

Fig. 1.—Extension disk as used in the West—without a tongue. Easy to turn with.

barrel. Have it as handy as possible to the well or other supply of water. In dry weather, put from two to four pails of water in the barrel every evening, or any other time. It will surprise you to see them grow. This is the second year we have tried it.

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Pruning.

By J. W. Crow, Professor of Pomology, Ontario Agricultural College, Guelph.

Pruning for the express purpose of developing fruit buds has not yet become a common practice in this country. Walter P. Wright, one of the best of British authorities on horticultural matters, states that "The formation of fruit buds can be absolutely insured by proper summer pruning, but it is expert finger-and-thumb work, and commercial growers in Great Britain rarely practice it." The writer does not expect our growers to find time for the expert methods of the English and French pomologists. We hope, however, to see adaptations made of Old Country practices to suit our conditions. Labor is more costly here, but it is not at all unlikely that it will pay us to put more time on our orchards, to the end that we may make larger profits therefrom. We need men who will specialize in apple-growing to the same extent that some few in the Niagara belt have specialized in peaches. Specialization means the adoption of more intensive methods, and the men who are leading the way to-day are those who do things best. It is true that in Great Britain the most expert practices are confined to those who grow fruit for exhibition, but it is also true that commercial growers in that country adopt, to a certain extent, such practices as summer pruning and root pruning. The wide-awake growers of the Pacific slope began experimenting with these advanced methods some years ago, and growers in many sections of British Columbia and the Western States are bringing trees into bearing at an early age, partly, at least, through following Old World practice.

It need scarcely be said that these practices are of use only with trees that are growing very rapidly, or which for some reason fail to set fruit buds. If trees blossom well, and fail to develop fruit, the trouble must be sought in other directions. Our object now is to understand how trees may be made to bloom. Mr. Wright states that the "expert finger-and-thumb work" referred to above (this applies to apples, pears, plums and cherries) consists of "pinching," which is "best done twice: first, when the side shoots have formed six good leaves; and, secondly, six weeks later. At the first stopping, the end of the shoot is pinched off, and at the second the ends of the secondary growths are removed." In no case are the leading shoots headed off, unless it is desired to increase their number by causing them to branch. The ideal is to develop enough main branches to fill up the head, without crowding, and then by proper handling of the side shoots, to develop fruiting spurs along the entire length of the main branches. Pinching as soon as the lateral growths have developed six good leaves will result, of course, in secondary growth, which must be carefully attended to later. To avoid the necessity of doing the work twice, commercial growers pinch these side shoots about the middle of August, at a time when they have nearly finished growth to six good leaves. At the subsequent pruning, these side shoots are again shortened, leaving two or three buds in length. This method is specially recommended for strong, dense-headed varieties like our

Northern Spy. At the winter pruning, the tops of varieties of this type should be thinned out to admit light, but no heading of leading branches should be practiced. In the following August, summer pruning as described above should be made use of for the purpose of causing development of fruit buds. It should not be necessary, under this method of handling, to wait fifteen or even twelve years for fruit. Summer pruning begun at five or six years, should result in fruit bearing at eight or nine, and probably earlier.

On the question of root pruning, I cannot do better than quote one of the best authorities (Pictorial Practical Fruit-growing, by W. P. Wright): "When all is said and done on the subject of pruning, it remains the fact that the real secret of fruitfulness in a tree lies at the root. If the roots are right, the fruit will come—large fruit, finely colored, and plenty of it. Pruning the branches of fruit trees becomes a necessity when we have to grow them on the restrictive system to suit small areas of ground; but, were it not for that, the knife might be kept away from them after the first early shaping, without any harm resulting; in fact, with positive benefit."

"The first thing to do is to get the soil into the right mechanical condition for holding moisture through long periods of drouth, and for permitting the free ingress of air. When this condition is secured, early relifting will do nearly all the rest. If a young tree is lifted and put back again the second year after planting, the stronger

THE FARM BULLETIN.

Essex Sales.

Essex at present is in the throes of a land boom. Prices for real estate have advanced with amazing rapidity. Various reasons may be assigned for present conditions; for instance, good crops and prices in 1910, with similar prospects for present year; the purchasing by American companies of large tracts of unimproved and partially-improved lands in the corn-growing belt, at high and advancing rates per acre. The possibility of an extended market should the prospective reciprocity agreement become an actual fact, is even now a visible factor. Groups of farmers may be observed almost every day earnestly discussing future prospects, and comparing notes. Your correspondent has seen nothing to compare with it in land-booming since the great boom in Western lands in the years 1881 and 1882. Our hope is that this may be more stable.

Owing to a mild winter and springlike weather of March, wheat has apparently suffered little or no damage, and, as the danger point is almost past, farmers are elated over the prospect of another good yield.

The manufacturing of maple syrup is at present occupying the attention of those who are fortunate enough to possess a sufficient number of trees warranting an investment in utensils necessary for conducting such an enterprise.

Piles of sand and gravel, cement blocks, brick and tile indicate advanced interest in farm improvements.

Farmers are actively engaged in preparing for spring work. Should present weather conditions continue, every available team will soon be at work on the land. The soil is in first-class order, and, to all appearances, an extended acreage of spring wheat and oats will be sown.

The lectures recently delivered at different points by specialists in various lines of agriculture, made possible through the kindly co-operation of the M. C. R. officials, were fully appreciated and largely attended by the farming communities, which augurs well for future progress.

Several of our wide-awake business men are dividing their farms into five- and ten-acre lots, with a view to increasing the number of market gardeners.

Stock of all grades and classes continues to be scarce. The supply of horses, cattle, sheep and poultry fails to meet local demand.

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Fig. 2.—Cultivator, extensively used in dry belts of the West. This cut shows the implement as extended by A. I. Mason, Hood River, Oregon, for working under low-headed trees. For getting close under the head, the driver moves over to the end farthest from the row, and his weight causes the tool to run sidewise, with the opposite end close to the trunk. An excellent tool for all except stony ground.

roots are broken, and exuberant leaf action is checked. Beyond paring over the ends of all broken roots with a sharp knife, nothing need be done. The tree is simply taken out and put back again. A young tree should not be lifted when the growth is short and fruit spurs are forming fast, but should be lifted when the summer growths are numerous, are 18 inches long, or more, and devoid of fruit buds. Begin three feet from the tree, work carefully towards the stem, and, as soon as fibres are met with, delve down below the tree and work it out. The operation may be performed as soon as the leaves ripen in autumn, if the weather be showery and the soil moist; but, if dry, it should be deferred. With those that are too large to lift, "it is well to make a trench around the tree so as to get at the roots, doing half one year, and half the next, whenever a tree seems disinclined to bloom. A special effort should be made to cut any large roots which strike downward into the subsoil, as they are a frequent source of unfruitful top growth."

There is no reason why root pruning of this kind should not give the same results in this country that it does in England. It is simply a question as to whether our growers can afford to take the necessary time for performing the operation. It will no doubt pay us to experiment in a small way, at least, as we undoubtedly have many cases in which it is desirable to hasten fruit-bearing. Regarding the proper time for root pruning, it may be that in our climate early spring would be the more favorable season, although it is probable that the operation could be successfully carried on at either time.

It still comes as a surprise to most audiences to learn that, according to investigations by an eminent Cornell authority, a bearing apple orchard between the ages of thirteen and thirty-three years, will remove, in the form of fruit and leaves blown off (not counting growth of wood) almost as much plant food as a twenty-five bushel crop of wheat.

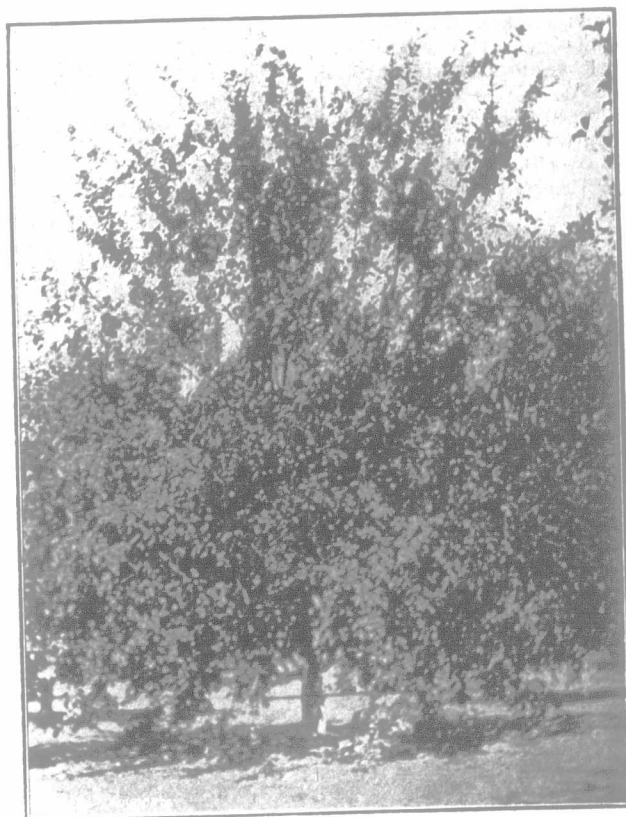


Fig. 3.—One of Mr. Mason's low-headed trees.