

the good soil from the high points in the attempt to fill the low places. The Fresno scraper should be used where a large amount of earth is to be moved. In case the soil on the high points is shallow, the upper part may be removed and returned after grading is completed. This may seem to be a lot of work, but is absolutely necessary in some cases. In case this is not possible, good rich soil should be used to fill the tree-holes. This will give the young trees a good start and also permit the newly uncovered soil to become congenial for the tree-roots when they are ready to occupy it. After the large depressions are filled the work of levelling is continued by means of the leveller or float. This is a device 18 feet long and 7 feet wide, which may be made at home. Take two pieces of timber 2 by 10 inches by 18 feet and four pieces 2 by 10 inches by 7 feet. Place the two long pieces parallel 7 feet apart, with the four short pieces distributed at intervals of 5 feet between them. This leaves $1\frac{1}{2}$ feet at either end for hitching, which is done by boring holes in the end and stretching a chain across. Larger models of this machine may be made by keeping the same proportions. The machine described requires four horses for the best results. Various braces and foot-planks may be added as needed. (See Fig. 1.)

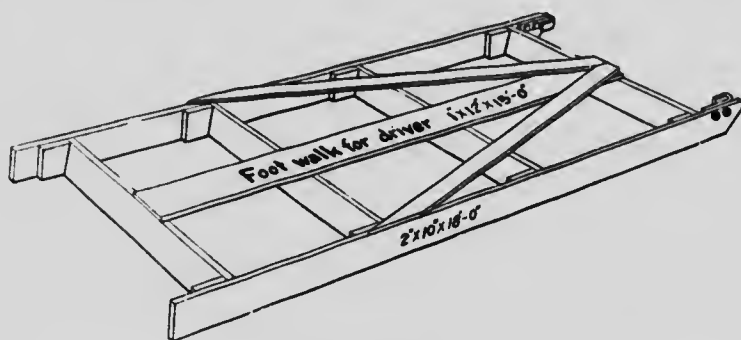


Fig. 1. Leveller or float.
(Farmers' Bulletin 392, U.S. Dept. Agr.)

Both this device have the surface of the soil loose and as free as possible from rocks. Run first lengthways, then crossways, the driver riding on the leveller while on the high places and dismounting while crossing the low places. This makes it fill and empty at the proper time. Much depends upon the driver for the best results; three or four times over the field should leave it in good condition.

METHODS OF APPLYING THE WATER.

One of two methods will be found very practical in applying water to land. Various modifications may be employed for special cases, but the furrow system for orchards and gardens and a combination of the furrow and flooding systems for meadows will be found ample. The furrow system, which is the most common in British Columbia, may be used on the land with less preparation than any other practical system. The land need not be level, but merely sloping enough to give a good fall without any swales or extra high places; of course, the less there are of these the better.