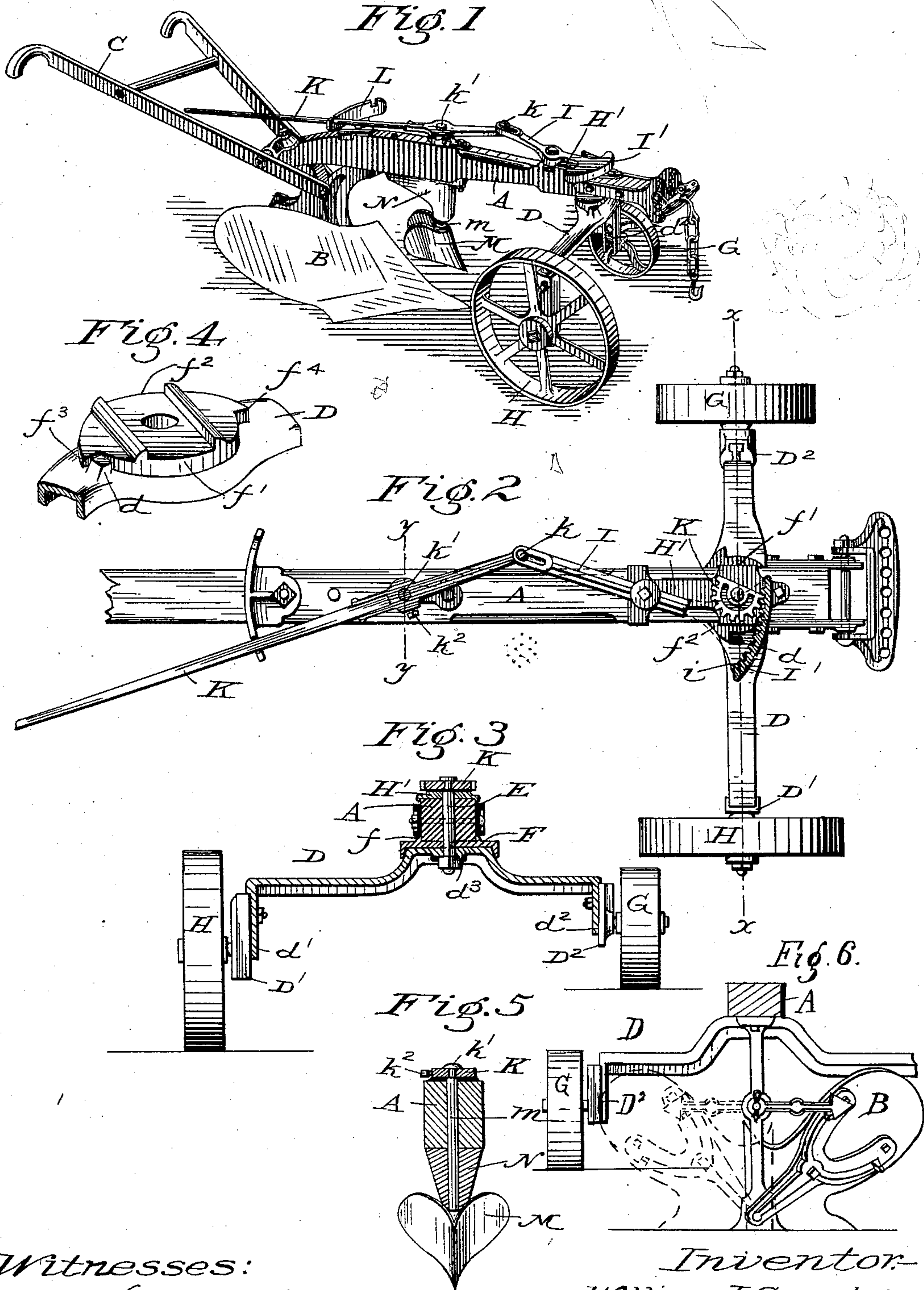


(No Model.)

W. L. CASADAY.
SWIVEL OR HILLSIDE PLOW.

No. 589,072.

Patented Aug. 31, 1897.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM L. CASADAY, OF SOUTH BEND, INDIANA.

SWIVEL OR HILLSIDE PLOW.

SPECIFICATION forming part of Letters Patent No. 589,072, dated August 31, 1897.

Application filed February 8, 1897. Serial No. 622,391. (No model.)

To all whom it may concern.

Be it known that I, WILLIAM L. CASADAY, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Swivel or Hillside Plows, of which the following is a specification.

My invention relates to an improved swivel or hillside plow; and the object of my invention is to provide a reversible double wheel-truck for a hillside or swivel plow which may be turned at will to adapt the wheel-truck to suit either a right or left hand turning plow and which also operates conjointly with a double moldboard-jointer, to convert the latter either into a right or left hand jointer, as will hereinafter appear.

My invention consists, primarily, in providing the forward end of the plow-beam with a swiveled axle, carrying at one end thereof a small land-wheel and at the other end thereof a larger furrow-wheel, the axle being provided with suitable means for reversing its position relatively to the beam of the plow to bring the said wheels either upon one side or the other side thereof, and thus adapt it for use either as a right-hand or a left-hand hillside-plow.

My invention also consists in providing the plow-beam, having a swiveled axle thereon, with suitable means for operating the axle to reverse its position thereon and also in connecting said means with a double moldboard-jointer in such manner that the said jointer and wheel-truck may be oscillated together to operate either as a right or left hand plow.

My invention further consists in certain details of construction and combinations of parts for carrying out the object of my invention in a preferred manner, as will hereinafter appear.

In the accompanying drawings, Figure 1 is a perspective view of a swivel-plow provided with my improved connections; Fig. 2, a plan view thereof; Fig. 3, a sectional front elevation through the swiveled wheel-truck in line *x x* of Fig. 2; Fig. 4, a perspective view, in enlarged detail, of the wheel-truck-axle swivel connection; Fig. 5, an enlarged sectional front elevation in line *y y* of Fig. 2, showing the double moldboard-jointer in po-

sition facing midway of its two positions; and Fig. 6 is a rear elevation of the swivel-share and jointer shown by full lines in one position, and by dot-lines in the other position.

A sidehill-plow beam A, with the usual swivel-share B and handles C, is provided at the forward end of the beam A with an axle D of novel construction, the latter being secured to the beam by a swivel-bolt E, passing vertically through the nose of the beam and also through a fifth-wheel or center casting F, secured to the under side of said beam and held from turning thereon by side flanges *f*, which receive the bottom edges thereof. The periphery of the center casting F has a reduced approximate half-circle *f'* and a greater approximate half-circle *f''*, connected by shoulders *f''' f''''*, against which a lug *d*, projecting from the axle D, abuts and holds the said axle square with the plow-beam.

The axle D has two vertical pedestals *d'* *d''*, each of which receive, respectively, the stud axle-blocks *D'* *D''*, to be adjustably secured thereon, and is made shorter upon one side than upon the other side of its pivotal connection. The small landside-wheel G being upon the short end and the large furrow-wheel H upon the longer arm of the axle, the latter will, whether placed upon the right or upon the left hand side of the plow-beam, exert a greater power to pull back and hold the stop-lug *d* thereon more firmly against the shoulders *f''' f''''* of the center casting F, and thus hold the axle square with the beam against the forward movement of the plow. When the axle is swung half round, the short end of the axle and the small landside-wheel G passes under the beam and the longer end of the axle and large furrow-wheel moves in a half-circle around the front end of the beam. This movement of the axle is preferably secured by the following-described means: The lower end of the swivel-bolt E is squared and fits through the square center hole of a boss *d'''* of the axle, and the upper end of said bolt is supported in a bearing in the cap-plate H', which is bolted to the beam, and is also provided with a bearing at its rear end for the pivot-bolt of a segment-lever I, which is thus adapted to swing horizontally over the plow-beam.

A segment-gear K is secured to the upper

end of the swivel-bolt E and engages with the teeth *i* of the segment-plate I' upon the forward end of the lever I, and when said lever is swung horizontally upon the beam from left to right or in a reverse direction, from right to left, the axle is caused to swing half round upon said swivel-bolt in either one direction or the other. The rear end of the segment-lever I is in this instance provided with a longitudinal slot to receive a pin *k* upon the end of a lever K, pivoted at *k'* to the upper side and near the middle thereof and extending rearwardly between the handles of the plow to within convenient reach.

A segment stop-plate L is secured to the top of the plow-beam, preferably in rear of the lever-pivot *k'*, and has notches therein to hold said lever either in the right or in the left position.

The adjacent ends of the levers I and K may be provided with segment-gears, which may engage with each other to thus oscillate one lever by the movement of the other, if this construction is considered preferable.

The plow is provided with a double-shovelled jointer M, supported upon a spindle *m* in bearings in a block N, secured to the under side of the beam, and may thus be made to act both as a right and as a left hand jointer.

The upper end of the jointer-spindle *m* is preferably made to provide the pivot *k'* of the shifting lever K, and the latter is secured thereto by means of a set-bolt *k''*, by which means the jointer is swung coincidently with the wheel-truck to bring one of its faces, which is adjacent to the land-wheel, parallel therewith and with the line of draft. By this means both the wheel-truck and jointer may be quickly turned together by simply shifting the hand-lever K, when the plow is swung beneath the beam to one side or the other thereof to become either a right or left hand turning plow.

Various changes may be made in the details of construction of the devices herein claimed without departing from my invention.

I claim as new and desire to secure by Letters Patent—

1. A swivel-plow provided at its forward end with swivel-truck comprising a double wheel-axle swiveled to the beam of the plow, a small land-wheel and a larger furrow-wheel supported upon said axle and adapted to be swung from one side to the other of the beam, substantially as described.

2. The combination with a swivel-plow, of an axle pivotally supported at the forward

end of the beam, a small land-wheel and a larger furrow-wheel journaled thereon at unequal distances from the pivotal center of the axle, a plate having a fixed stop secured to the beam and a stop-lug on the axle, substantially as and for the purpose described.

3. The combination with a hillside-plow of an axle carrying a land and a furrow wheel pivotally supported at the forward end of the beam to be reversibly connected therewith, a toothed plate secured to said pivot-bolt, a segment rack-lever pivoted to the beam and a hand-lever also pivoted to the beam to operate said segment rack-lever and axle, and a stop-plate secured to the beam for holding the hand-lever in either of its positions substantially as described.

4. The combination with a swivel-plow, a wheel-truck pivotally supported upon the forward end of the plow-beam, a lever for reversing the position of the truck-axle, a double moldboard-jointer swiveled upon the plow-beam and a hand-lever connected to the said jointer and beam to operate the wheel-truck and jointer conjointly, substantially as described.

5. The combination with a swivel-plow, of a wheel-truck swiveled to the beam, a gear upon the truck-pivot, a segment rack-lever pivoted to the beam to engage the gear upon the truck-pivot, a swivel-jointer supported upon a spindle passing through the plow-beam and a hand-lever secured to the jointer-spindle and connected to the segment rack-lever to operate the wheel-truck conjointly with the jointer, substantially as described.

6. The combination in a hillside or swivel plow, of the axle pivotally secured to the forward end of the beam and carrying wheels adjustably secured to the axle and adapted to be reversed therewith upon the beam, substantially as described.

7. The combination in a hillside-plow, of the axle pivotally secured to the forward end of the beam and carrying wheels supported upon the axle to bear at unequal elevations respectively upon the land and in the furrow and adapted to be reversed therewith upon the beam, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in the presence of two subscribing witnesses.

WILLIAM L. CASADAY.

Witnesses:

W. H. ROWE,
JOHN CROSS.