

(No Model.)

J. H. SHAW.
SEED PLANTER.

No. 349,460.

Patented Sept. 21, 1886.

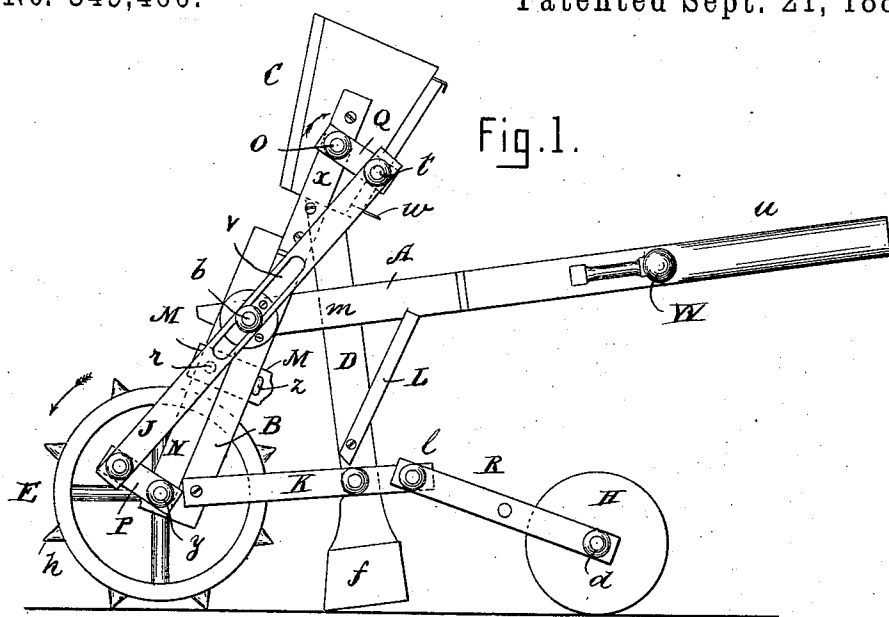


Fig. 1.

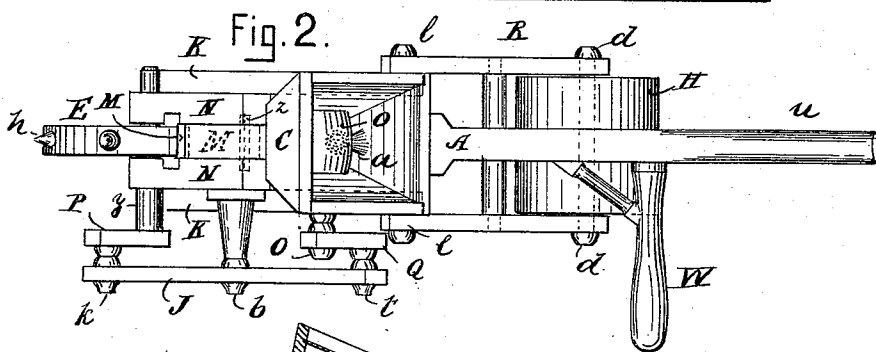


Fig. 2.

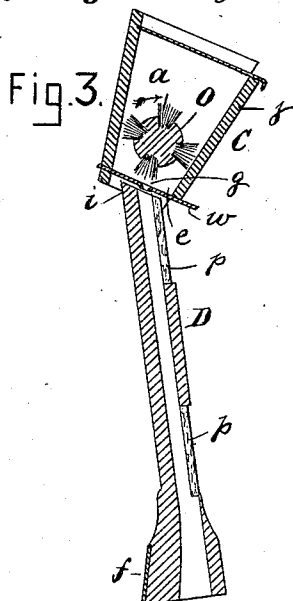


Fig. 3.

Witnesses.

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SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 349,460, dated September 21, 1886.

Application filed January 28, 1886. Serial No. 190,015. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SHAW, a subject of the Queen of Great Britain, residing at Berwick, in the county of Kings, Province of Nova Scotia, Canada, have invented a certain new and useful Improvement in Seed-Planters, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved seed-planter; Fig. 2, a top plan view of the same; and Fig. 3 a vertical longitudinal section of the seed hopper and spout, the brush being shown in vertical transverse section in the same view.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of seed-plinters which are designed to be operated by hand-power; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the beam, B the standards, C the hopper, D the spout, E the wheel, H the roller, and J the pitman. There are two of the standards B, one at either side of the wheel E, and projecting horizontally from the lower end of each there is a rigid arm, K; but instead of two standards, one may be employed by bifurcating or otherwise suitably constructing the same, if preferred.

The hopper C is mounted on the top of the standards, and is secured in position by two cleats, x, one of which is attached to the up-

per end of either standard. The cleats may, however, be dispensed with and the hopper supported by the standards, if desired.

The spout D is framed rigidly into the arms K and beam A, through which it passes, as shown at m, and has its lower end provided with a plow or furrow board, f, its upper end being rigidly secured between the upper ends of the standards B, and opening into the hopper C diagonally or at an obtuse angle to its bottom, as best seen in Fig. 3.

The forward end of the beam A passes between the standards B, and is rigidly secured thereto, said beam being provided with a brace, L, the lower end of which is secured to the spout D.

Fitted to slide vertically on each of the standards B there is a bar, N, said bars being rigidly connected together near their centers by the bolt r and stub-beam M. The stub-beam is arranged at a right angle to the bars N, with its forward end disposed between them, the bolt r passing through said bars and beam. The rear end of the stub-beam passes between the standards B, and is provided with a key-pin, z, for securing the bars N in any desired position on said standards.

The wheel E is journaled on the shaft y in the lower ends of the bars N, said shaft being provided with a crank, P.

Journaled horizontally in the lower part of the hopper C there is a shaft, O, provided around its periphery with a series of brushes, a, arranged radially at equal distances apart, as best seen in Fig. 3. The shaft O projects through one side of the hopper C, and is provided on its outer end with a crank, Q.

A headed stud, b, is secured to one of the standards B, on which the pitman-rod J works, said stud passing through an elongated slot, v, in said pitman and serving as a fulcrum therefor. The upper end of the pitman-rod J is connected to the crank Q on the shaft O by the pin t, and its lower end to the crank P on the shaft y by the pin k.

Jointed to the rear ends of the arms K at l there is a frame-work, R, in which the roller

H is journaled on the horizontal shaft *d*, said frame-work being adapted to oscillate vertically.

A bottom, *w*, is fitted into the hopper C, said bottom being provided with a hole, *g*, through which the seed passes into the spout D. The bottom *w* is fitted to slide in close contact with the upper end of the spout in such a manner that when the slide is pushed in to its fullest extent the hole *g* will be closed to such an extent by the rear side of the spout at *i* that the seed will not pass through it, and when partially drawn out said hole will be partially opened, thereby utilizing the spout as a gage for regulating the quantity of seed to be dropped.

The rear end of the beam A is rounded to form the hand-piece *u*, and there is also a handle, W, projecting horizontally from said beam near its rear end.

The wheel E is provided around its periphery with a series of radial spurs, *h*, to prevent it from slipping on the ground when the sower is in use.

By arranging the hopper C at an obtuse angle to the spout D the bottom *w* is caused to incline, as shown in Fig. 3, so that the seed will fall into the pocket *e*, formed between the bottom *w* and rear side, *j*, of the hopper, thereby preventing the seed from passing through the hole *g* accidentally, or except when forced forward intermittently by the brushes *a* as the shaft O revolves.

The spout D is provided with glazed openings at *p p* on its rear side, to enable the workman to see the seed as it falls from the hopper through the spout, and thus guard against any defect in the work that might arise from the imperfect operations of the machine.

In the use of my improvement the seed is placed in the hopper C, and the slide *w* properly adjusted. The hand-piece *u* is then taken in the right hand, and the handle W grasped in the left hand, the beam A being depressed in such a manner as to cause the plow or furrow-board on the lower end of the spout D to enter the ground to a proper depth. The planter is then pushed forward, causing the wheel E to rotate in the direction of its arrow, the pitman J to slide and oscillate on the stud *b*, the brush-shaft O to be revolved in the direction of its arrow, or in an opposite direction to that of the wheel E, and the seed to be dropped intermittently or in "hills" through the spout D in a manner which will be readily obvious without a more explicit description.

As the plow or furrow-board *f* on the lower end of the spout D forms the furrow for the seed, the seed will be covered by the earth on either side falling into the furrow as the plow advances in the usual manner, the earth being pressed down onto the seed by the roller H. As the wheel-crank P is connected directly with the brush-crank Q by the pitman J, it will be obvious that the shaft *y* must necessarily be nicely adjusted with respect to the shaft O to enable said cranks to revolve freely; and hence I journal the wheel E in the bars N, and adjustably secure said bars to the standards B, thereby enabling the shaft *y* and wheel E to be readily adjusted with respect to the brush-shaft. Any other suitable means may, however, be employed for adjustably mounting the wheel E, if desired.

Having thus explained my invention, what I claim is—

1. In a seed-planter, the combination of the following instrumentalities, to wit: a hand-beam, a seed-hopper, a rotary brush disposed in said hopper, a seed-spout having its lower end adapted to form a furrow in the ground and its upper end connected with said hopper, a roller for pressing the earth down onto the seed, a driving or supporting wheel, a crank-shaft for the driving wheel, a crank-shaft for the brush, an oscillating pitman connecting said crank-shafts, a stud or fulcrum for the pitman disposed between said crank-shafts, and a standard or standards, substantially as set forth.

2. In a seed-planter, the bars N, provided with the stub-beam M and pin *z*, or other suitable means for adjustably mounting the wheel E on the standards B, in combination with the wheel E, standards B, crank-shaft *y*, pitman J, stud *b*, crank-shaft O, and hopper C, substantially as described.

3. The improved seed-planter herein described, the same consisting of the standards B, bars N, stub-beam M, pin *z*, wheel E, crank-shaft *y*, pitman J, stud *b*, crank-shaft O, brush *a*, hopper C, beam A, spout D, arms K, frame-work R, and roller H, constructed, combined, and arranged to operate substantially as described.

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Witnesses:

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