

be a paying practice. It is, however, a question whether it will pay to irrigate winter wheat unless the season proves extremely dry. The irrigation of oats will generally be followed by good results, and the same holds good in regard to barley. For the production of a green crop for feeding, there can be no question but that irrigation will be profitable almost irrespective of how wet the season may prove to be.

As soon after seeding as possible field laterals are run out uniform in width throughout their entire length. These extend from the head gates of the main ditch and are placed from sixty to seventy feet apart. If the surface has been well prepared, a grade of $1\frac{1}{2}$ inches to the rod will be ample for the laterals. No fixed rule can be laid down for the proper time to irrigate grain. The soil should contain sufficient moisture at seed time to nourish the crop until it shades the ground. A quantity of water, varying from five to eight inches in depth, may be applied at one irrigation at that time. A second irrigation is usually applied when the grain is beginning to head out. The plants are using at this time the maximum amount of

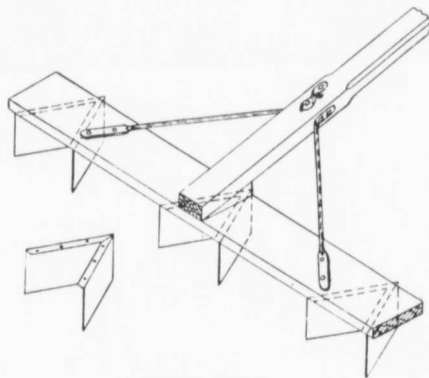


Fig. 14- Furrower

moisture, and as soon as there is a deficiency they begin to suffer. When the growth is checked at this stage, lost vigor cannot be restored by the subsequent watering, and the yield is lessened. No water should be applied during the last three weeks of growth, so as to induce the plant to mature before the advent of killing frosts. After the last irrigation has been applied, the banks of the field laterals should be turned back into the lateral by a walking plow drawn by one horse, so as to permit of a self-binder being operated in the field.

Great care must be exercised in irrigating grain. Unless the crop has been somewhat thickly seeded the application of too much moisture is liable to induce too great stooling and individual development of the straw and heads, thus delaying the ripening process to the danger limit. If the