J. JOHNSON.

REVOLVING-DROPPER.

No. 169,707. Patented Nov. 9, 1875.

Fig: 1.

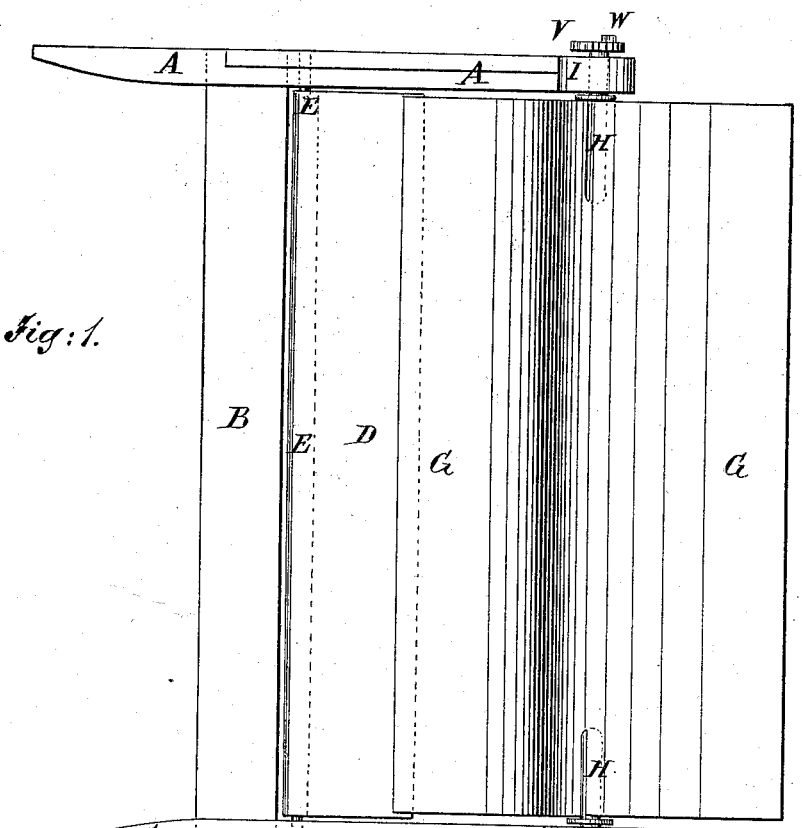

Fig: 2.

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JOHN JOHNSON, OF PERRY, ILLINOIS, ASSIGNOR TO HIMSELF, WILLIAM T. SMITH, AND THOMAS H. WARD, OF SAME PLACE.

IMPROVEMENT IN REVOLVING DROPPERS.

Specification forming part of Letters Patent No. **169,707**, dated November 9, 1875; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, JOHN JOHNSON, of Perry, in the county of Pike and State of Illinois, have invented a new and useful Improvement in Revolving Dropper for Reaper, of which the following is a specification:

Figure 1 is a top view of my improved dropper, shown as applied to the cutter-bar of a reaper. Fig. 2 is a side view of the same, part being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved dropper for reapers which shall be so constructed that it may be revolved from beneath the cut grain, to allow it to drop to the ground without being disarranged and tangled, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the vibrating apron, the revolving double apron, and any suitable operating mechanism with each other, and with the cutter-bar of a reaper; and in the combination of the crank, the two levers, the rack-bar, the gear-wheel, the clutch, the disk, the projections, the sliding bar, and the two springs with each other, and with the vibrating apron and the revolving double apron, as hereinafter fully described.

A represents the outer divider, B the cutter-bar, and C the inner divider. D is an apron placed directly in the rear of the cutter-bar B, receive the butts of the cut grain, and the forward edge of which is rigidly attached to a shaft, E. The ends of the shaft E work in bearings in the dividers A C, and the inner end projects and has a crank, F, attached to it. G is a revolving double dropper, made in about the shape shown in Fig. 2, and to which, along its central line, is attached a shaft, H, the ends of which work in bearings in standards I, attached to the rear parts of the dividers A C. The middle part of the shaft H may be cut away, and its inner journal projects and has a disk, J, attached to it. Upon the journal H, at the outer side of the disk J, is placed a small gear-wheel, K, which has a flange upon its outer side, projecting beyond the teeth of said wheel. Upon the outer end of the hub of the wheel K are formed ratchet-teeth L, that engage with the ratchet-teeth of the clutch M, placed upon the journal H, and connected with it by a pin and slot or a tongue and groove, so that it may slide longitudinally upon the journal H, but must carry said journal with it in its revolution. The clutch M is held up against the teeth L of the gear-wheel K by the spring N, placed upon the outer end of the said journal H. O is a toothed rack, the teeth of which mesh into the teeth of the gear-wheel K, and which has a slot formed in it to receive the said gear-wheel, to prevent it from getting out of gear. The forward end of the rack O is pivoted to the lever P, the lower end of which is pivoted to the lower part of the divider C, a little below and a little in the rear of the shaft E. Q is a lever, the forward end of which is pivoted to the crank F, and its rear end is pivoted to the rear part of the divider C. The movement of the lever Q and crank F is limited by stop-pins R, attached to the divider C. To the lever Q, beneath the middle part of the disk J, is pivoted the lower end of the bar S, that slides up and down upon the guide-pin attached to the standard I. To the sliding bar S are attached two projections, S, at such a distance apart that when one of said projections is close to the edge of the disk J, the other may be at a little distance from said edge upon the opposite side of said disk. To the opposite sides of the disk J are attached two projections, j', which project a little beyond the edge of said disk, so that one or the other of them may strike against whichever of the projections s^1 may be nearest the edge of said disk. The projections j' are so arranged that when a wing of the double revolving apron G rests upon the rear edge of the vibrating apron D, one of said projections j' may rest against the lower projection s^1 of the sliding bar S. The lever Q is held up, so that the lower portion s^1 of the bar S may be in position for the lower projection j' of the disk J to strike against, by a spring, T, attached to the divider C, and which bears against the lower side of the said lever Q. The lever P is held back by a spring, U, connected with the forward part of the divider

C and the upper part of the said lever P. The revolving double apron is kept from being turned back by a ratchet-wheel, V, attached to the end of the outer journal H, and upon the teeth of which rests a pawl, W, attached to the standard I. Upon the upper end of the lever P is formed a handle, p^1, and upon its lower part is formed a foot-rest, p^2, so that the said lever may be operated by either hand or foot, as may be desired or convenient.

In receiving the cut grain, the vibrating apron D and the revolving double apron G are held in the position shown in Figs. 1 and 2. When enough grain has been received for a gavel, the driver presses down upon the crank F with his left foot, which lowers the apron D and draws down the bar S, withdrawing the lower projections s^1 from the lower projection j', and bringing the upper projection s into position to receive the said lower projection j' as the disk j revolves. The driver then presses the lever P forward with his right foot, which draws the rack O forward, and revolves the double apron G, withdrawing the forward wing of said apron from beneath the grain, and bringing the rear wing forward. As the double apron G revolves, the projection j' of the disk J strikes against the upper projection s^1, which stops the apron G with its forward wing in position to receive the cut grain and keep it from coming in contact with the butts of the gavel before they have been drawn from the apron D. As the butts of the grain drop from the apron D, the driver removes his foot from the crank F, which allows the spring T to force up the slide S, raising its upper projection s^1 from the projection j', and allowing the lever P to be forced farther forward, completing the half-revolution of the double apron G, and bringing the lower projection j' in contact with the lower projection s^2, holding the parts in position until enough grain for another gavel has been collected.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the vibrating apron D, the revolving double apron G, and any suitable operating mechanism, substantially as herein shown and described.

2. The combination of the crank F, levers P and Q, rack-bar O, gear-wheel K, clutch L M N, disk J, projections j' and s^1, sliding bar S, and springs T U with each other, and with the vibrating apron D and the revolving double apron G, substantially as herein shown and described.

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Witnesses:
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