G. JESSUP.

Grain-Drill.

No. { 1,623, / 32,627. }

Patented June 25, 1861.

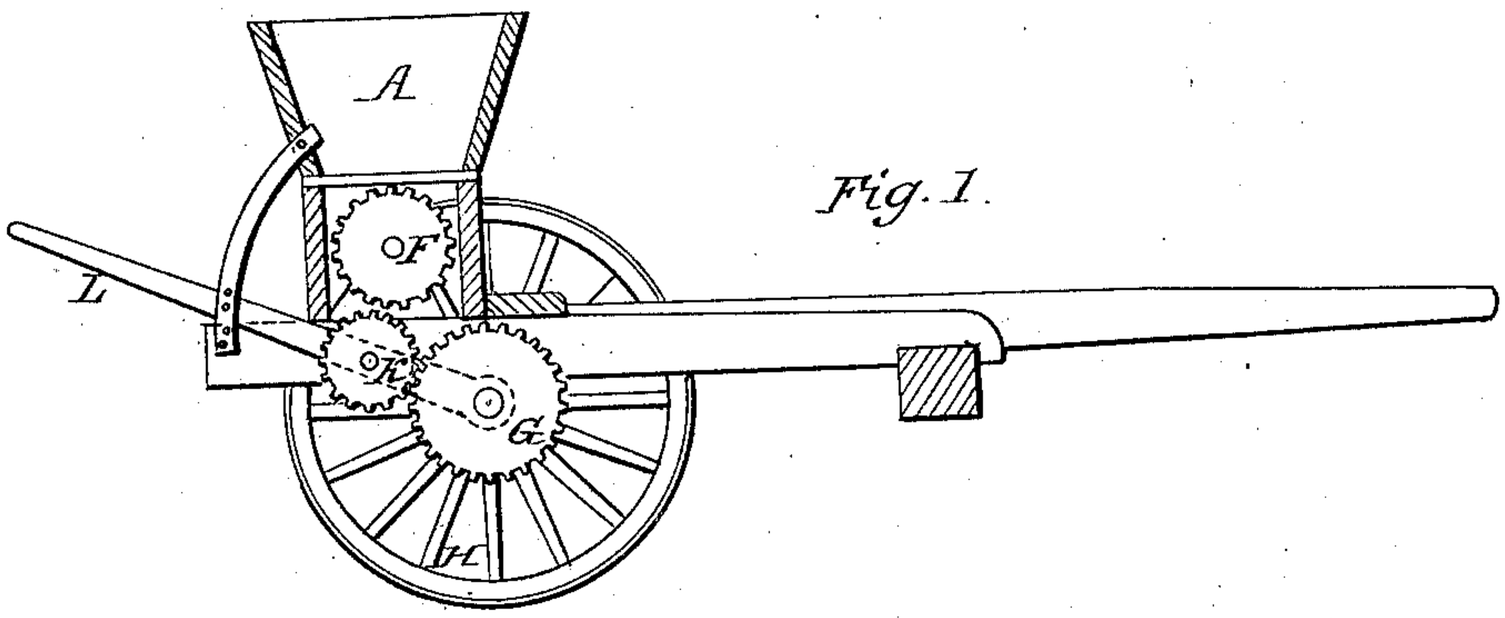


Fig. 1.

Fig. 2.

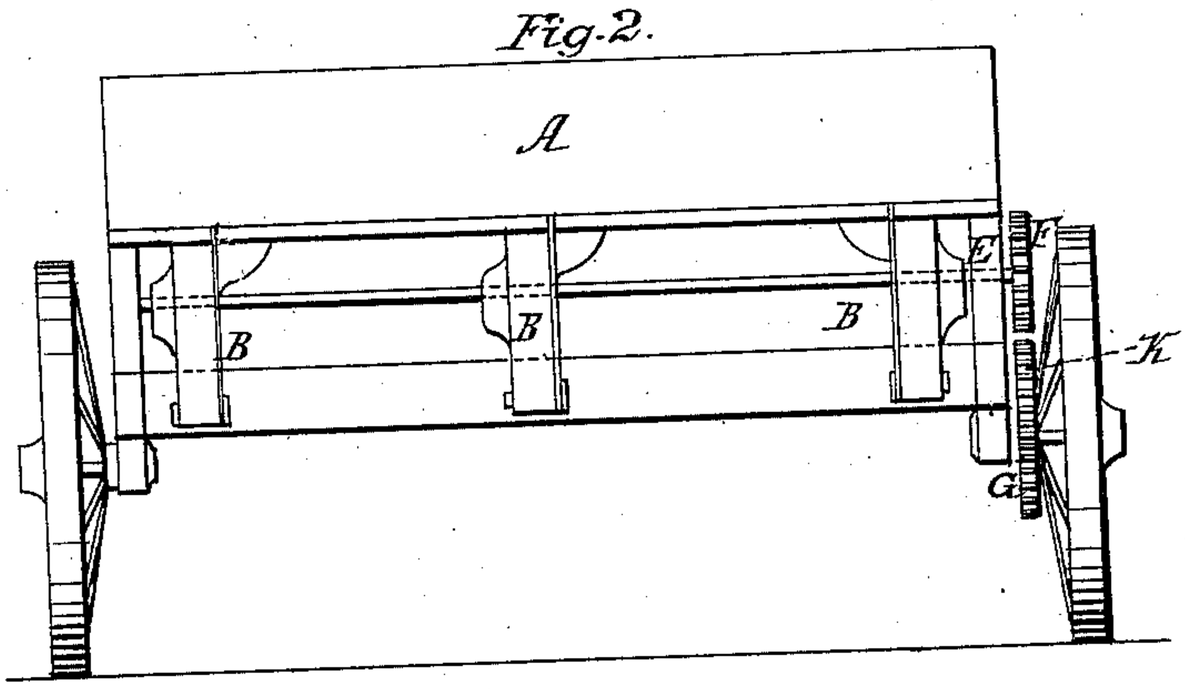


Fig. 5.

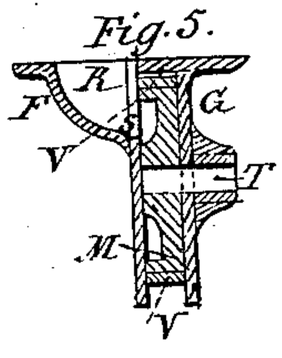


Fig. 4.

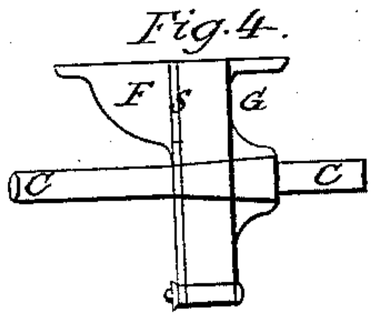
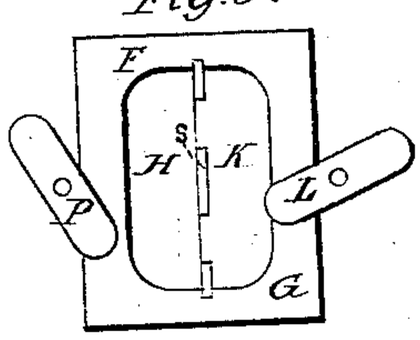


Fig. 3.



Witnesses.
Robert A Chapin
Jacob Dennis Jr.

Inventor.
Gilbert Jessup

UNITED STATES PATENT OFFICE.

GILBERT JESSUP, OF CHAPINVILLE, NEW YORK.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. **32,627**, dated June 25, 1861.

To all whom it may concern:

Be it known that I, GILBERT JESSUP, of Chapinville, in the county of Ontario and State of New York, have invented certain new and useful Improvements in the Construction and Mode of Operating Seeding or Seed-Dropping Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the figures and letters thereon—

Figure 1 thereof being a side elevation of the machine; Fig. 2, a rear elevation, and Figs. 3, 4, and 5 details.

The nature of my invention consists in so constructing and operating the seeding-rollers that they shall not injure or break the grain of seed while the latter are passing through them.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

The body of the apparatus consists of a frame of wood, and is mounted upon wheels in the ordinary manner, as is represented in Figs. 1 and 2, and upon this frame is placed a hopper or seed-box, A, of oblong form, as common, extending in a transverse direction, and along the center of the bottom of this hopper is placed the seeding-rollers B B B, Fig. 2, all of which rollers are operated by the common spindle, C, Fig. 2. At one side of the frame there is a wheel, (shown at F, Figs. 1 and 2,) which is made to gear with another wheel, (shown at G, Figs. 1 and 2,) upon the hub of one of the wheels on which the before-mentioned frame is mounted, as already described, by means of an intermediate wheel, (shown at K, Fig. 1,) which is made to revolve upon a stud on a lever, (shown at L, Fig. 1,) the fulcrum of which lever is the axle of that one of the wheels (which carry the frame) to the hub of which is mounted the wheel shown at G, Figs. 1 and 2. The wheel K is therefore constantly in gear with the wheel G, but the wheel F cannot revolve until the lever L is sufficiently elevated to bring the wheel K into gear with it. By this arrangement, as customary, the seeding-rollers B B B are put in motion or stopped, as may be required.

All the parts above described, or parts substantially equivalent to them, are well known in machines of this class, and have been referred to as above only to make more clear the whole construction and operation of my improvements, as well the parts which are old as those which I claim as my invention; but nothing hitherto described is claimed by me.

It is the seeding mechanism to which my improvement refers, and this I will now describe, having regard to the detail figures mentioned, of which Fig. 3 is a top view, Fig. 4 an end elevation or edge view, and Fig. 5 a section through the axis of the seeding-wheel.

The seeding mechanism is formed of cast-iron or other suitable material, and may consist of any desired number of rollers or droppers. The casing of these rollers is composed of the principal castings F and G, which have broad flanges at top, and are let in through the bottom of the before-described hopper till they come flush with its inner surface, and each roller has two apertures, H and K, for the passage and exit of the seed. These apertures are constructed for seeds of different sizes, and are therefore to be used separately. For this purpose I form a stopping-plate or slide, of cast-iron, to fit into either of these openings, coming flush with the face of the flanges, and retained in position by turn-buckles or buttons P and L, Fig. 3. As the apparatus is represented in Fig. 3, the opening K is closed and the stopping-plate secured by the turn-buckle or button L, and the vent H left open, which opening is intended for the passage of the larger kinds of seed, which will pass down into the side cavity of the seed-wheel M, and will be carried forward while resting on the rim of said wheel. This wheel M is shown in section at Fig. 5, and the seed is carried forward, assisted by means of the drop-chute R in the casting F, and the wheel M may have its said side cavity either smooth or fluted; but when the smaller kinds of seed are to be sown the stopping-plate is removed from the aperture K and placed in the aperture H, where it is secured, as before described, by means of the turn-buckle P. In this case the seed falls upon the periphery of the wheel M, where there are a number of small cogs or stents, as shown at V, Fig. 5, by means of which the seed is carried downward and dropped upon the ground as required.

The apertures H and K are separated from each other by means of a small vertical plate, S, Fig. 3, in which figure a side view of it is

shown. The same plate, S, is also shown edgewise in Figs. 4 and 5.

The seeding-wheel M is formed with a boss upon one of its sides, concentric with its periphery, and fitted to work in a circular cavity in the casting G, Fig. 5, and is, by the bearing of the opposite side of said wheel M against the casting F, retained in position while rotating, so that it cannot vibrate, but at the same time is loose or free upon its shaft. Through the center of this wheel M, I make a square pyramidal opening, T, Fig. 5, and through this the square spindle C, Fig. 4, (also shown at Fig. 2,) is passed, and by its means the rotary movement is communicated to the whole series of seed-rolls. This spindle is a bar of squared iron, having a bearing or journal at E, Fig. 2. The seed-roll being mounted in its case by means of the boss upon one of its sides entering the casting on the same side, (thus forming a bearing and seat for the roller independent of the spindle by which it is rotated,) and the central opening of the roll being pyramidal or taper, the roll has considerable vibratory play within its case, which enables it to yield to the different sizes of seed while the latter is passing through it, at the same time that all nipping or binding of the roll in its case and all injury to the grain from such causes are prevented.

It must be observed that the arrangement of the seeding-wheel and channels here described and shown is essentially different from that described in the specification of Letters Patent granted to Foster Jessup and others, of Palmyra, in the State of New York, on the 4th day of November, 1851, of which said patented device I was the inventor. That device would occasionally crush and break the larger seed while the latter was passing through, and thereby greatly injure it; but the apparatus here described is so constructed and arranged that it will neither crush nor break the seed, which is an important improvement, and is the great object I have in view.

Having thus described the nature, construction, and mode of operation of my said improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

The combination of a seeding-wheel having a tooth-face and channeled side, with the casting F G or holding-frame with two seed-entrances for the purpose of sowing fine or coarse seed from the same hopper, substantially as hereinbefore described.

GILBERT JESSUP.

Witnesses:

ROBERT CHAPIN,

JACOB DENNIS, Jr.