No. 657,720. Patented Sept. 11, 1900.

J. H. WOLFE.

COTTON SEED PLANTER.

(Application filed May 28, 1900.)

(No Model.)

Fig. 1.

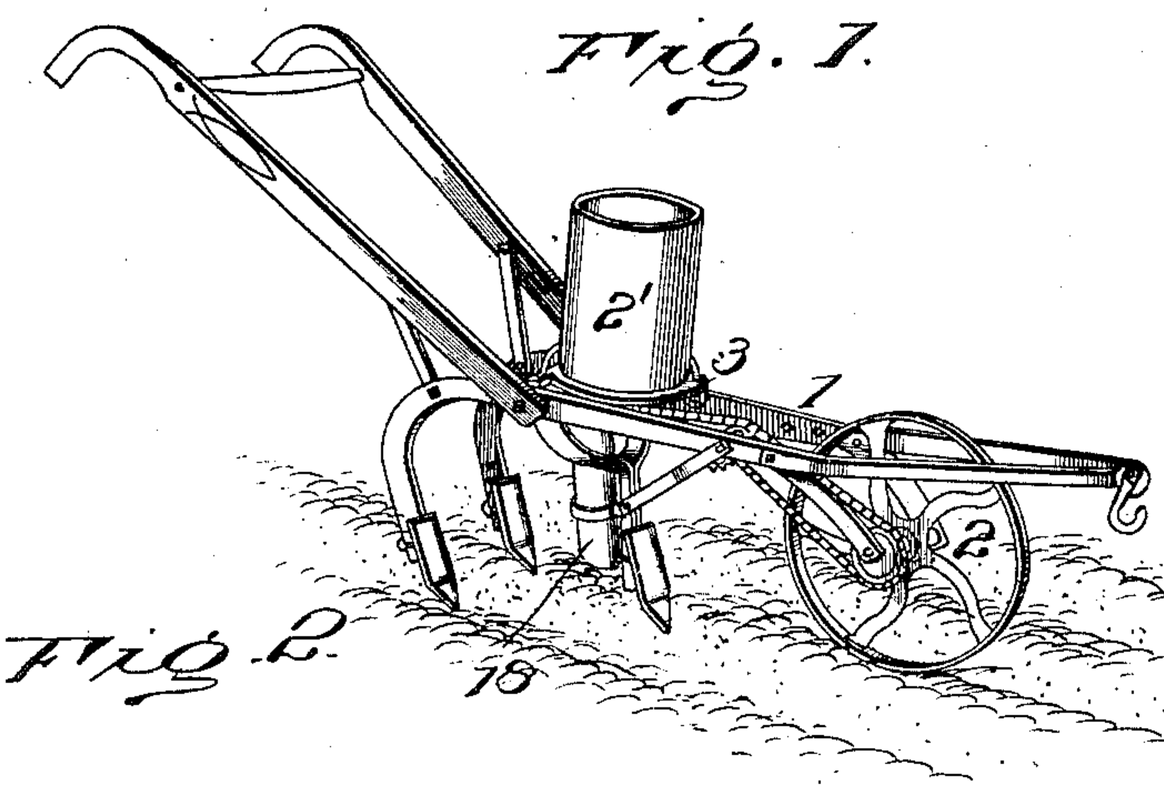


Fig. 2.

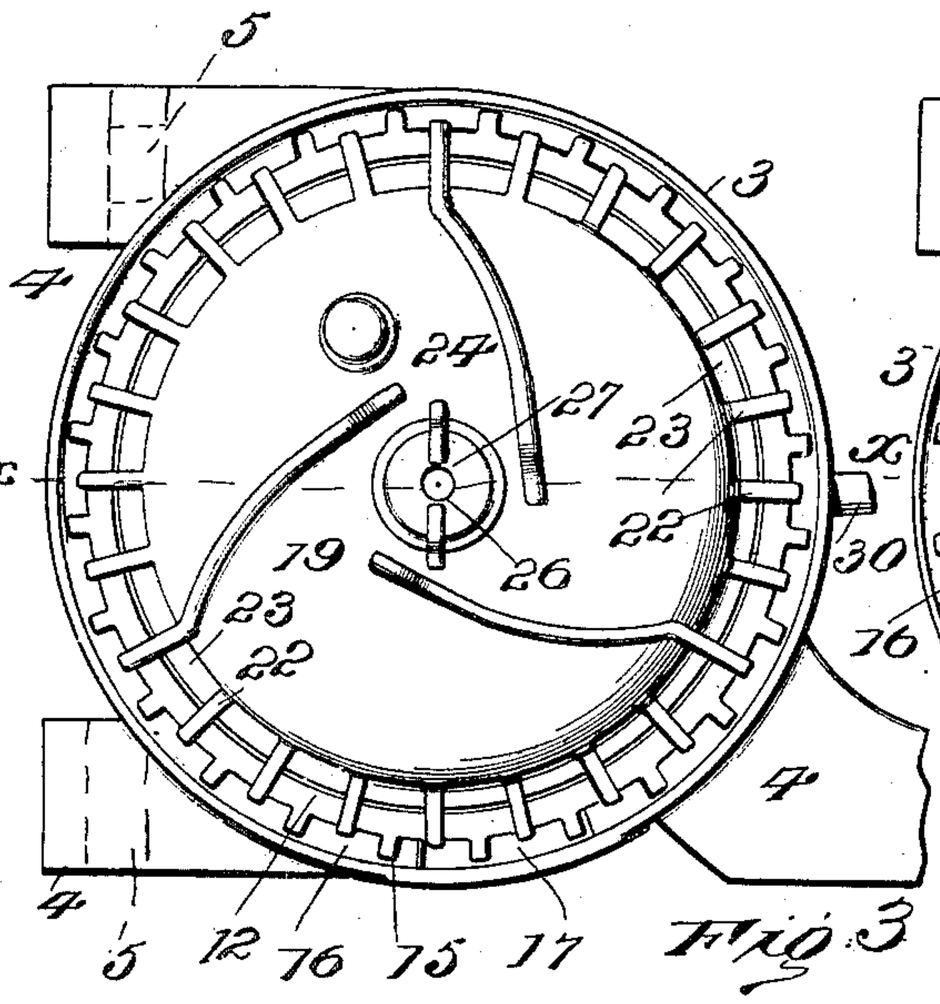


Fig. 3.

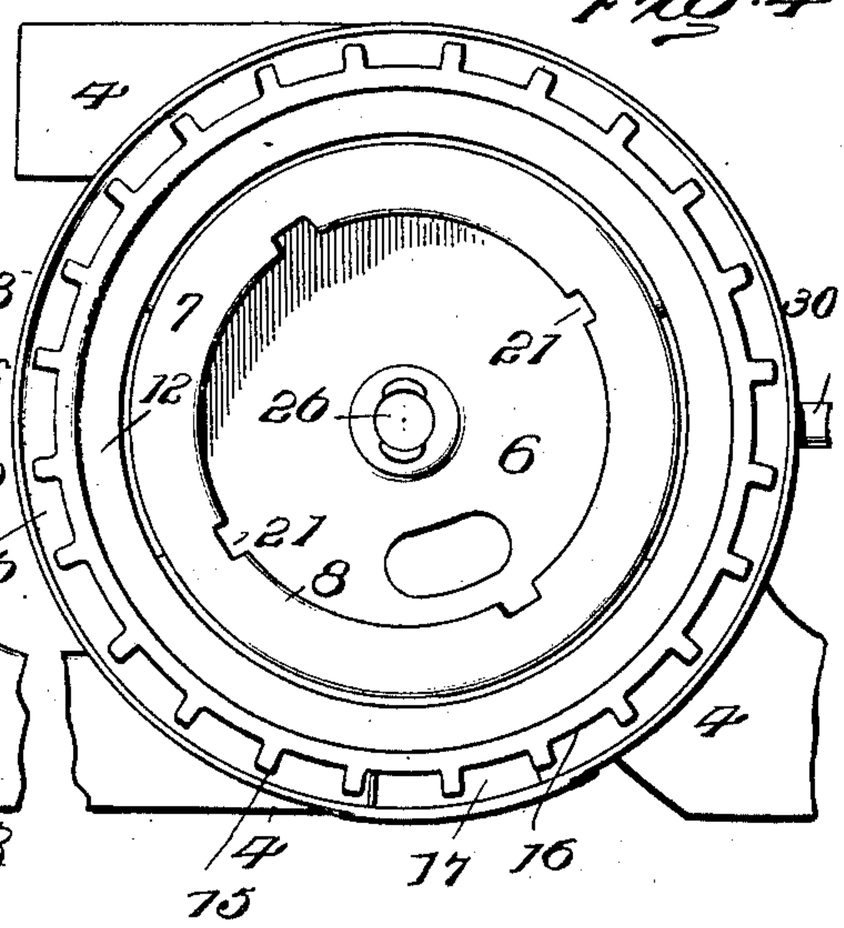
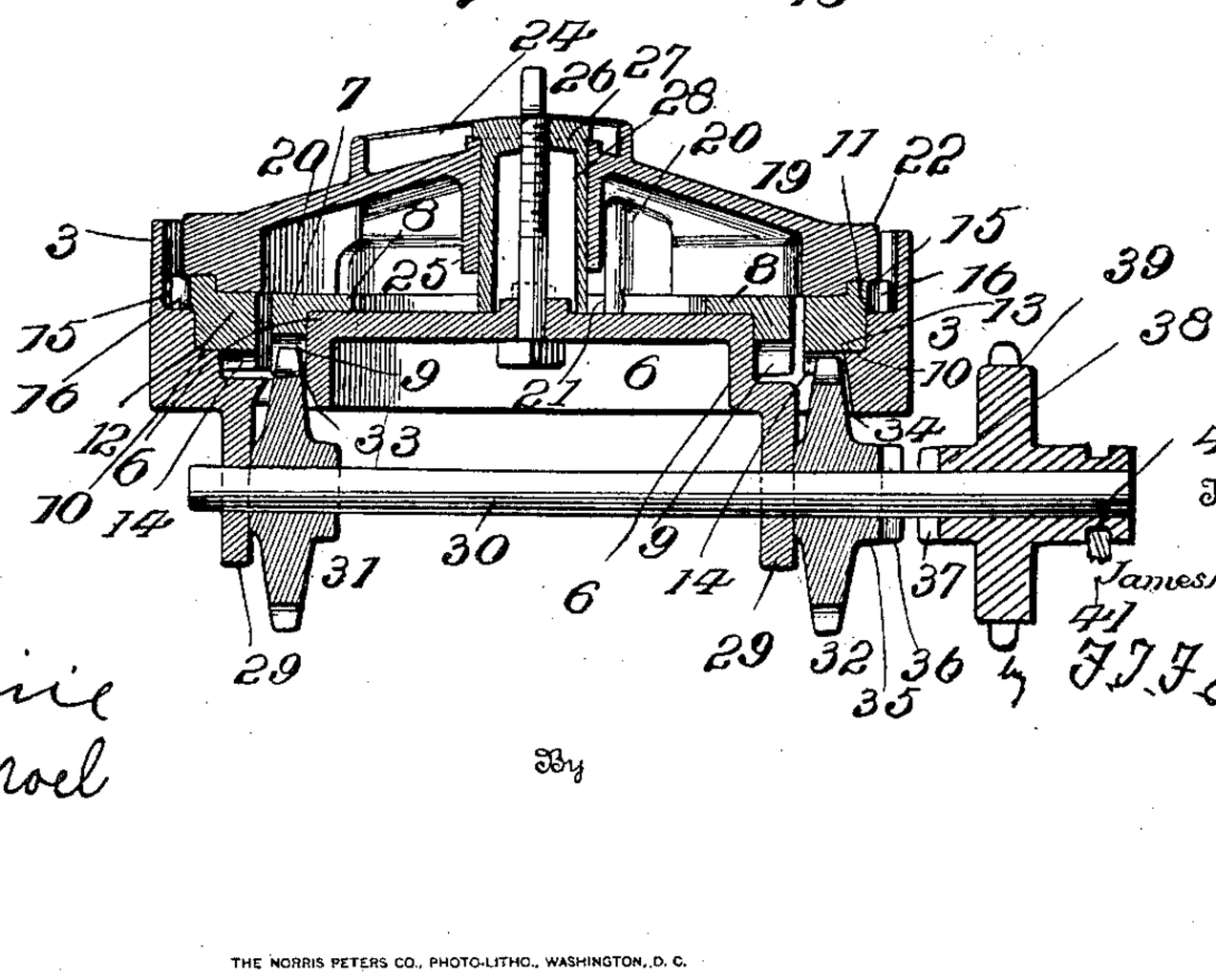


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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COTTON-SEED PLANTER.

SPECIFICATION forming part of Letters Patent No. 657,720, dated September 11, 1900.

Application filed May 28, 1900. Serial No. 18,246. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WOLFE, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Cotton-Seed Planters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in seed-planters, and is designed more especially for use in planting cotton-seed as it comes from the gin, and is designed to provide a simple device by means of which the seed is separated, distributed, and discharged in separated condition instead of in a bunch, as is done at the present time.

Other objects will become apparent upon further description of the invention.

The invention consists, essentially, in the construction and novel arrangement of the several parts of the device hereinafter described, illustrated in the drawings, and more particularly pointed out in the claims hereunto appended.

In the drawings, Figure 1 is a view showing the seed-hopper containing my invention applied to the cultivator. Fig. 2 is a view of the dropping mechanism detached from the cultivator, with the hopper removed. Fig. 3 is a sectional view on line *x x*, Fig. 2. Fig. 4 is a top view of a portion of the dropping mechanism, the agitator-disk being removed to show the relative arrangement of the other parts.

Referring to the drawings by numerals, 1 indicates a cultivator of any of the usual well-known constructions, and 2 an operating or power-transmitting wheel, as is evident.

3 is a cylindrical shell or base in which the distributing mechanism is supported. 2′ is a seed-hopper fitted over and upon said cylindrical shell 3. This shell or base is provided with outwardly-extending arms 4 4 4, which arms are provided with downwardly-depending apertured ears 5 5 5, by means of which the supporting-base is attached to the frame of the cultivator. The bottom of the base is cast or formed with a central upwardly-extending annular support 6, which supports and carries a rotatable circular gear 7. The top edge of this gear 7 is provided with a flange 8, by which it is seated upon the top surface of the support 6. The lower edge of this gear is provided with teeth 9, adapted to intermesh with suitable driving mechanisms, to be hereinafter described. The interior of this shell is provided with an annular lower shoulder 10 and an upper shoulder 11, the lower shoulder being of less diameter than the upper shoulder and adapted to support the distributing-ring 12. The bottom of this ring is provided with an annular flange 13, which rests upon and is supported by the annular shoulder 10. This flange is provided with gear-teeth 14, which intermesh with suitable driving mechanisms, to be hereinafter described. The upper edge of said ring is provided with toothed projections 15, with distributing-spaces 16 formed therebetween. The side of the shell is formed with a suitable opening 17, through which the seed drops into the tube 18, and thence to the ground.

The numeral 19 indicates a cap-shaped agitator-disk, which is provided with lugs 20 20, extending upwardly from the side walls thereof, which lugs are adapted to be received into notches or recesses 21 21 in the flange 8 of the circular gear 7. The outer side wall of said agitator-disk is provided with toothed projections 22, between which are distributing-spaces 23, through which the seed is passed to the spaces 16 of the distributing-ring. The upper surface of this agitator is provided with spirally-arranged agitator-wings 24, which serve to agitate and separate the seed and pass it to the spaces in the distributing-ring. The center of said distributing-disk is provided with an inwardly-extending hub 25, and the several parts are secured together by means of a bolt 26 and a thumb-nut 27. The

thumb-nut 27 is provided with a hollow spindle 28, which fits within the hub 25 and about which the agitator-disk rotates.

The under side of the shell is provided with depending ears 29 29, in which is journaled a rotatable shaft 30. Rigidly secured on the shaft are two gear-wheels 31 and 32, respectively, the gear-wheel 31 meshing with the teeth of the circular gear 7 through an opening 33, and the gear-wheel 32 meshing with the teeth of the distributing-ring 12 through an opening 34. The gear-wheel 32 is provided with a boss 35, having in its outer edge slots 36, which are adapted to be engaged by lugs 37 on the hub 38 of a driving gear-wheel 39, mounted loosely on the shaft 30. The hub of gear-wheel 39 is provided with an annular groove 40, in which is seated the fork of a lever 41, by means of which said gear-wheel 39 is shifted into and out of engagement with the gear-wheel 32. The power to drive the gear-wheel 39 is transmitted from the power-wheel 2 by means of a sprocket-chain or other suitable mechanism.

The operation of the device is as follows: Power is transmitted from the wheel 2 through the chain to the driving-gear 39, which engages with the gear 32 and rotates the shaft 30. The gear 31 meshes into the teeth of the circular gear 7 and drives said gear and the agitator connected thereto to the right, and the gear 32 meshes with the gear-teeth of 14 the distributing-ring and drives said distributing-ring to the left, the opposite motions of said distributing-ring and agitator serving to separate the seed and deliver it evenly and at regular intervals. The rapidity with which the seed can be distributed depends on the gear used to operate the device.

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

1. In a seed-planter of the character described, the combination of a shell or base provided with a central support and a concentric annular shoulder, a distributing-disk mounted on said annular shoulder, means for rotating said disk in one direction, an intermediate disk mounted on said central support and adapted to be rotated in a direction opposite to the direction of the distributing-disk, and an agitator-disk mounted upon and carried by said intermediate disk.

2. In a seed-planter of the character described, the combination of a shell or base provided with a central support and a concentric annular shoulder, a distributing-disk mounted on said annular shoulder, means for rotating said disk in one direction, an intermediate disk mounted on said central support and adapted to be rotated in a direction opposite to the distributing-disk, an agitator-disk mounted upon and carried by said intermediate disk and having on its upper surface spiral agitator-wings, and an opening in the shell at one side thereof to permit the passage of seed from the hopper to the distributing-tube.

3. In a seed-planter of the character described, the combination of a shell or base provided with a central support and a concentric annular shoulder, a distributing-disk mounted on said annular shoulder and provided with peripheral distributing-spaces, means for rotating said disk in one direction, an intermediate disk mounted on said central support and adapted to be rotated in a direction opposite to the distributing-disk, an agitator-disk mounted on and carried by said intermediate disk, wings on said agitator-disk and an opening in one side of the shell to permit the passage of the seed to the distributing-tube.

4. In a seed-planter of the character described, the combination with a suitable carriage or support, of a shell or base provided with a central support and a concentric annular shoulder, a distributing-disk, mounted on said annular shoulder and provided with gear-teeth on its under side, an intermediate disk mounted on said central support and provided with teeth on its under side, an agitator-disk mounted on and carried by the intermediate disk, said distributing-disk being provided with peripheral distributing-spaces, a driving-shaft, a gear-wheel mounted on said shaft for driving the distributing-disk in one direction, and a gear-wheel mounted on said shaft for driving the intermediate disk in the opposite direction.

5. In a seed-planter of the character described, the combination with a cultivator and a power-wheel mounted thereon; of a cylindrical shell or base, an opening in one side thereof, the said opening leading from the interior thereof to the dropping-tube, a central support, a cylinder-gear seated on said support, annular shoulders in said shell, a distributing-ring supported on said shoulders and provided with gear-teeth on the under side thereof, a separator and agitator superimposed on said distributing-ring and carried by said circular gear, mechanism secured to the under side of said shell and connected with the power-wheel on the cultivator, whereby the distributing-ring and the agitator and separator are rotated in opposite directions to separate and give an even distribution of the seeds to be planted, as set forth.

6. In a seed-planter of the character described, the combination with a cultivator, and a power-wheel mounted thereon; of a cylindrical shell or base, a hopper mounted thereon, supporting-arms for holding said shell to the cultivator, a central upwardly-extending annular support in said shell, a circular gear provided with a flange and seated on said support, annular shoulders in said shell, a distributing-ring supported on said shoulders and provided on the under side thereof with

gear-teeth, a superimposed cap-shaped separator and agitator carried by said circular gear, shafts secured to the under side of said shell and provided with suitable pinions rigidly secured thereon, a driving clutch-gear loosely mounted on said shaft, means for shifting said driving-clutch into and out of engagement with one of said pinions, and means for transmitting power from the power-wheel to said driving-gear, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES H. WOLFE.

Witnesses:

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