FOSTER, JESSUP & BROWN.

Grain-Drill.

No. 8,484. Patented Nov. 4, 1851.

Fig. 1.

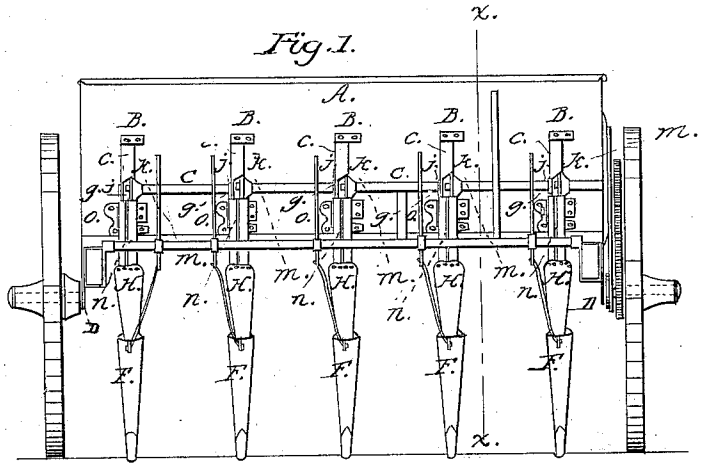


Fig. 2.

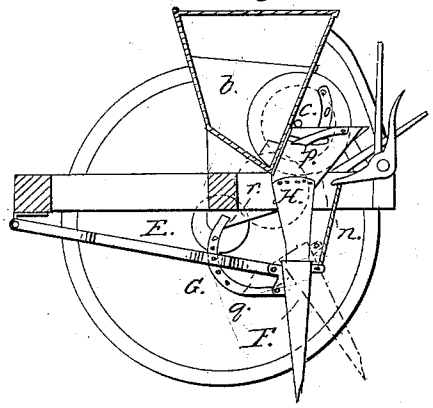


Fig. 3.

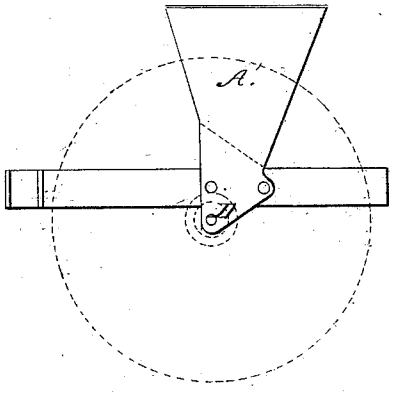


Fig. 4.

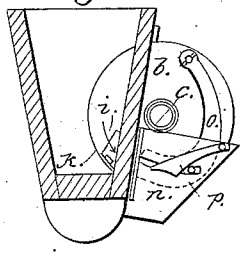


Fig. 5.

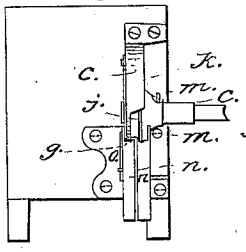


Fig. 6.

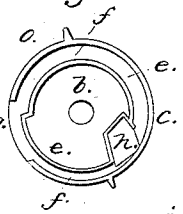
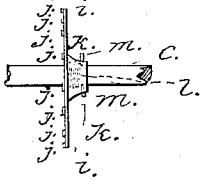


Fig. 7.

Fig. 8.



UNITED STATES PATENT OFFICE.

N. FOSTER, G. JESSUP, H. L. BROWN, AND C. P. BROWN, OF PALMYRA, N. Y.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **8,484**, dated November 4, 1851.

To all whom it may concern:

Be it known that we, NEWTON FOSTER, GILBERT JESSUP, H. L. BROWN, and C. P. BROWN, of Palmyra, in the county of Wayne and State of New York, have invented a new and Improved Seed-Drill; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a back view in elevation. Fig. 2 is a transverse vertical section taken at the line X X, Fig. 1. Fig. 3 is a side view in elevation, showing the connection of the head of the grain-box with the axle-tree. Fig. 4 is a transverse vertical section of the grain-box, showing a side view of the distributing-case. Fig. 5 is a back view of the distributing-case. Fig. 6 is a view of the inner side of the outer or stationary disk of the case. Fig. 7 is a view of the inner side of the revolving disk. Fig. 8 is a view of the end of the revolving disk, showing the spring on the shaft by which the disk is forced or pressed against the flange in the stationary disk.

Similar letters of reference indicate corresponding parts in each of the several figures.

The nature of our invention consists in distributing the seed by means of a disk or case having two flanges, one outside, and forming what may be termed an "end" or "covering," as it projects over at a right angle to the disk. The other flange is some distance below the one mentioned, and projects from the disk in the same direction. A channel is thus formed between the two flanges, through a portion of which the grain is carried from the grain-box by means of a runner or revolving disk, which is pressed closely against the lower flange on the stationary disk by a spiral spring, or its equivalent, the revolving disk having teeth or projections which set into the channel between the two flanges, said teeth conveying the seed through the channel into an elastic tube, by which it is deposited in the furrow.

Our invention further consists in connecting the head of the grain-box with the axle-tree by having them formed in one casting; and, further, in an arrangement of the tubes or teeth by which they may be stopped at any angle, from a right angle to a very obtuse angle, with the levers.

To enable others skilled in the art to make and use our invention, we will proceed to decribe its construction and operation.

A, Fig. 1, represents the back of the grain-box.

B B B B B B are the distributing-cases. These are constructed in the following manner:

b is a disk with a flange, *c*, on its periphery, projecting at a right angle with the disk, forming a sort of dish. The outside of the flange is seen more particularly in Fig. 5.

e is a flange on the same disk, and projecting from the disk in the same direction as the flange *c*. This is seen in Fig. 6. It will be observed that there is a channel, *f*, between the two flanges, and that there is an opening or recess, *g*, in the flange *c* to allow the grain to pass out.

h is an opening in the disk *b*, through which the grain passes into the channel *f* from the grain-box. This opening is seen in Figs. 4 and 6. This disk *b* is stationary, as it is screwed or bolted onto the back of the grain-box A, (see Fig. 1,) a portion of it passing into the grain-box through a slot, (see Fig. 4,) the opening *h* being in the grain-box. There is a circular opening in the center of the disk *b*, through which the shaft C passes.

i is the revolving disk. This revolves within the outer flange, *c*, on the stationary disk *b*. In Fig. 7 a view of the inner surface is seen with the teeth *j* projecting from its edge at right angles with the disk. These teeth fit into the channel *f*. There is also a circular opening at the center of this disk, through which the shaft C passes.

k is a collar on the outer side of the disk *i*, (see Fig. 8,) in which a spiral spring, *l*, is placed. This spring is confined between a pin, *m*, on the shaft C and the outer face of the disk, and is the means whereby the disk is kept against the flange *e* on the stationary disk *b*.

n is a cap, which encompasses the lower parts of the distributing-cases that are outside the grain-box A. This cap is formed of two pieces, and they are bolted onto the back of the grain-box, as seen in Fig. 1. The grain falls into this cap from the channel *f*.

o is a slide, which is passed over the aperture *h* when it is necessary to close it, and secured by a catch, *p*, which rests against a stud on the slide. (See Fig. 4.)

The several parts of the distributing-case are

now described. The operation is simple: The disk *i* revolves with the shaft C in the direction indicated by the arrow, Fig. 4, the pin *m* on the shaft catching into recesses in the collar *k*, as seen more particularly in Fig. 5. The grain passes into the channel *f* through the opening *h*, and is carried through the channel by the teeth *j* on the revolving disk *i* till the grain reaches the opening or recess *g* in the outer flange, *c*. (Seen in Fig. 6.) The grain then falls into the cap *n* and into the tube, which will be presently described.

By referring to Fig. 8 the manner in which the spiral spring acts upon the disk *i*, keeping it against the flange *e*, will be readily seen.

Any other suitable elastic material might be used instead of the spiral spring.

In Fig. 3 the head or one of the sides of the grain-box A′ is shown. The bottom of the grain-box is shown by dotted lines, and it will be seen that the side projects downward sufficiently low, so as to be screwed or bolted onto the frame of the machine, and also sufficiently low to have the axle D attached to it. Now, the heads or side pieces and axles are cast in one piece. The axles are seen by dotted lines in Fig. 1. This is much cheaper and more simple than the ordinary axle, and the levers under the grain-box are not at all interfered with.

E in Fig. 2 represents one of the levers to which the tubular teeth F are attached.

q is the fulcrum at one end, and the other end is attached to the tubular tooth F by a pivot.

G is a curved arm, attached to the tooth a short distance below the pivot mentioned. This arm projects upward through a slot in the lever, and has a stop or knob, *r*, on its upper end. Now, it will be seen that as the tooth F is propelled forward or drawn back the curved arm G traverses through the slot. Now, if a hole, *s*, be drilled through the lever E and a series of holes through the curved arm G, the tubular tooth F may be kept or stopped in any position, from a right angle to a very obtuse angle, with the lever E by passing a pin through the requisite hole. This will be readily seen by referring to Fig. 2. (See the red lines.) By this arrangement the pliable tube H, which conducts the seed from the cap *n* into the tubular tooth F, is prevented from being torn or broken by the tooth, as is often the case in ordinary drills.

The wheels and frame, being of ordinary construction, require no particular description.

The shaft C is driven by a toothed wheel on the hub of one of the wheels. This toothed wheel meshes into a pinion attached to a lever, and this pinion works into a toothed wheel on the shaft C. The pinion on the lever is thrown in and out of gear when desired, so that the motion of the shaft may be stopped or allowed to operate when desired.

Having thus described the nature and operation of our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the seed-box A′ and cap *n*, arranging the rotating disk *i* vertically, and providing it with the projections *j*, and the stationary vertical disk *b*, provided with an opening, *h*, for receiving the grain, and the flanges *c e*, between which the said projections rotate, and by which the grain is carried from the seed-box to the cap, and thence to the seeding-tube, the whole being arranged in the manner and for the purpose specially set forth and described.

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GILBERT JESSUP.
HIRAM L. BROWN.
CALVIN P. BROWN.

Witnesses:
E. C. WILDER,
WM. H. SOUTHWICK.