which was given to the subject by the press generally, would have resulted in bringing the article to market in such quantities as to compete with foreign sugars. Our anticipations in this respect have been disappointed, and though it is now the

**SPALDING'S PATENT GRADING MACHINE.**

of an elasticity of movement which prevents it from being brought into contact with stones or obstructions of any kind. The forward part of the scraper has a plow end, not seen in this view, which permits it to enter easily into the loose earth to be removed, and the height of the scraper is regulated by the lever, D, rack and chains working over the pulley, E, on the side of the wagon frame. This apparatus can be easily attached to any farm wagon, and we are assured by the inventor that it works admirably. The machine was patented, on March 8, 1868, through the Scientific American Patent Agency, by William Spalding, of Port Clinton, Ohio, from whom further information can be obtained.

the plants start they should be covered with a little straw every clear night until all signs of late frost have departed. When the plants are about five inches high they are fit for transplanting. A cloudy or rainy day is best for this operation. They should be set out about two feet apart each way—three feet is the Virginia rule. But, before the plants are set, a small quantity of rolled stable manure should be placed in the spots intended for each, and the earth drawn towards them to form small hills. The plants must be hoed as often as is necessary to keep down the weeds, and a sharp look-out must be kept for the "tobacco worm," which delights in committing ravages on this plant. This worm is about one and

high of the sugar season, we have only observed very small lots, held chiefly as confectionary, and sold at the moderate rate of thirty cents a pound. We do not know whether the article is catalogued in the Internal Revenue bill as sugar or confectionary; if the latter, there is a large difference in the amount accruing to the Government between it as an article of luxury or one of necessity; and those charged with the execution of the laws would do well to consider the matter. Maple sugar at thirty cents a pound will hardly compete with Havana sugar or be considered as indispensable by a majority of the people. Perhaps the trees themselves afford less sap than formerly—on account of the war. Is it so?