(No Model.)

W. W. SCHULTZ.

SEEDING MACHINE.

No. 605,348. Patented June 7, 1898.

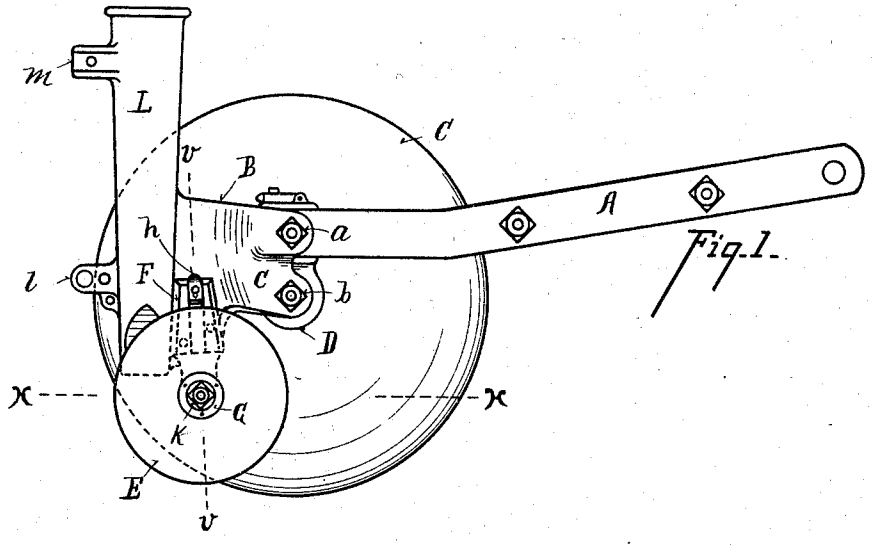


Fig. 1.

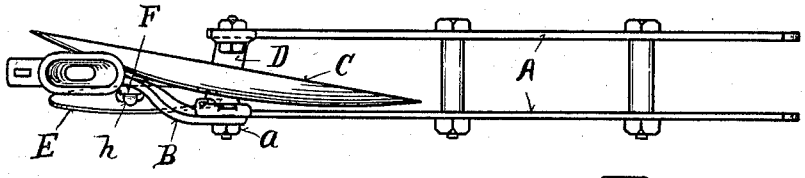


Fig. 2.

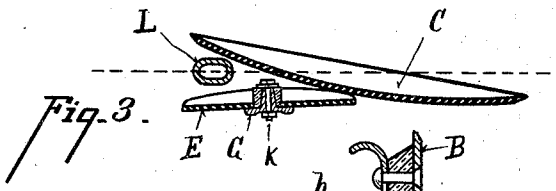


Fig. 3.

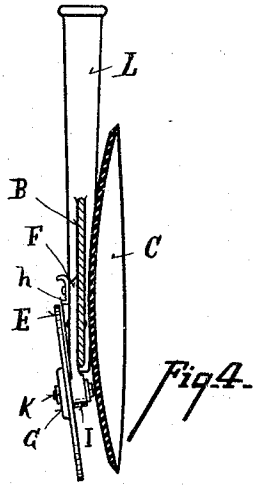


Fig. 4.

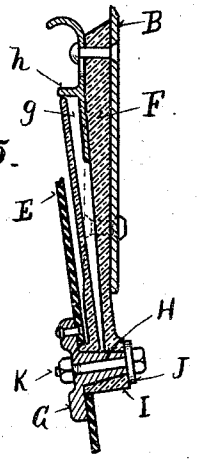


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

WALTER W. SCHULTZ, OF RICHMOND, INDIANA, ASSIGNOR TO THE WAYNE WORKS, OF SAME PLACE.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 605,348, dated June 7, 1898.

Application filed April 15, 1898. Serial No. 677,736. (No model.)

To all whom it may concern:

Be it known that I, WALTER W. SCHULTZ, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a specification.

The object of my invention is to provide a reliable and positive disk-cleaner which shall serve at the same time as a guard for the seed to secure its proper deposit in the furrow, the features of which are more fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of my improvement. Fig. 2 is a top plan view of the same. Fig. 3 is a section on line *x x*, Fig. 1. Fig. 4 is a section on line *v v*, Fig. 1. Fig. 5 is an enlarged section of the hanger and cleaner-disk taken in the same line.

A represents the ordinary drag-bar.

B represents a hanger upon which the disks and seeding-tube are hung.

C represents the ordinary furrow-opening disk. D represents a sleeve-journal on which said disk centers and revolves.

The hanger is secured to the drag-bar by means of the bolt *a*. Bolt *b* represents the bolt for securing the said journal to the lower ear *c* of the hanger.

E represents the revolving secondary cleaning-disk and seed-guard, which is journaled on a second hanger F, which hanger is preferably detachable and is secured to the hanger B by being riveted or bolted fast to same. The object in making this hanger F detachable from the hanger B is to allow of its renewal in case of wear.

G represents a disk on which is secured a cone H, which journals in a cone-shaped bearing in hub I, formed on the hanger F. The cone H forms the journal-axis on which the disk E revolves. The disk G carries the cone-axis and is rigidly secured to the smaller disk E, which effectually prevents dirt from working into the journal. J represents a washer which effectually closes the opposite end of the journal. K represents a bolt for securing said disk and journal in position.

g represents an oil-passage leading down to the journal of disk E. It is closed by a slide-cap *h*.

It will be observed that the disk E journals upon a center independent of the journal of the larger disk C, and in the preferred form of construction the forward edge of the disk E comes in contact with the face of disk C, thereby assisting the disk E to revolve. This mode of operation accomplishes a very important office. While the disk E serves as a scraper to keep disk C clean, its revolution prevents the lodgment and clogging of dirt between the two disks. In the preferred form of construction the rear edge of this disk is set slightly outside of the plane of the furrow formed by disk C, thereby enabling disk C to open the furrow. It also performs the office of keeping the furrow open by throwing out the clods and substances which are apt to fall into the furrow formed by the large disk. The revolution of disk E not only materially lessens the draft by reason of its revolving, but it is more effectual in keeping the furrow open for the deposit of seed than a stationary guard would be.

L represents the seed-tube, which is preferably cast integral with the hanger B. The lower end of this depends down between the disks C and E, thereby depositing the seed in the furrow. Another advantage obtained by the use of the disks is that the furrow is kept clean of clods, being effectually thrown out by the revolving disk-guard E. The differential motion of the two disks prevents any lodgment of trash between them which would obstruct the flow of the seed. Consequently the seed is deposited in a clean furrow and covered by fine earth. This secondary disk is much superior to the employment of a scraper rigidly secured to the seed-tube.

l m represent ears to which are attached the covering devices and the spring controlling devices. These may be of ordinary construction and are not shown.

Having described my invention, what I claim is—

1. In combination with a furrow-opening disk and a seed-tube of a seeding device, the rotating guard-disk E journaled on an independent center, below and in rear of the center of the furrow-opening disk and opposite

the mouth of the seed-tube, substantially as specified.

2. In a seeding device in combination with a furrow-opening disk journaled upon a hanger, and a seed-tube mounted thereon, the rotating disk-guard E journaled upon an independent center, below and eccentric to the plane of the furrow-opening disk, substantially as specified.

3. In a seeding device, in combination with a furrow-opening disk journaled upon a hanger, and a seed-tube mounted thereon, the rotating disk-guard E journaled upon an independent center, below and eccentric to the plane of the furrow-opening disk and having its forward edge in frictional contact with said furrow-opening disk, substantially as specified.

4. In a seeding-machine, in combination with a furrow-opening disk and a seed-tube connected to a hanger and a drag-bar support, a seed-guard disk journaled upon a secondary hanger detachably connected to the main hanger and having its center of rotation below and in rear of the axis of the furrow-opening disk, substantially as specified.

In testimony whereof I have hereunto set my hand.

WALTER W. SCHULTZ.

Witnesses:
E. B. CLEMENTS,
OLIVER B. KAISER.