J. L. RITER.

Grain Drill.

No. 108,294. Patented Oct. 11, 1870.

Fig. 1

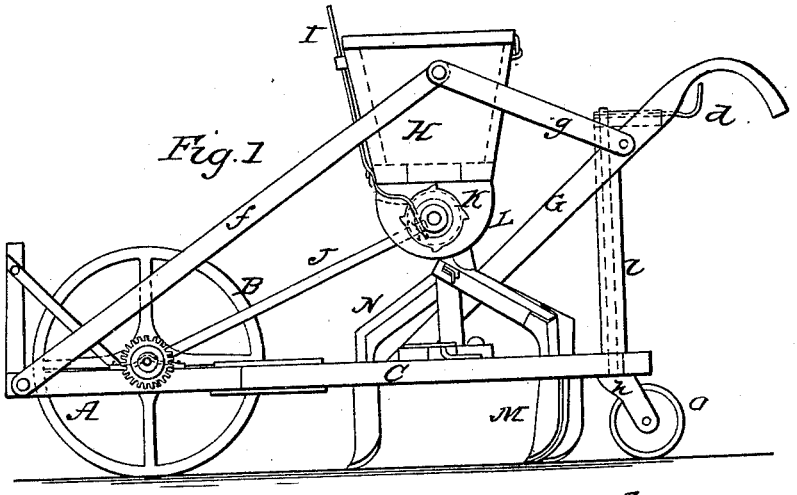

Fig. 2

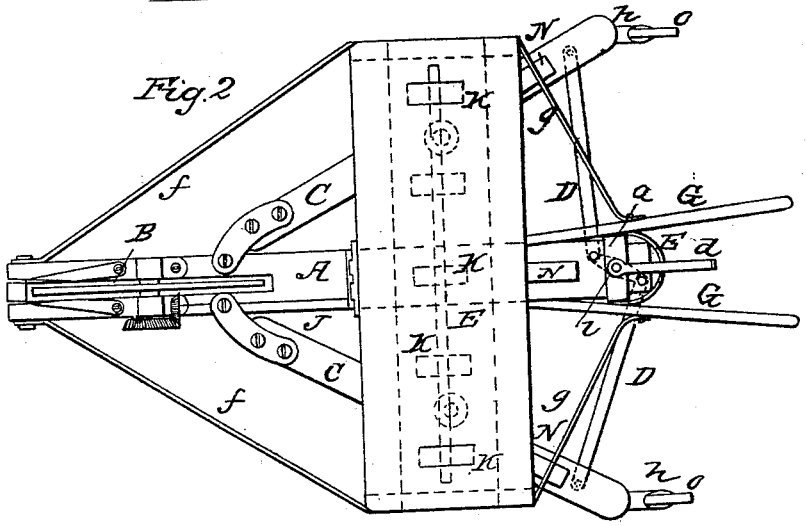

Fig. 3

WITNESSES
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JOHN L. RITER, OF BROWNSVILLE, INDIANA.

Letters Patent No. 108,294, dated October 11, 1870.

IMPROVEMENT IN GRAIN-DRILLS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JOHN L. RITER, of Brownsville, in the county of Union and in the State of Indiana, have invented certain new and useful Improvements in Grain-Drills; and do hereby declare that the following is a full, clear, and exact description thereof.

The nature of my invention consists in the construction and arrangement of a grain-drill, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, and

Figure 2 a plan view of my machine.

Figure 3 is a perspective view of one in the feed-wheels in the same.

A represents the center beam or frame, which is slotted in its front end, for the reception of the driving-wheel B.

The side arms C C are pivoted at one end obliquely to the frame A, and the other end provided with metallic straps D D, which are secured to the ends of a lever, *a*, attached to the lower end of a vertical shaft, *b*, that passes through the rear end of the frame A.

To the upper end of the shaft *b* is attached a handle, *d*, which rests upon the upper part of a brace, E, said brace connecting and bracing the handles G G. By this means the side arms can be adjusted at at any angle from the frame that may be desired.

H represents the seed-box, supported, by any suitable means, on the frame A.

To the front side of the hopper or seed-box H is secured a lever, I, in the lower end of which is a journal-box, for the reception of the upper end of a shaft, J, which at each end is provided with a miter-wheel, the wheel at its lower end gearing with a miter-wheel on the driving-wheel shaft or axle, and the wheel at its upper end gearing with a similar wheel on the feed-shaft *e*.

By means of the lever I the feed-shatt is readily stopped or put in motion, as may be desired.

The feed-shaft *e* is provided with any desired number of feed-wheels K K, upon the peripheries of which are arranged arms *i i*, as follows:

Each arm has a gradual slope from one side of the periphery of the wheel to the opposite side, one arm sloping toward one side of the wheel, and the next arm sloping toward the opposite side, and so on alternately. By this arrangement of arms a constant feed is obtained, as the feed is never cut off by the arms.

The feed-wheels K are each inclosed in a metallic feed-box, L, attached to the under side of the hopper bottom, and upon each of said feed-boxes is cast a conductor, P, through which the grain passes into the chutes or spouts N N.

The hoes M M are secured to the middle arm or frame A and to the side arms C C.

The chutes N N carry the grain from the conductors P to the hoes, and are provided with slots in each side, at the upper end, and are secured to the conductors by a pin or bolt passing through the slots and the lower end of the conductors. By this arrangement the side arms C C may be contracted or expanded as the pins or bolts work in the slots on the chutes, thus allowing them to accommodate themselves to the motion of the side arms.

The feed-shaft *e* is made with one flat side, and the hole for the same in the feed-wheel K is also flat on one side, as shown in fig. 3; hence the feed-wheels are adjustable upon the feed-shaft.

To the ends of the side arms C C are secured guards *h h*, which are supplied with wheels O. These wheels are secured in the guards by means of bolts, and may be raised or lowered by means of holes in said guards.

The guards may be loosely bolted to the arms, so they will be adjustable, or they may be securely bolted so they will not be adjustable.

By this arrangement the grain can be sown any depth desired, and the machine will run steadily.

The wheels O O follow in the tracks made by the hind hoes.

f f and *g g* are metallic straps that brace the hopper or feed-box H.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The conductors P P, cast upon the feed-boxes L L, substantially in the manner and for the purpose described.

2. The slotted chutes N N, substantially as and for the purposes set forth.

3. The slotted chutes N N, constructed and arranged, in combination with the feed-boxes L L and hoes M M, substantially as and for the purposes herein set forth.

4. The feed-wheel K, provided with arms *i i*, sloping alternately from side to side, substantially as and for the purposes herein set forth.

5. The combination of the hopper H, feed-boxes L L, feed-wheels K K, chutes N N, and hoes M M, all constructed and arranged substantially as and for the purposes herein set forth.

6. In combination with subject-matter of foregoing clause, the frame A, side beams C C, wheel B, shaft J, lever I, wheels O O, straps D D, with lever *a*, shaft *b*, handle *d*, and brace E, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 3d day of March, 1870.

JOHN L. RITER.

Witnesses:

JOHN H. STAGG,

ALEXANDER H. SWANN.