A SMALL GRAIN NURSERY THRESHER.1

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The thresher herein described was designed to avoid the labor of threshing by hand a large number of grain samples from yard square of similar areas used in the obtaining of plot yields from outlying fertility and crop production experiments. Three men using this machine have threshed and cleaned successfully 120 samples per hour, recording weights of both straw and grain. It is designed to be practically self cleaning so that it can be used for rod-rows, head rows, or any pure-line and plant breeding work in a small grain nursery. The thresher is not claimed to be entirely original in design; but it incorporates a number of desirable features observed in the operation of other small threshers. It can be built in its entirety by any good mechanic, the only important items to be purchased being a one-quarter horse power motor and a combined motor-forge blower with rheostat.

OPERATION.

The grain, fed through the over-shot cylinder, strikes a baffle board, and drops down into the drawer through a current of air which cleans the grain. A part of the grain and the chaff is carried onto the grain pan where a separation is effected by the air current and rapid vibration of the grain pan. All of the grain does not roll down into the drawer until the air current is shut off, which completes the threshing. The operator in feeding permits only the heads to go through the machine. Nevertheless, a few heavy pieces of straw will collect in the grain drawer. These are removed by pouring the grain through the screen, which has a slight vibratory movement.

ADJUSTMENTS.

Cylinder speed can be varied by means of different sized pulleys on the motor. The concaves can be raised from the cylinder by placing shims under the ends. The volume of the air current is controlled or shut off entirely by the rheostat. This adjustment, together with that of the angle of incline of the grain pan, makes the machine operate equally well for wheat, barley, or oats.

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