J. P. FULGHUM.

Grain-Drills.

No. 156,150. Patented Oct. 20, 1874.

Fig. 1

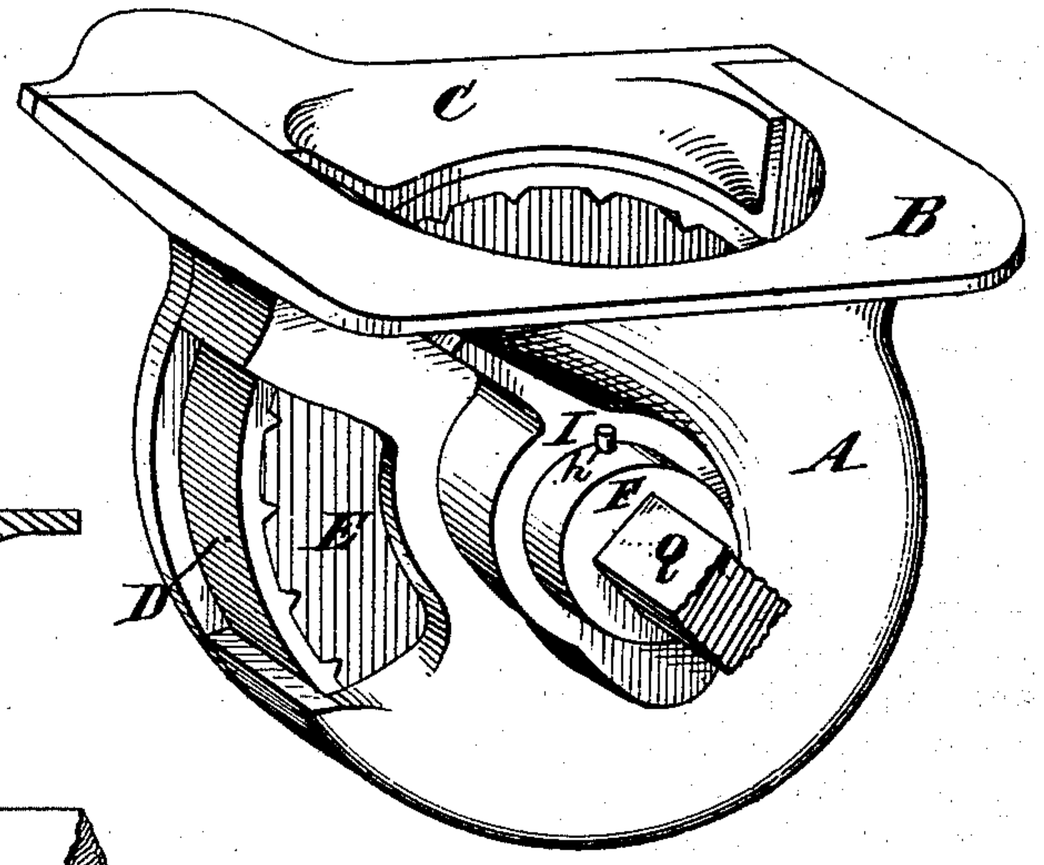


Fig. 3

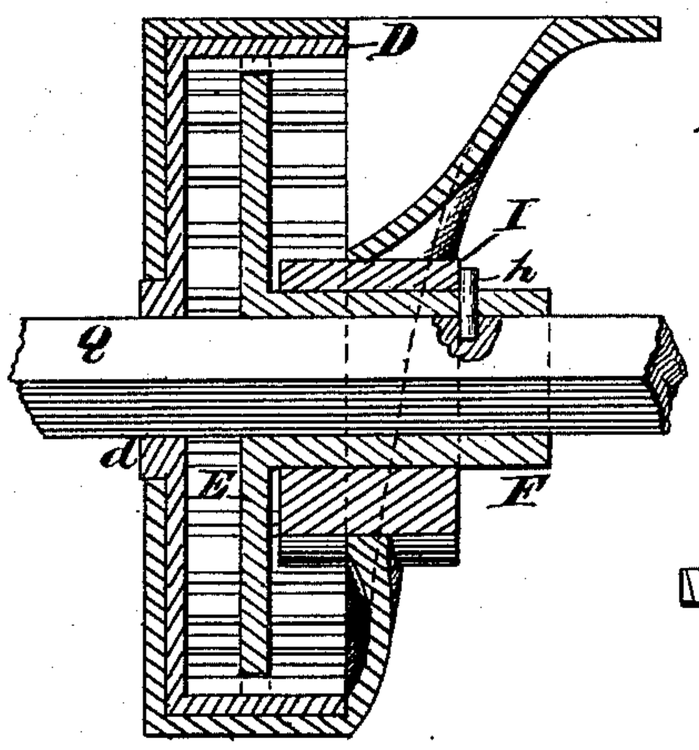
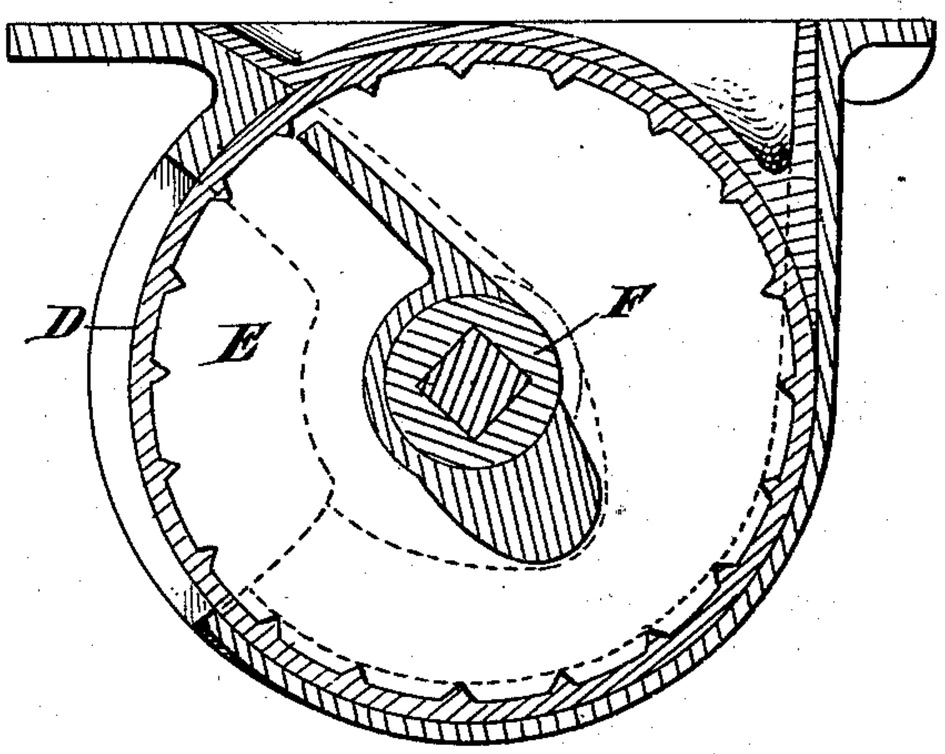


Fig. 2



Attest

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UNITED STATES PATENT OFFICE.

JESSE P. FULGHUM, OF MILTON, INDIANA, ASSIGNOR OF ONE-HALF HIS RIGHT TO HOOSIER DRILL COMPANY, OF SAME PLACE.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. **156,150**, dated October 20, 1874; application filed August 5, 1874.

To all whom it may concern:

Be it known that I, JESSE P. FULGHUM, of Milton, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Seeding Mechanism for Grain-Drills, of which the following is a specification:

This invention relates to that class of drills in which a vertical distributing-wheel, having a carrying-flange, rotates within a secondary hopper; and consists in providing mechanism for regulating the quantity of grain to be dropped without changing the speed of the rotating-wheel, as hereinafter more fully described.

Figure 1 is a perspective view of a secondary hopper embodying my invention. Fig. 2 is a vertical section at the side of the gage-disk, and Fig. 3 is a vertical section of the same in the plane of the feed-shaft.

A represents a seed-cup, having a flange, B, for securing it to the bottom of the main grain-hopper, and an aperture, C, for receiving the grain from a corresponding aperture in the bottom of the main grain-hopper. This seed-cup, in its general features, may be made similar to any of the well-known casings for flanged rotating side-delivery distributing-wheels.

The vertical seed-distributing wheel D may also be made in any of the improved forms now in use, though a preferred type is here shown, having a flat vertical disk at one side with a hub, *d*, journaling in the casing, and a ribbed grain-carrying flange, as shown.

E represents a thin flat vertical disk, made to fit loosely the inside of the carrying-flange of the distributing-wheel D, and having a hub, F. The hubs *d* and F are each pierced with non-circular apertures, the former being loose on the feed-shaft Q, while the latter is rigidly attached by a screw or pin, *h*. I represents a guard-plate, traversing the channel in the upper rear end of the casing close to the disk E, and allowing the carrying-flange to revolve around it snugly. This guard-plate is provided with an eccentric collar, which surrounds the hub F and serves to gage the grain-channel without diminishing the capacity of the seed-cup. The circular opening in the collar fits loosely around the hub, so as to allow the hub to revolve within it.

The pin *h* may be allowed to project, as shown, so as to hold the collar and guard-plate in place, or a separate pin or other suitable means for preventing lateral movement of the collar on the hub may be employed.

The converging side of the casting of the seed-cup is provided with a slot inclining from the seed-shaft upward and rearward to correspond with the inclination which may be desired to give to the guard-plate, and within this slot the guard-plate is adapted to move laterally and simultaneously with the gage-disk E.

The gage-disk and guard-plate are on the feed-shaft, and move laterally with the same. It is by an end movement of this shaft that the dropping capacity of the distributer is regulated, although I have not deemed it necessary to show the mechanism by which the same is accomplished, as I have fully described mechanism for a similar purpose in Letters Patent No. 145,795, granted to me August 23, 1873, which mechanism or any other appropriate means may be employed.

The seed-wheel D and gage-disk E rotate in unison, and when it is desired to work the drill to its greatest capacity the seed-shaft Q is slid endwise, so as to force the disk E closely against the back of the wheel D, which sliding causes a corresponding movement of the guard-plate I.

When it is desired to drop any less quantity, or to diminish the carrying capacity of the flange on wheel D, the seed-shaft is moved in an opposite direction, which advances the gage-disk and guard-plate, and thereby diminishes the quantity of grain which the wheel or flange is capable of delivering.

The play of the seed-shaft should correspond with the width of the flange on seed-wheel, and any place within this limit may the seeding capacity of the device be regulated at will without any change of speed or gearing.

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

1. In combination with the vertical gage-disk

E, the guard-plate I, provided with a collar which acts as a bearing for the hub of said disk, and slides laterally with it on the same shaft through a slot in the casing of the distributer, substantially as shown and described.

2. In the secondary hopper of a grain-drill, the eccentric collar described, whereby the seed-channel is gaged without diminishing the carrying capacity of the seed-cup, substantially as shown and described.

In testimony whereof, I have hereunto set my hand this 27th day of July, 1874.

JESSE P. FULGHUM.

Witnesses:

C. C. ROUMAGE, Jr.,

EDWARD BOYD.