

(No Model.)

2 Sheets—Sheet 1.

J. SELBY.
CORN PLANTER.

No. 576,624.

Patented Feb. 9, 1897.

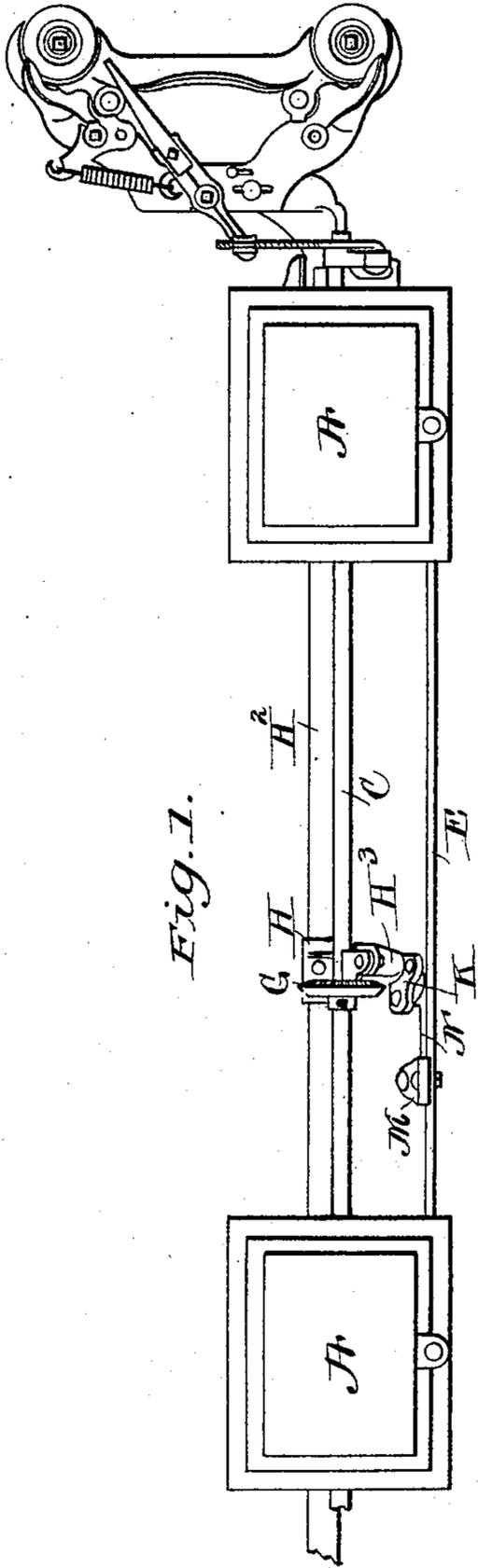


Fig. 1.

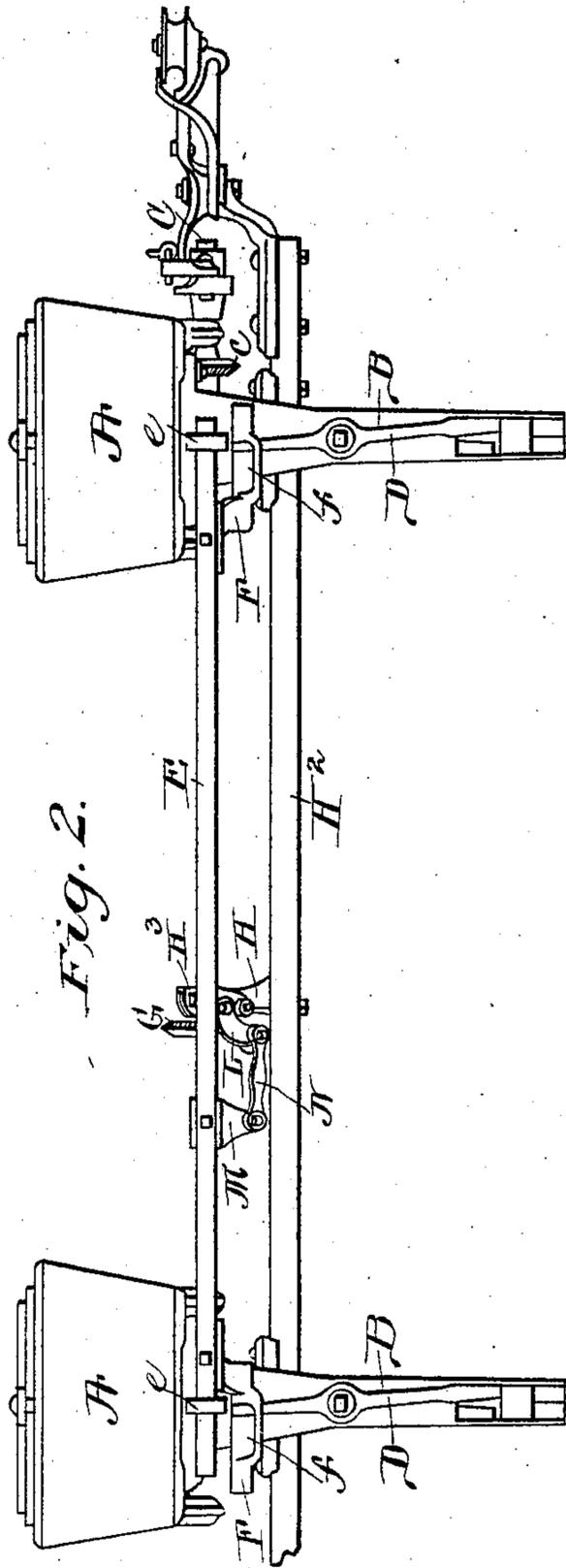


Fig. 2.

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 Abraham Jacobson

Inventor:
 James Selby
 by W. V. Tuff
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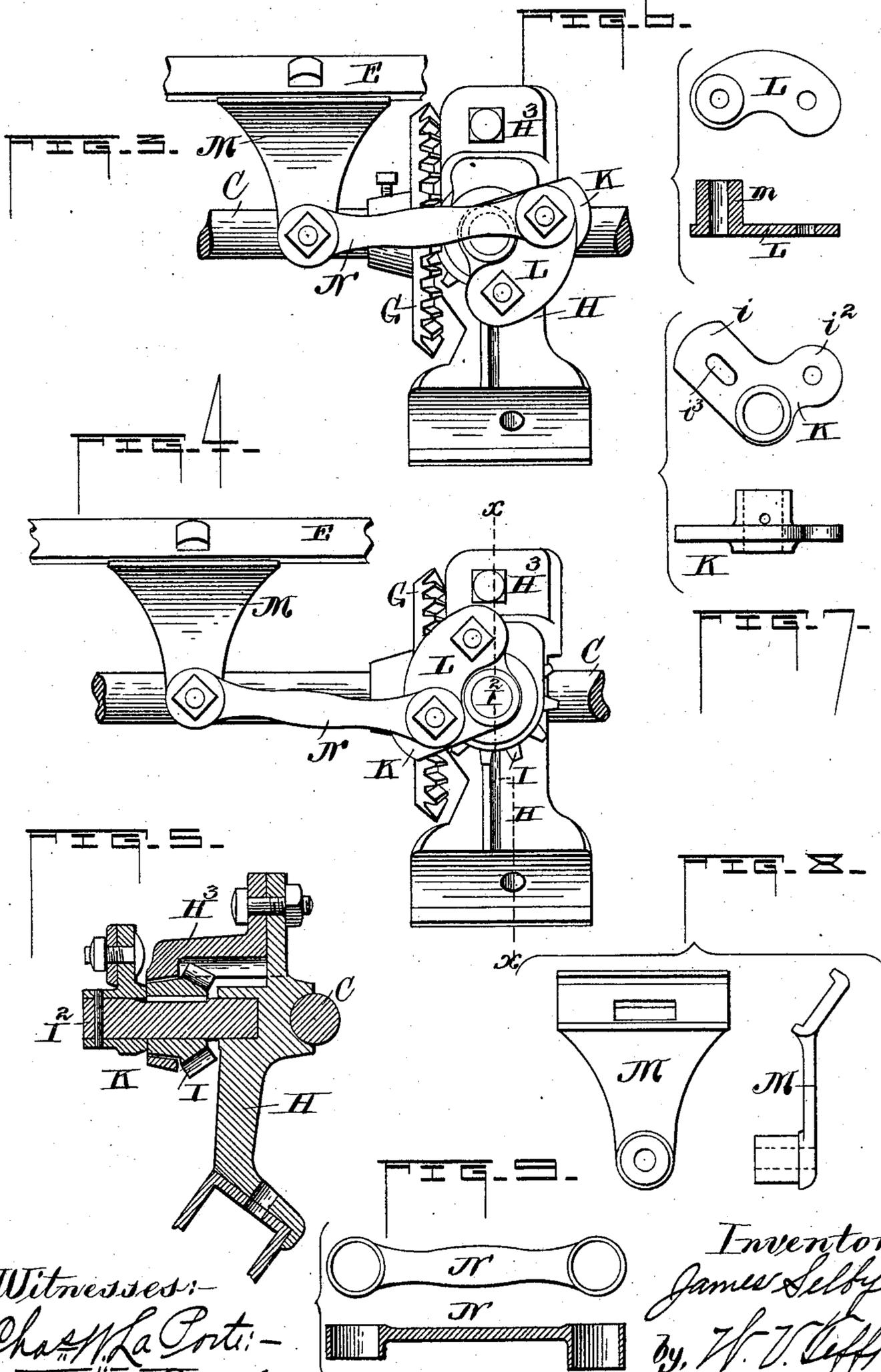
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No. 576,624.

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Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES SELBY, OF PEORIA, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 576,624, dated February 9, 1897.

Application filed September 3, 1895. Serial No. 561,381. (No model.)

To all whom it may concern:

Be it known that I, JAMES SELBY, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in corn-planters, by means of which a simple appliance is added to the usual construction of the same that renders it much more efficient in its working.

My invention relates particularly to an appliance for operating the dropping-valves of a corn-planter through mechanism connecting the valves and the usual shaft carrying the gears for turning the dropping-plates, whereby the valves are laterally shiftable alternately in opposite directions by a positive movement derived from the said shaft and delivered to the said valves in a direction at right angles with the direction of rotation of the said shaft.

My invention consists, essentially, in the provision of a bar connecting the upper free ends of the pivoted laterally-shiftable dropping-valves and mechanism connecting the said bar with the shaft that bears the gears that turn the dropping-plates in such a manner that the bar will be shifted alternately in opposite directions and at right angles with the direction of movement of the said shaft.

That my invention may be more fully understood reference is had to the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a corn-planter with my device shown in connection therewith. Fig. 2 is a rear view of the same. Fig. 3 is a detail view of my preferred mechanism for conveying the movement of the shaft to the bar, which parts have been referred to above. Fig. 4 is a detail view of the same parts, but showing a different adjustment of movable parts thereof. Fig. 5 is a section through the line X X, Fig. 4, showing structural relation of the parts. Figs. 6, 7, 8, and 9 are details of construction of shiftable parts of the device.

In the drawings, A A are the usual corn-

boxes connected with a planter. B B are the usual shanks depending from said boxes and are divided internally to provide two delivery-chutes in each shank, which construction is common to a great many corn-planter shanks.

C is a shaft extending across the planter-frame and carrying gears *c*, which mesh with gears connected with the dropping-plates and is designed to operate the dropping-plates in the usual way, this feature, as well as those just before pointed out, being common to a great many corn-planters now in use.

D D are dropping-valves pivoted to the outside of the shanks B B in the manner shown.

So much of the mechanism as I have just described has been in use for a number of years, and I make no claim to these parts.

The means for operating the dropping-valves that has been used in connection with the above-said parts has generally demanded a spring for use in connection therewith to provide for one direction of movement of the valves. In practice I have found this means for actuating the valves insufficient and undesirable for practical use, and I am seeking to protect in this application for patent a means for actuating the valves in which no spring is employed and the action to which mechanism is positive in its nature, rendering obstruction to the shifting of the valves impossible.

In carrying out the invention I provide the bar E, which is carried near its extremities in the loops *ee* and is connected with the upper ends of the pivoted dropping-valves D D by means of the plates F F, which are bolted to the said bar and carry loosely the upper ends of the said dropping-valves in slots *ff*, provided therein, which said slots are long enough to take up or provide for the excess in the length of shift of the said bar.

G is a bevel gear-wheel fixed upon shaft C.

H is a frame-support connected with the cross-piece H² and supports the bevel cog-wheel I, providing a journal-bearing therefor in connection with the part H³, which is substantially an arm supporting a collar at its extremity, which engages or supports and holds in place one end of the journal and against which the cog-wheel I abuts.

Referring to Figs. 4 and 5, the part K is a plate fixed upon the outer end of the spindle

I², said plate having the extensions *i i*², the extension *i* being provided with the slot *i*³. L is a supplemental plate having perforations matching with the perforations in the plate K and is designed to be bolted thereto, the supplemental plate L being provided with the perforated sleeve *m*. M is a detachable stud or projecting plate secured to bar E, and N is a reach connecting the plate M with the sleeve *m* on supplemental plate L, the said reach being pivotally bolted to plate M, and the supplemental plate and reach being also bolted to plate K, and the slot *i*³ is provided in plate K to accommodate the taking up of any lost motion resulting from long use of the machine, so that bar E may always be shifted the same distances.

Besides the parts particularly referred to in the drawings heretofore I have also shown a check-rower appliance on one end of the machine, as it would assist in making clear the particular class of machine to which my device is applicable.

The operation of the device may be easily understood by an examination of the drawings; but to make it perfectly clear I desire to call attention to the bevel cog-wheel G on shaft C, which said shaft being turned in the usual way or in any suitable manner will cause the dropping-disks to be actuated in the usual way for dropping the corn. Such movement also will turn bevel cog-wheel G, which movement will be transmitted through bevel cog-wheel I, meshing therewith, the plate formed of the parts K and L, the part K, fixed upon spindle I², the reach N, pivoted upon said plate, forming an eccentric connecting with spindle I², and the stud M, secured to bar E and with which the said reach N is pivotally connected, and the bar E to the pivoted dropping-valves D D, with the upper ends of which the said bar is connected through the plates F F, carrying the ends loosely within slots in the said plates, which slots take up or provide for excesses in the length of movement of the said bar, as such movement is longer in distance than it is desired or practical that the valves shall be shifted, and the continued turning of the shafts will cause the bar to be shifted alternately in opposite directions continuously, which will cause the valves also to be shifted alternately to open and close the separate chutes in each shank, the movement of the valves, however, being intermittent, as they will be idle or stationary by the ends of the valves.

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

1. In a corn-planter, a revolving shaft and seed-plates operated thereby, a reciprocating bar operating valves in seed-shanks under said seed-plates, a bevel cog-wheel on said revolving shaft, a bevel cog-wheel suitably supported and meshing therewith, a cam-plate operated by such gear connection and a connecting-link between the cam and the reciprocating bar, all substantially as described and shown.

2. In a corn-planter, having seed-hoppers with seed-plates therein and seed-tubes having valves therein, a revolving shaft operating the plates and a reciprocating bar operating the valves, a cam-plate supported upon a short shaft at right angles with the said revolving shaft and connected with the bar by means of a pivoted link and matching gears upon the seed-disk-operating shaft and the shaft that supports the cam, all substantially as described and shown.

3. In a corn-planter, the combination, with a revolving shaft for operating the seeding devices and a reciprocating bar for operating the valves in seed-tubes, of a cam-plate pivotally connected by means of a link with the reciprocating bar and connected with the revolving shaft by means of suitable gear-wheels, all substantially as described and shown.

4. In a corn-planter, having seeding devices operated by a revolving shaft and seed-tubes having valves therein operated by a reciprocating bar, a cam-plate made in two parts, adjustable the one upon the other, carried upon a short shaft bearing at right angles with the shaft that operates the seeding devices, and connected with a reciprocating bar by means of a link, pivoted to a projection from the bar and eccentrically upon the cam-plate and matching bevel-gears upon each of the shafts, all substantially as described and shown.

5. In a corn-planter, a revolving shaft for operating seed-plates, a reciprocating bar for operating valves in seed-shanks under seed-plates, provided with slotted portions near its extremities for loose engagement of the upper ends of said valves, a cam-plate on a short shaft at right angles with the shaft that operates the seed-plates and connected with the reciprocating bar by means of a link, and matching bevel-gears upon each of the shafts, all substantially as described and shown.

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

JAMES SELBY.

Witnesses:

E. E. PETERS,
H. S. HARTZ.