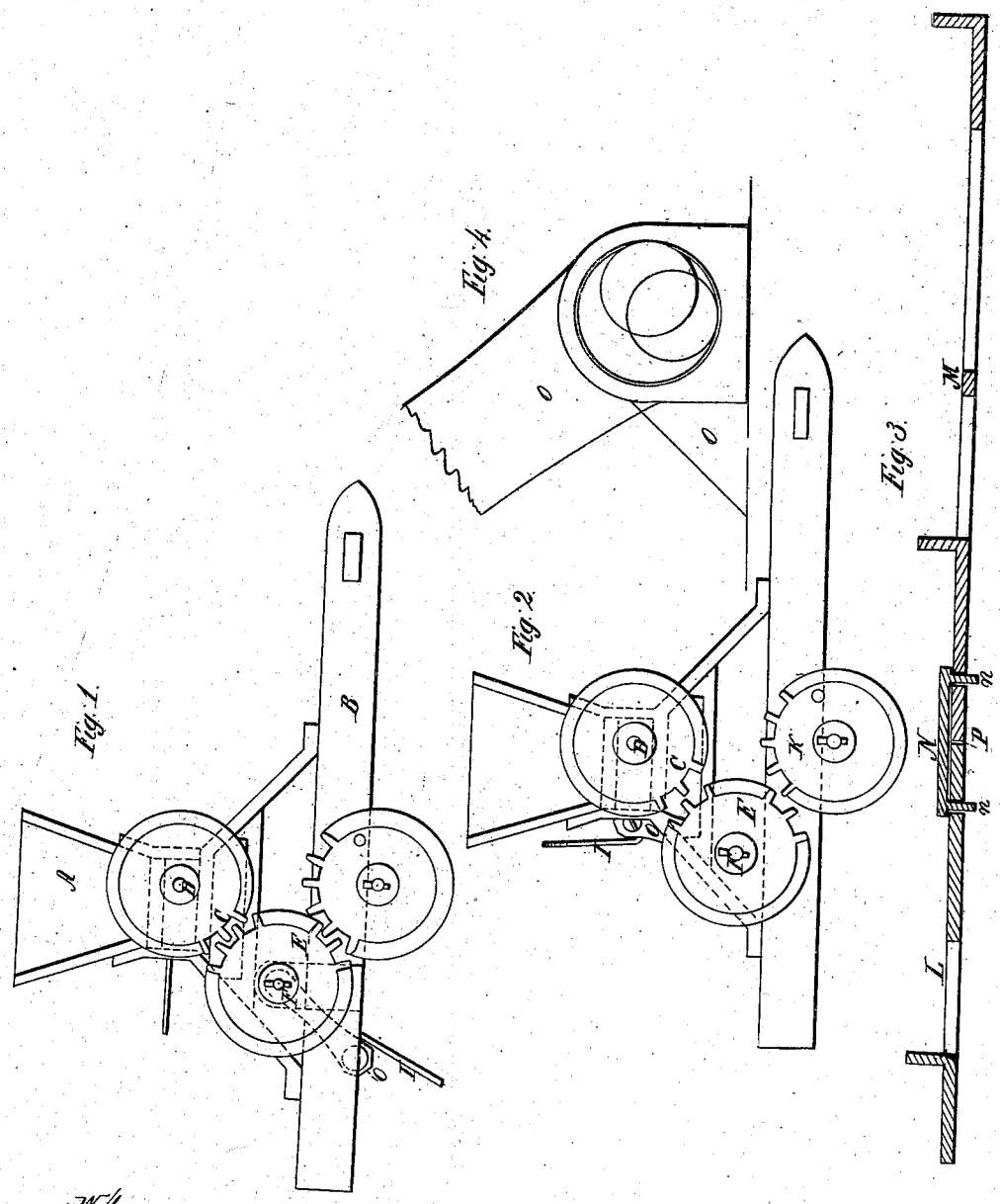
J. B. Crowell.

Grain Drill.

No. 48,262. Patented Jun. 20, 1865.



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UNITED STATES PATENT OFFICE.

JACOB B. CROWELL, OF GREENCASTLE, PENNSYLVANIA.

IMPROVEMENT IN WHEAT-DRILLS.

Specification forming part of Letters Patent No. **48,262**, dated June 20, 1865.

To all whom it may concern:

Be it known that I, JACOB B. CROWELL, of Greencastle, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Wheat-Drills; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvement consists, first, in the mode of gearing and the use of an eccentric-pin in connection with three gear-wheels for operating the feed-shaft or stirrers for wheat-drills, the wheels being thrown out of gear by the bar usually employed for raising the boots and shovels; and, secondly, it consists of making the feed-slide in two or more sections, in order to give the slide a free motion and prevent it from binding.

In the accompanying drawings, Figure 1 is an end view of a portion of a wheat-drill, showing the three gear-wheels engaged with each other. Fig. 2 is a similar view, showing the middle wheel moved backward and downward, and thus thrown out of gear with the upper wheel. Fig. 3 is a section of a portion of a full-sized feed-slide detached from the machine. Fig. 4 is a detached view of the eccentric, by means of which the gear-wheels are disengaged.

In the construction of my machine the frame B and the hopper A may be of the usual form. The upper gear-wheel, C, is placed upon the shaft D of the feed-roller or stirrer, and the lower wheel, K, is attached to the hub or axle of the traveling wheel of the machine. The middle gear-wheel, E, is placed upon an eccentric-pin, F, a short distance from the center of the shaft G, Fig. 4. This pin has a peculiar eccentric motion, as indicated in red lines, Fig. 4, and as will be further explained.

The bar usually employed to raise the boots is attached in the common way to two arms, O, and is raised and lowered by means of the handle or lever I. (Seen down in Fig. 1 and up in Fig. 2.) As the lifting-bar and boots are raised the arm O rotates the shaft G, and thus moves the eccentric-pin F, as above mentioned. This motion carries the wheel E down and throws it out of gear with the wheel C. As the lever I is again depressed the lifting-bar and boots are lowered into working position, and the same motion elevates the gear-wheel E and engages it with the upper wheel, C. Thus the boots or shovels and the feed-gear are both operated by the same motion. It will be observed that this movement of the middle gear-wheel prevents the necessity of moving the hopper, (as is common with wheat-drills,) and is a very great improvement.

My improvement in the feed-slide is shown in Fig. 3, which is a longitudinal section of a portion of a feed.

I propose to cast the feed-slide in two parts or pieces, united by a cross section or joint near the center. The two pieces L and M may have a joint, P, where the ends of the pieces are brought together. The two parts are locked together by a coupling-piece, N, cast with pins *n n*, and entering holes in the two pieces of the slide. This construction of slide will prevent binding, and thus facilitate the easy working of the slide if the plates are warped in casting or afterward or otherwise inclined to bind upon the guides. The slide may be made in three or more pieces without departing from my invention.

I am aware that feed-slides have been divided longitudinally or made in two pieces having the full length of the slide. Therefore I do not claim such divided or sectional slide, but confine my claims to feed-slides with cross-sections, as above described.

I do not broadly claim the use of three wheels for throwing the feed arrangement into gear and out of gear, but confine my invention to the use of such three wheels when the eccentric-pin is employed.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The use of the above-described eccentric-pin for supporting the wheel E and throwing the same out of gear and into gear, substantially as set forth.

2. The above-described arrangement of the three gear-wheels C, E, and K with the stationary hopper, substantially as specified.

3. The combination of the gear-wheel E with the eccentric-pin and arm O, when operated simultaneously with the elevation or depression of the boots, as described.

4. A feed-slide when cast or made in two pieces or sections, locked or coupled together and operated as one slide, substantially as described.

JACOB B. CROWELL.

Witnesses:

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