

No. 703,357.

Patented June 24, 1902.

I. A. WEAVER.  
CORN PLANTER.

(Application filed Nov. 18, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

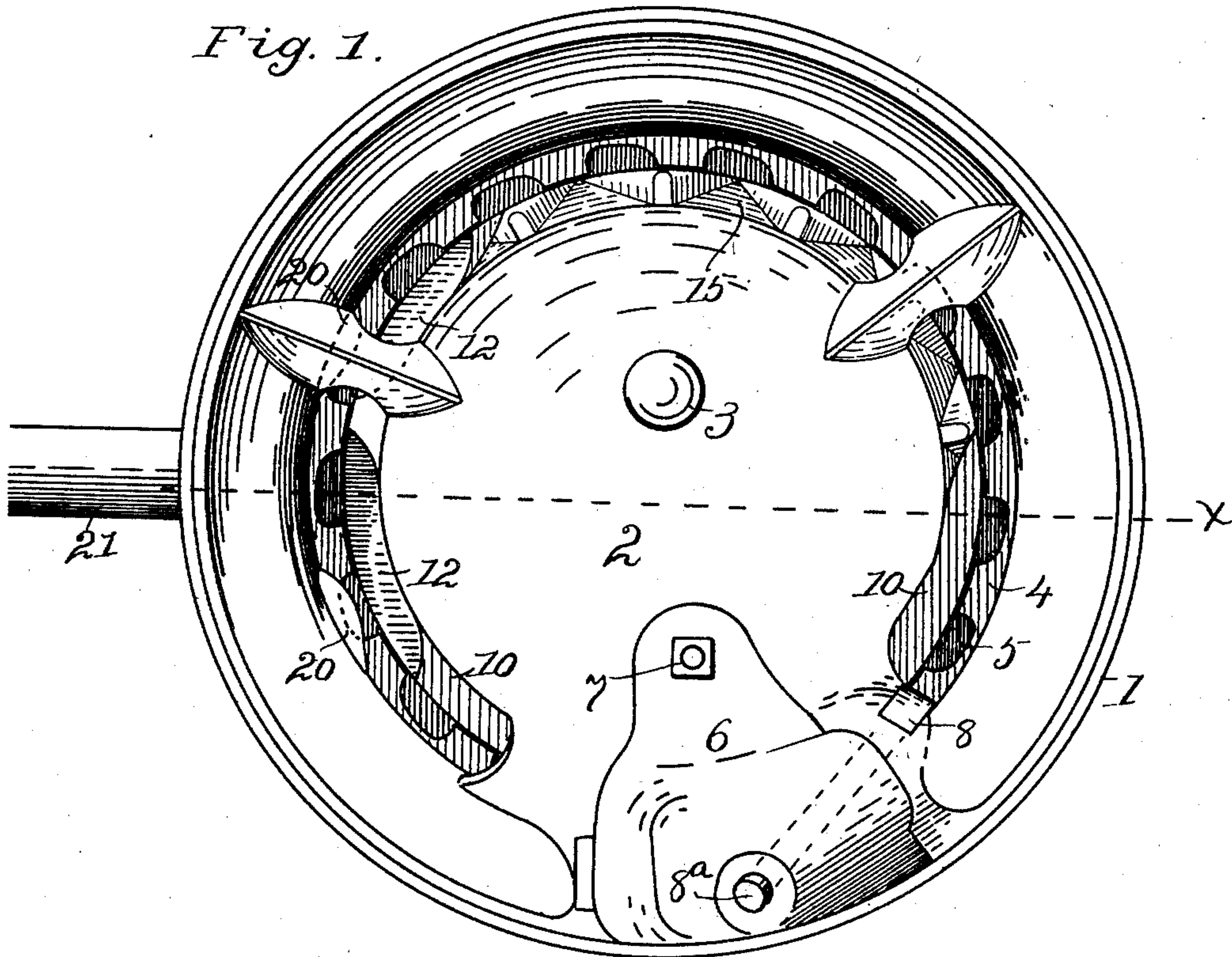
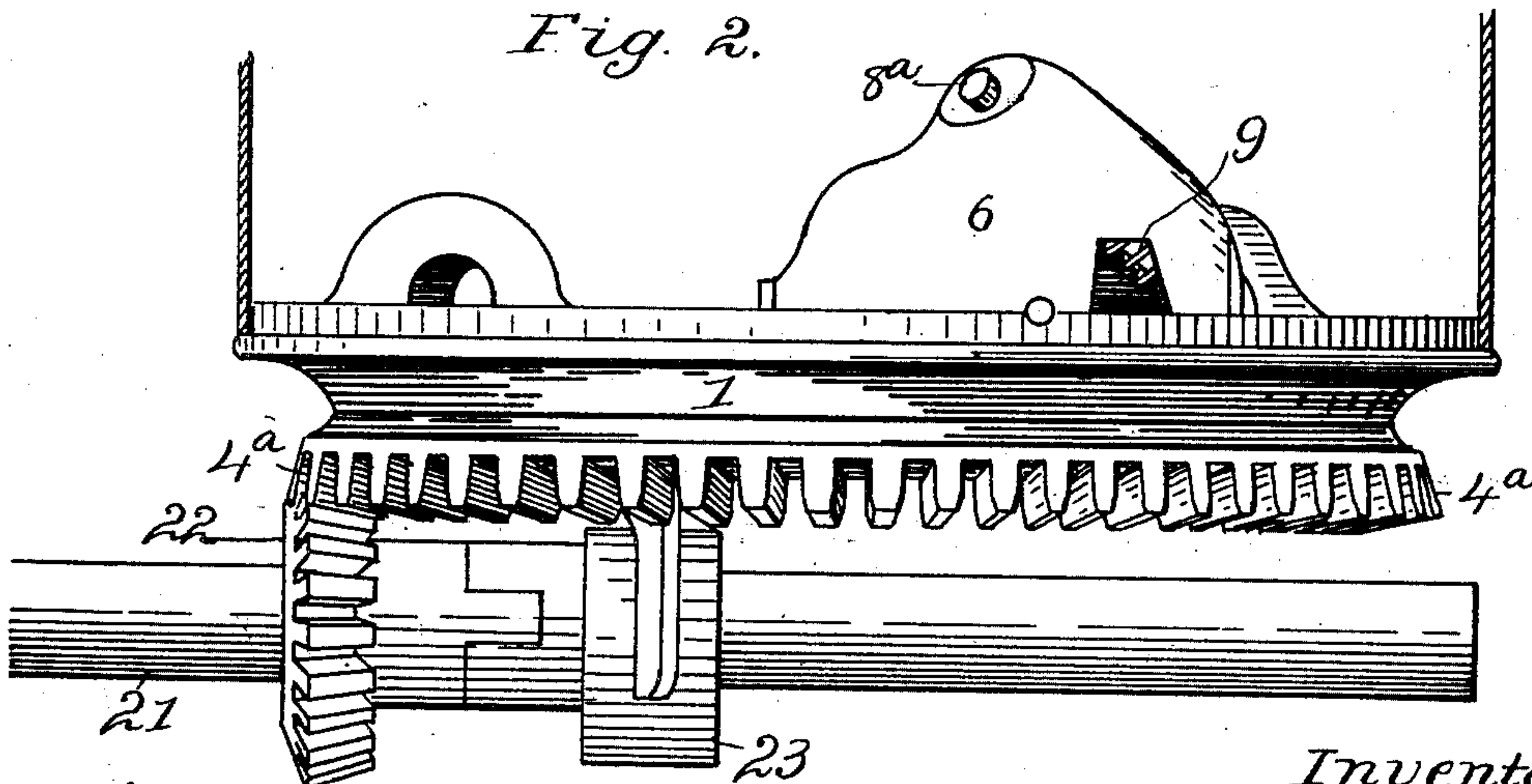


Fig. 2.



Witnesses.

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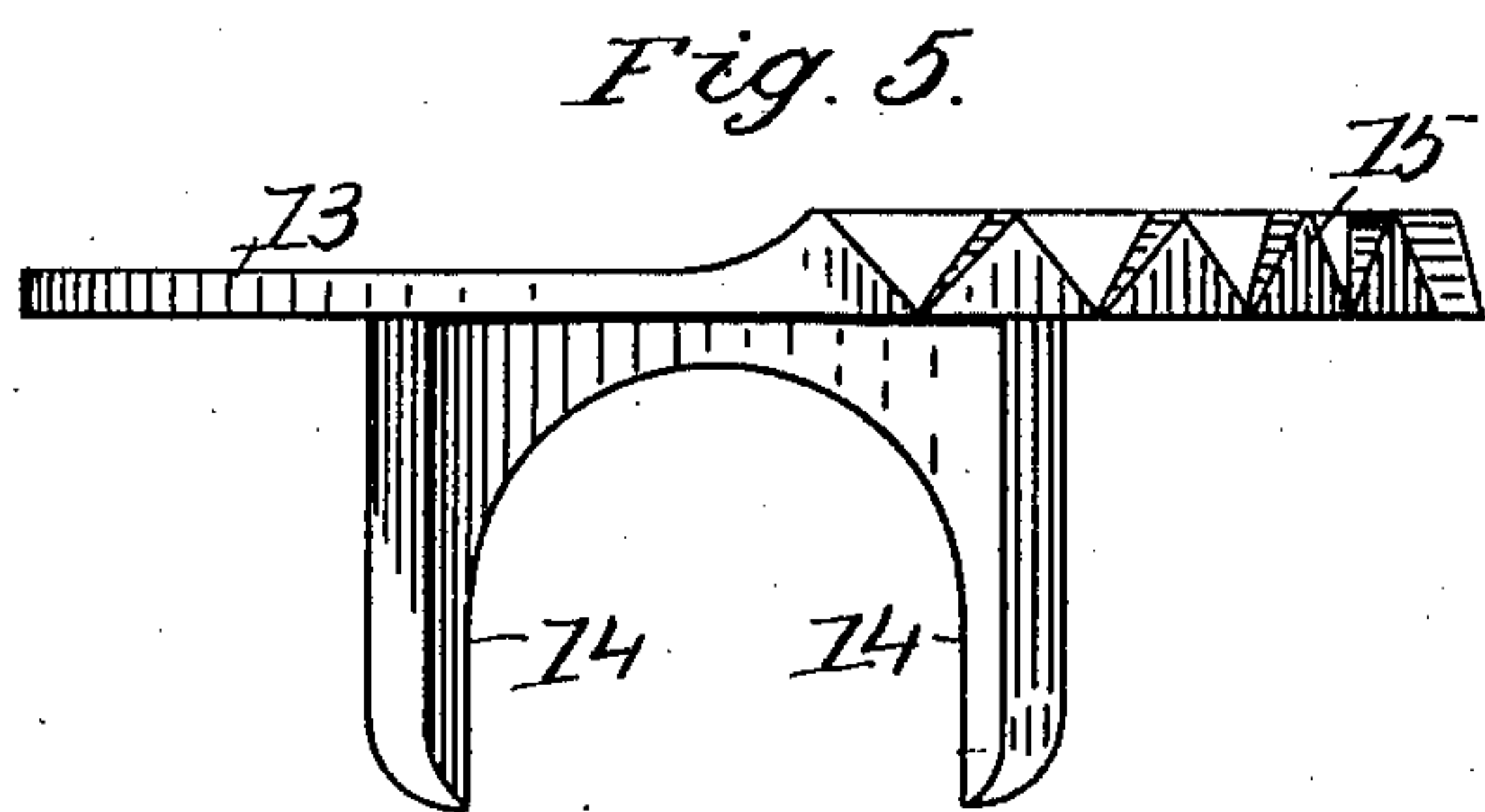
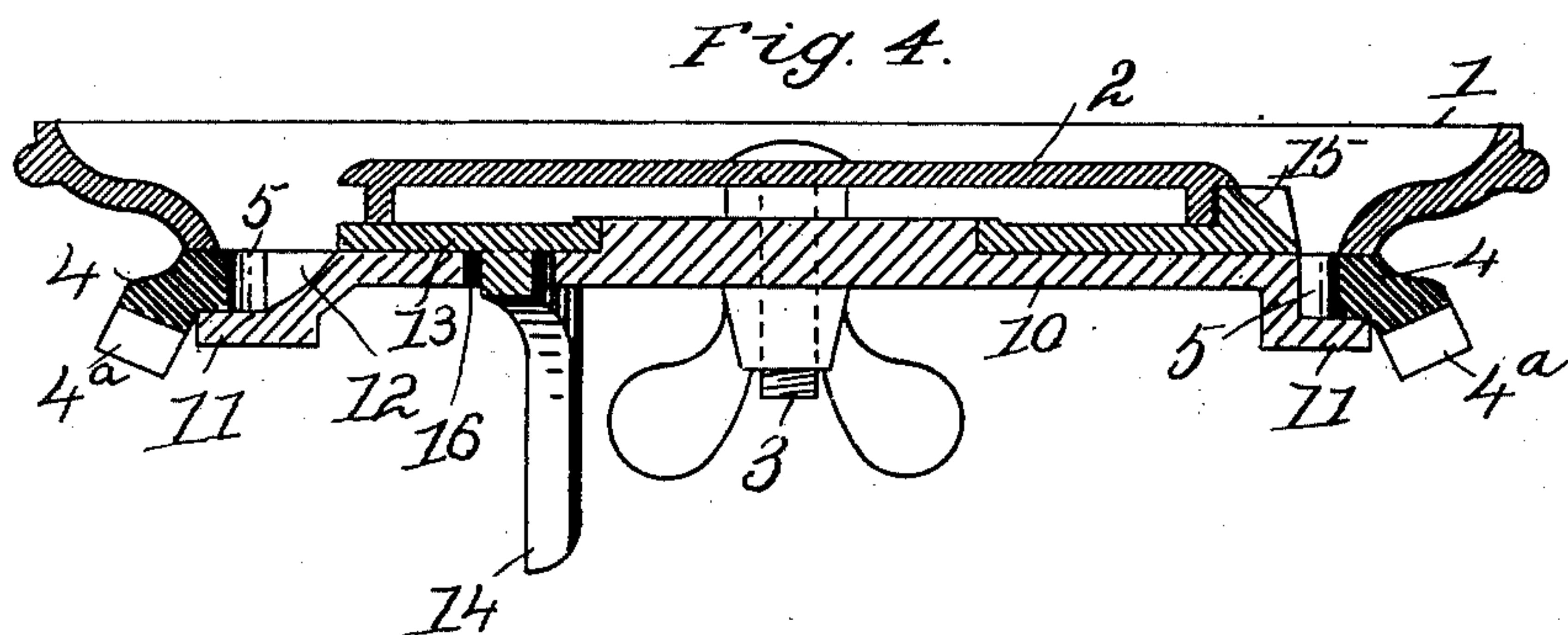
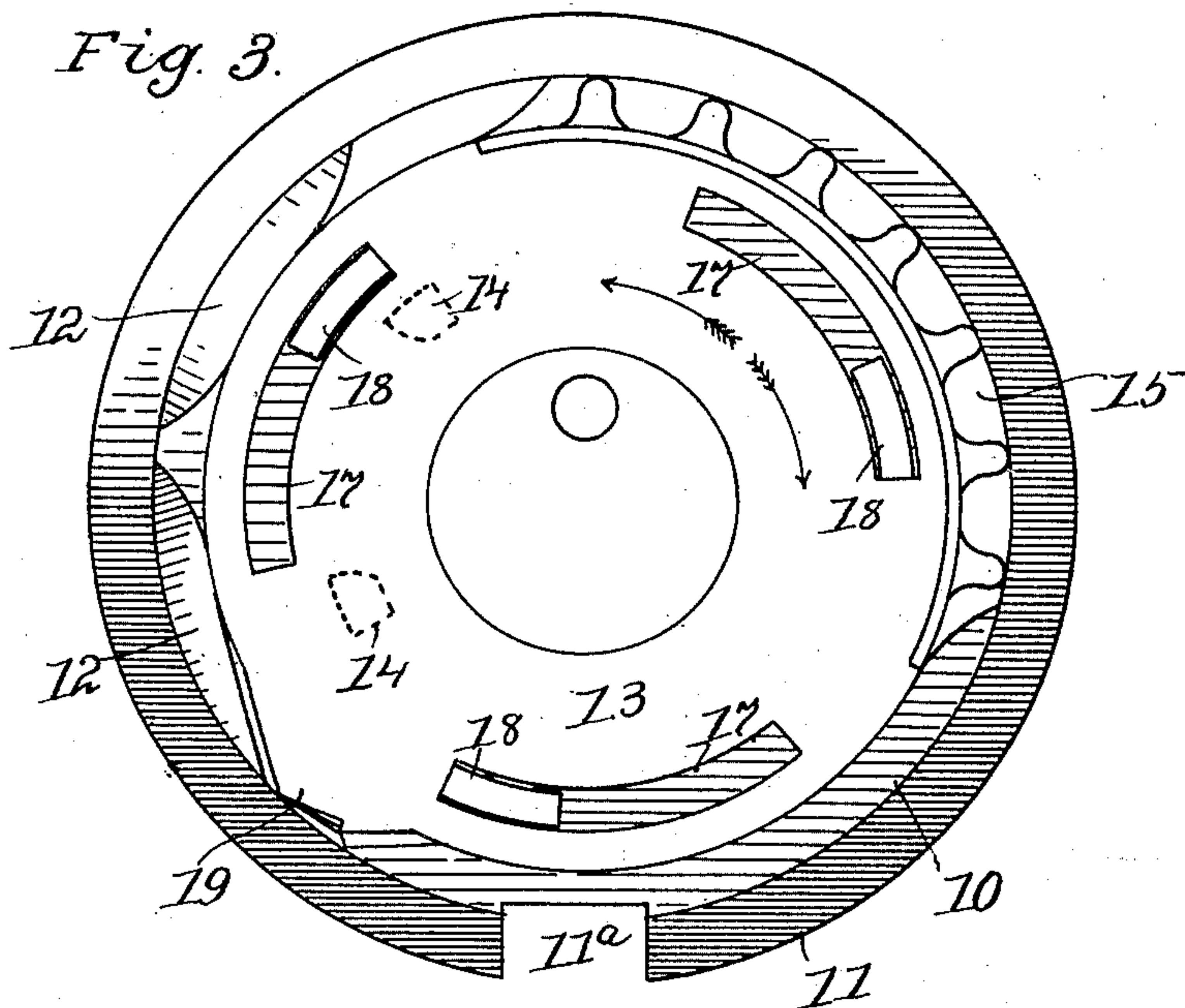
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# UNITED STATES PATENT OFFICE.

IRA A. WEAVER, OF SPRINGFIELD, ILLINOIS, ASSIGNOR TO SATTLEY MANUFACTURING COMPANY, OF SPRINGFIELD, ILLINOIS, A CORPORATION OF ILLINOIS.

## CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 703,357, dated June 24, 1902.

Application filed November 18, 1901. Serial No. 82,773. (No model.)

*To all whom it may concern:*

Be it known that I, IRA A. WEAVER, of the city of Springfield, county of Sangamon, and State of Illinois, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

This invention relates to the dropping mechanism of planters. One of its objects is to provide for depositing grains of corn edge-wise in cells, each adapted to receive a single grain. Another of its objects is to release the superfluous grain when two grains may chance to occupy the same cell, and another of its objects is to dislodge and arrange disarranged grains without breaking them. The object first named is attained by placing an oscillating feeder alongside the cells of the seed-plate, the second object is attained by leaving the cells open on one side and providing an open space into which the superfluous grains may escape, and the third object is attained by setting the cut-off in an oblique position, so that the yield of the engaging end of the cut-off will be upward and backward with relation to the direction of the travel of the cells.

The invention is exemplified in the structure hereinafter described, and it is defined in the appended claims.

In the drawings forming part of this specification, Figure 1 is a plan of the bottom of a seedbox constructed in accordance with my invention. Fig. 2 is an elevation of the seedbox-bottom. Fig. 3 is a plan of the bottom plate and the feeder-plate of the seedbox. Fig. 4 is a section on line X in Fig. 1. Fig. 5 is an elevation of the feeder-plate.

At 1 is shown an annular plate to which the seedbox is attached, and at 2 is shown a disk concentric with the annular plate 1. The disk is smaller in its greatest diameter than the smallest diameter of plate 1, and between the plate and the disk is a groove that describes the greater part of a circle. The disk 2 and the plate 1 are cast in one piece. They constitute a cover for the seed-wheel, and the circular slot in the cover permits the passage of corn to the exposed seed-cells. A cut-off housing 6 is attached to the cover-disk by means of a bolt 7, and the shank

8<sup>a</sup> of the cut-off 8 has oblique sliding bearings in the housing 6. The shank of the cut-off extends upward and backward in the housing, and it has a spring, as 9 in Fig 2, that tends to hold the cut-off protruded and in contact with the seed-wheel. The seed-wheel 4 is in this instance an annular rim with gear-teeth 4<sup>a</sup> projecting obliquely from its perimeter and seed-cells 5 cut into its inner surface. The upper surface of the bottom plate 10 is flush with the upper surface of the seed-wheel. At the inner circle of the seed-wheel the bottom plate jogs downward to form the inner wall of the seed-cells, and a flange 11 on the perimeter of the bottom plate forms a support for the seed-wheel and a bottom for the cells thereof. At a point in the cut-off housing the flange 11 is cut away, as shown at 11<sup>a</sup> in Fig. 3, to form a discharge-opening for the grain. The disk 2 of the cover-plate is smaller in diameter than the diameter of the circle of the seed-cells, and a part of the raised surface of the bottom plate is exposed. At one or more places the raised part of the bottom plate is cut away from the cells, as shown at 12, and the surface left is oblique with relation to the vertical and gradually inclined at its conjunction with the circle defining the general contour of the raised part of the bottom plate. Inclined extensions 20 are formed on the part 1 of the cover-plate above the seed-cells and opposite the cut-away spaces 12, and these extensions coact with the seed-wheel and the beveled surfaces of the cut-away spaces in a manner and for a purpose hereinafter explained.

A feeder-plate 13 is pivoted between the cover-plate disk and the bottom plate. It conforms in outline for a part of its circumference to the disk 2, and it has a pair of downward-extending fingers 14, that pass through a slot in the bottom plate and straddle an eccentric cam 23 on a drive-shaft 21. A part of the perimeter of the feeder-plate projects beyond the disk of the cover-plate, as shown at 15, and this extended part is raised and provided with protuberances capable of agitating the corn. A part 19 of the feeder-plate may extend over the seed-cells in the rear of the cut-off housing, and bearings 18 may ex-



tend from the bottom plate through slots 17 of the feeder-plate.

The seed-wheel is given continuous rotary motion in one direction by a pinion 22 on the drive-shaft, and the feeder-plate is rocked back and forth by action of the eccentric on fingers 14. The feeding-surface 15 extends alongside the cells of the seed-wheel, and the agitation imparted to the seed by the oscillating motion of the feeder insures the filling of the seed-cells by grains on edge. If two grains should be carried by one cell, one will of necessity extend above the seed-wheel and engage the cut-off, and the cut-off will yield backward and upward, raising the point of contact with the grain until sufficient leverage is gained to tilt the extra grain out of the cell. As the feeder-plate oscillates the extension 19 passes in and out below the cut-off housing in the rear thereof and tends to force corn into the cells. Should it force two grains to occupy one cell, one lying alongside the other, the outer one will be forced over into one of the cut-away spaces 12 by an incline 20, while the other, if disarranged in the cell, will be carried back into position by the inclined surface at the end of the cut-away space.

The protuberances on the stirring-surface 15 of the feeder-plate may be made of any desired shape and size, and they may even be omitted without losing all the advantages derived from the oscillating motion. The protuberances are preferably rounded on their edges to avoid cutting the corn.

I claim—

1. In a dropper for corn-planters, the combination with a seed-wheel having seed-receiving cells, of a stationary wall alongside one side of the line of travel of the cells, and an oscillating wall along the opposite side of the line of travel of the cells.

2. In a dropper for corn-planters, the combination with a seed-wheel having seed-receiving cells, of a stationary wall alongside one side of the line of travel of the cells, an oscillating wall along the opposite side of the

line of travel of the cells, and extensions on the oscillating wall projecting toward the cells.

3. In a dropper for corn-planters, the combination of a seed-wheel having seed-receiving cells, a plate above the seed-wheel having a feeder extension disposed alongside the line of travel of the cells, a pivot for the feeder-plate concentric with the seed-wheel, means for rotating the seed-wheel and means for oscillating the feeder-plate.

4. In a dropper for corn-planters, the combination of a seed-wheel having seed-receiving cells, a feeder-plate pivoted concentric with the seed-wheel, fingers depending from the feeder-plate and a cam between the fingers to impart oscillating motion to the feeder-plate.

5. In a dropper for corn-planters, the combination of a toothed seed-wheel having seed-receiving cells, a feeder-plate pivoted concentric with the seed-wheel, fingers depending from the feeder-plate, a shaft below the seed-wheel a pinion on the shaft to drive the seed-wheel and a cam on the shaft to oscillate the feeder-plate by engaging the fingers thereof.

6. In a dropper for corn-planters, the combination of an annular seed-wheel having seed-cells formed in its inner circumference, a stationary plate forming the inner walls of the cells, such plate being cut away from the cells throughout a part of its circumference and a stationary incline opposite the cut-away space tending to force grains out of the cells and into the cut-away space.

7. A cut-off for the seed-plates of planters, comprising a housing, a cut-off having a shank extending obliquely upward and backward through the housing, and a spiral spring in the housing tending to hold the operative end of the cut-off protruded from the housing.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

IRA A. WEAVER.

Witnesses:

JAMES H. MATHENY,  
MAY JENKINS.