

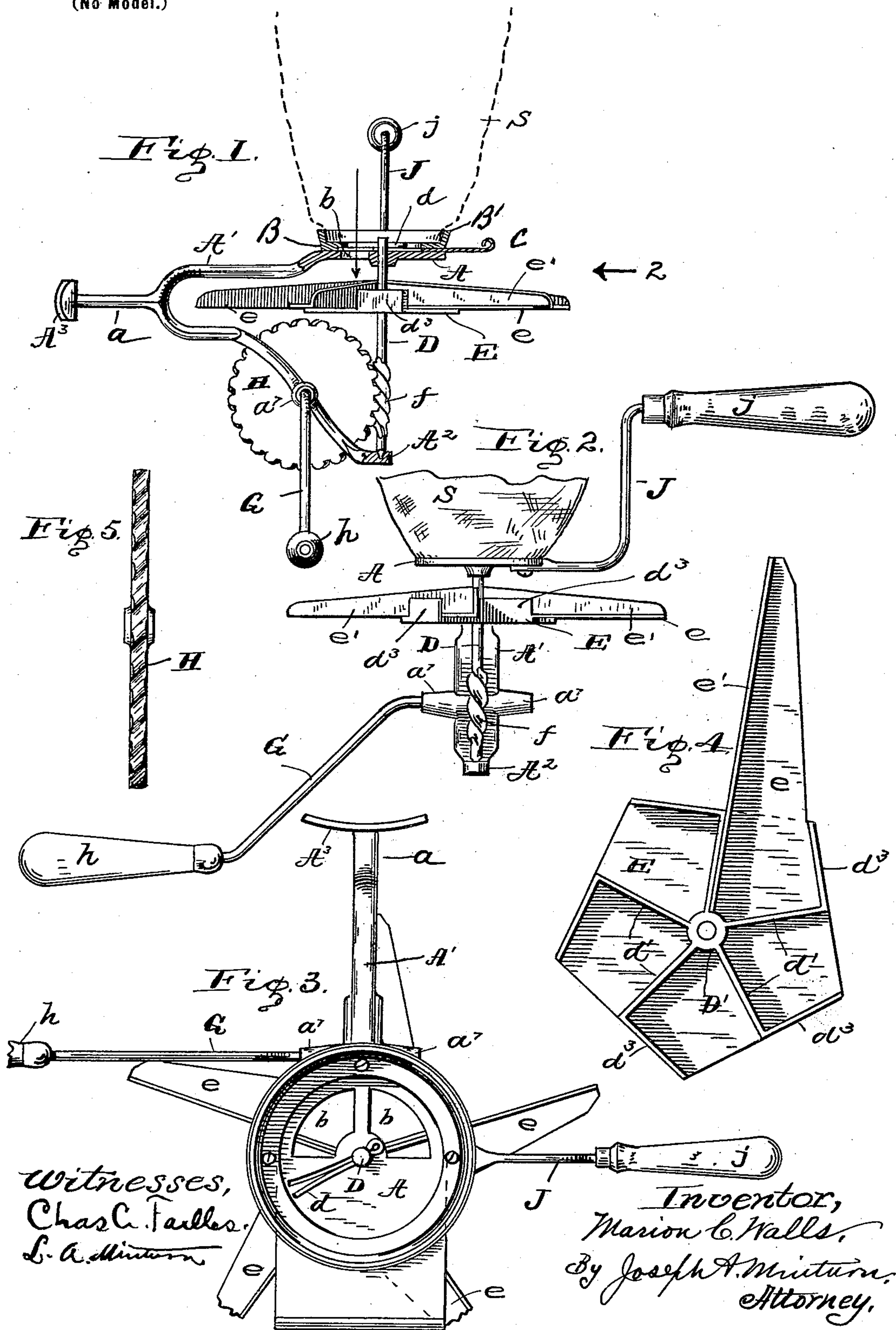
No. 640,606.

Patented Jan. 2, 1900.

M. C. WALLS.
HAND BROADCAST SEED SOWER.

(Application filed Oct. 9, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

MARION C. WALLS, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO JAMES A. EVERITT, OF SAME PLACE.

HAND BROADCAST SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 640,606, dated January 2, 1900.

Application filed October 9, 1899. Serial No. 733,080. (No model.)

To all whom it may concern:

Be it known that I, MARION C. WALLS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Hand Broadcast Seed-Sowers, of which the following is a specification.

The object of this invention is to improve the seed-throwing arms so as to cause them to deliver the grain from near their outer ends and to provide a substantial center plate to receive and hold the arms.

The object also is to provide a compact and durable mechanism for rotating the delivery-arms and to assemble the driving mechanism in a manner to permit of the easy dismemberment of the same.

The object also is to provide a machine which, while being durable, can be produced and sold at small cost.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation and partial vertical section of my invention, the sack for holding the grain being indicated by the dotted lines; Fig. 2, a detail in front view looking in the direction of the arrow 2 in Fig. 1; Fig. 3, a detail in top plan view of my invention with the sack removed; Fig. 4, a detail in plan view of the center plate with one of the grain-throwing arms attached, and Fig. 5 an edge view of the toothed wheel for operating the revoluble shaft which carries the seed-throwing arms.

A is the disk, which forms the platform on which the sack S for holding the grain is supported. It has the integral frame A', which makes a lateral bend to avoid contacting with the revolving seed-throwing arms located under the disk A and terminates with the foot A². The frame has the extension a, terminating with the breast-plate A³, which rests against the operator's body to hold the machine a suitable distance away from it. The under member of the frame is slotted longitudinally to receive the toothed driving-wheel and is provided with lugs a⁷, projected laterally to form the journal-bearings for the crank-shaft on which the toothed wheel is mounted.

The lugs are bored out longitudinally to receive the shaft. The upper face of the foot A² is provided with a tapering socket to receive the lower end of the revoluble shaft which carries the grain-throwing arms. The disk A has a central opening to receive the upper end of the said revoluble shaft, and it is also provided with the slots b b, through which the grain from the sack is fed onto the traveling arms below. Resting on the disk A is the ring B, having the flanged sides B'. The ring is secured to the disk by screws and is for the purpose of impinging the sack between the disk and ring to thereby removably secure the sack to the disk. The ring is thinned on its side next to the disk A to form a slideway for the gate C, by which the size of openings through the slots b b is regulated and the opening closed when desired.

D is the vertical revoluble shaft, which carries the center plate E, to which the grain-throwing arms e are fastened. Its lower conical end is seated in the tapering hole in the foot A² after its upper end has been passed through the central opening in the disk A. The top projecting end of the shaft has a transverse hole, through which a pin d is inserted to serve the double purpose of retaining the shaft in position and to act as an agitator to stir up the grain and force it down through the openings.

The center plate E, above referred to, is fastened to the shaft D a short distance below the under side of the disk A. It has a central boss or hub D', from which radiate the flanges d'. The outline of the disk is pentagonal, and the flanges d' bisect the sides and then continue along the side to the left to the next adjacent corner, leaving an open space between the end of the flange and the next adjacent flange, through which the grain-throwing arm e is projected. This arm has the flange e' along one edge—the opposite edge from the direction of travel of said arm.

By the above construction the grain is deposited into a three-sided inclosure, the outside portion d³ of the flange d' acting as a stop to keep the grain from being thrown out close to the base of the arm, which would result in its being dropped down at the feet of the operator; but by being thrown to the end of the

arm first it will be thrown off with more force than would otherwise be the case.

The shaft D below the center-plate E has the spiral flanges *f*.

5 G is a crank-shaft mounted in the bores of the lugs *a*⁷, and H is a toothed wheel mounted on said shaft. The teeth of the wheel H mesh with the spiral flanges of the shaft D, where-
 10 by by the rotation of the wheel the shaft will be revolved. It will be noted that the direction or order of movement in this case is from the toothed wheel to the worm on the shaft to be driven, which is the reverse of the
 15 usual application of the worm and toothed wheel, and in order to make the transmission of power practical the teeth of the wheel are at an angle, instead of being square with the sides of the wheel, as shown in Fig. 5. The
 20 shaft G is continued laterally and bent to form a crank, by which the wheel H will be turned. It is provided with the handle *h*, by which the crank is grasped by the right hand of the operator. The left hand of the operator
 25 is used in steadying the machine by taking hold of the handle *j*, mounted on the bar J, which is fastened to the disk A.

If desired, for cheapness the radial flanges *d'* may be omitted, inasmuch as the flanges *e'* of the arms *e* make the flanges *d'* unneces-
 30 sary.

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

1. In a hand seeding-machine, the combi-
 35 nation with a frame, a receptacle to hold the supply of grain, having means for discharge in regulated quantities, and a shaft having seed-throwing arms with three-sided inclosures and spiral flanges as shown and de-
 40 scribed, of a wheel and a crank-shaft on which

the wheel is mounted, said wheel having diagonal teeth which mesh with the spiral flanges, substantially as specified.

2. In a seeding-machine of the kind specified, the combination with a frame, a recep- 45
 tacle to hold the supply of grain having means for discharging in regulated quantities, and a revoluble shaft, of a grain receiving and throwing device comprising a center plate
 50 under the grain-supply divided by flanges on the side next to the said grain-supply into three-sided inclosures and having a radially-projected flanged arm extending out through
 55 the open side of said inclosures, substantially as shown and described.

3. In a hand broadcast seed-sower, a frame, a receptacle to hold the grain-supply having means for discharging the grain in regulated quantities, a shaft having seed-throwing arms
 60 comprising a center plate under the grain-supply opening and arms secured to said center plate, the latter being pentagon in shape with flanges to form three-sided inclosures
 65 and having plates with flanged back edges secured to the plate and extending radially through the uninclosed side of said inclosures, said shaft having spiral flanges as shown, a
 70 crank, a crank-shaft and a toothed wheel mounted on said crank-shaft having diagonal teeth to engage the spirals on the shaft carrying the seed-throwing arms, substantially as described and shown.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 4th day of October, A. D. 1899.

MARION C. WALLS. [L. S.]

Witnesses:

J. A. MINTURN,
 CHAS. FAILLES.