J. N. WATROUS & C. MINOR.

SIDEHILL PLOW.

APPLICATION FILED JUNE 30, 1909.

949,922.

Patented Feb. 22, 1910.

2 SHEETS—SHEET 1.

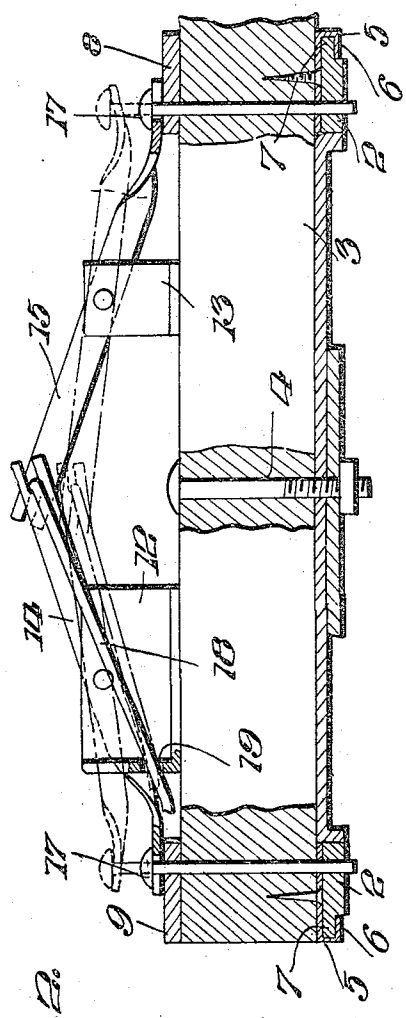

Fig. 2.

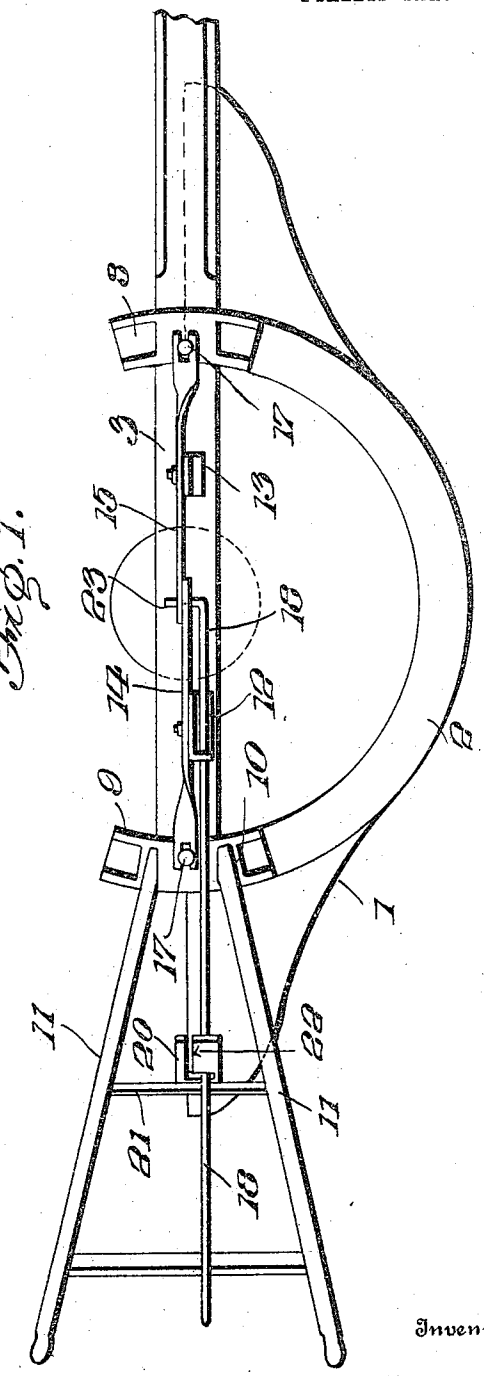

Fig. 1.

Witnesses

W. N. Woodcock

Juana M. Fallin

Inventors

John N. Watrous

Charles Minor

By A. W. Mackey, Attorneys.

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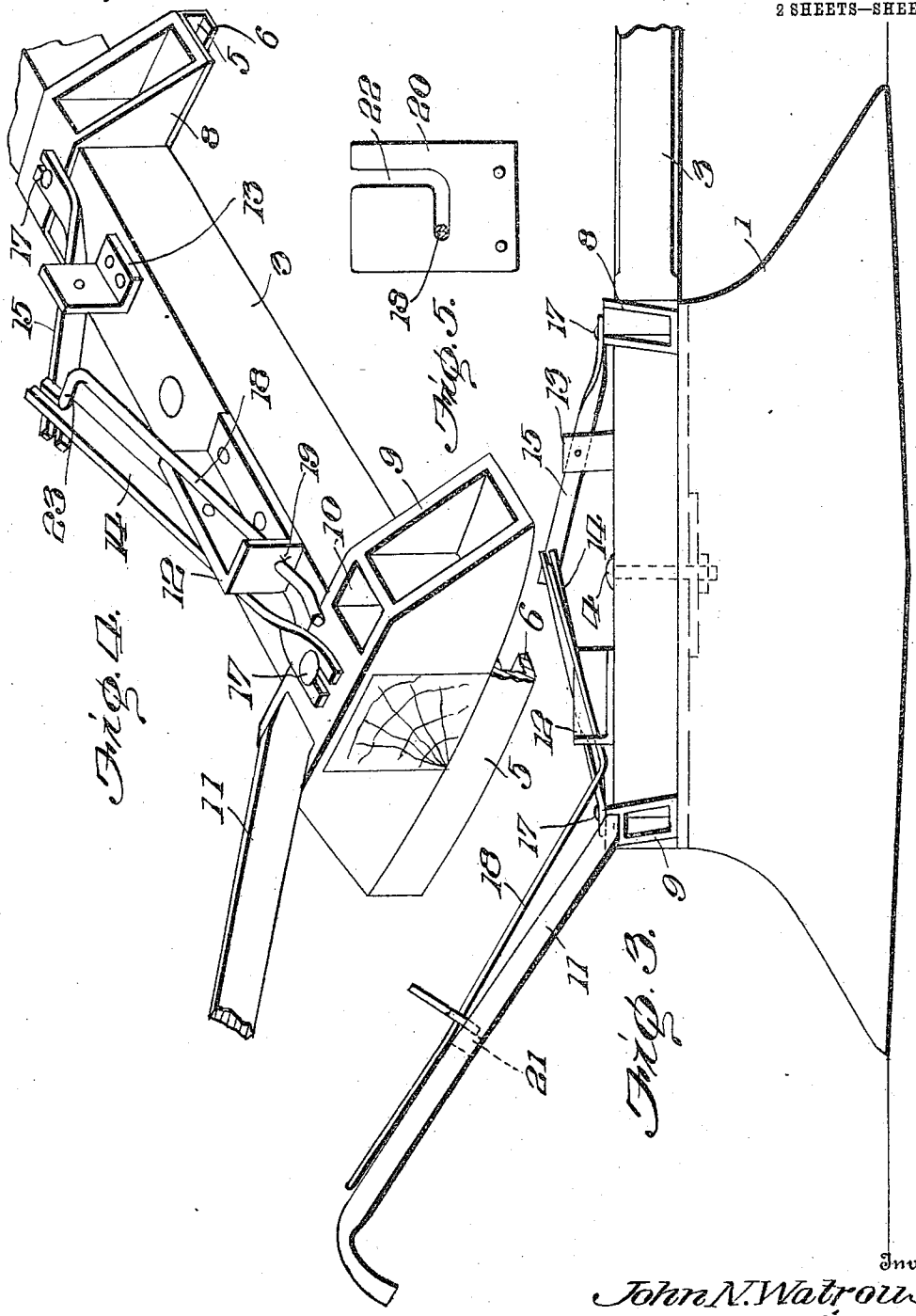

Fig. 5.

Fig. 4.

Fig. 3.

Witnesses

H. N. Henderson.

Juana M. Fallin,

Inventor

John N. Watrous

Charles Minor

By A. H. Macy, Attorneys.

UNITED STATES PATENT OFFICE.

JOHN N. WATROUS, OF THOMASTON, AND CHARLES MINOR, OF PLYMOUTH, CONNECTICUT, ASSIGNORS OF ONE-THIRD TO EDWARD C. ROOT, OF THOMASTON, CONNECTICUT.

SIDEHILL-PLOW.

949,922. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed June 30, 1909. Serial No. 505,176.

To all whom it may concern:

Be it known that we, JOHN N. WATROUS and CHARLES MINOR, citizens of the United States, residing at Thomaston and Plymouth, respectively, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Sidehill-Plows, of which the following is a specification.

This invention comprehends certain new and useful improvements in plows and the primary object of the invention is an improved construction of side-hill plow embodying a double mold-board to turn the furrows all one way, together with a pivoted or swinging beam which may be easily reversed so that its forward end will face in either direction, whereby when the end of a furrow is reached, the beam and handles may be reversed as the beam turns around, without the necessity of unhooking the mold-board and lifting the beam up over the top of same, it being only necessary with our construction of device, after the beam has been reversed, to simply pull the plow aside enough to take another furrow.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts which we shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a top plan view of a plow constructed in accordance with our invention; Fig. 2 is a side elevation of a portion of the beam, partly broken away or in section. Fig. 3 is a side elevation of the entire plow; Fig. 4 is a perspective view, on an enlarged scale, of a portion of the beam, and Fig. 5 is a detail view of a locking plate hereinafter specifically described.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The mold-board 1 of our improved plow is two-ended or double, as shown, and has secured to its upper edge and to the plow share a horizontally disposed semi-circular bar 2.

3 designates the beam. The beam 3 is pivotally connected intermediate of its ends to the mold-board, as by the king bolt 4 so as to permit the beam to swing around and reverse its position end for end so that its forward end or clevis will project forwardly from either end of the mold-board. The beam 3 has secured to it, at opposite sides of the king bolt 4, curved shoes 5, which are formed with lower angular edges 6 designed to take underneath a flange 7 formed on the outer edge of the curved bar 2 so as to effect a proper guiding connection between the beam and bar in the turning movement of the former. Braces 8 and 9 are secured to the top side of the beam 3 just above the shoes 5, as shown, the brace 9 being provided in its upper face with sockets 10 in which the angularly disposed ends of the plow handles 11 are received.

12 and 13 designate, respectively, brackets which are secured to the upper side of the plow beam 3. Levers 14 and 15 are fulcrumed intermediate of their ends on the respective brackets, the adjoining ends of said levers overlapping, as shown, and having a slot and pin connection with each other so as to effect a corresponding movement of both levers when one of them is actuated. The outer ends of the levers 12 and 13 are recessed or forked, as indicated at 16, and carry locking pins 17 which extend downwardly through the braces 8 and 9 and through the beam 3 into locking engagement with keepers or apertures formed in the curved bar 2.

An actuating handle 18 is secured to the lever 14 and extends through an opening 19 in the end of the bracket 12 and is thence angularly bent and extends upwardly between the handles 11 and is designed for locking engagement with a keeper plate 20 which is secured to one of the cross braces 21 of the handles. The plate 20 is formed with an angular slot 22, as shown, so that the actuating handle 18 may be thrust downwardly through the vertical portion of said slot and given a side movement into the horizontal portion thereof, so as to lock the handle. Preferably, the inner end of the handle 18 is laterally bent, as indicated at 23, so as to form the adjustable connection between the overlapping slotted ends of the levers 14 and 15.

From the foregoing description in connection with the accompanying drawings,

it will be understood that in the practical use of our improved plow, when the end of a furrow is reached, it is only necessary to raise the rear or free end of the handle 18 which will cause the overlapping arms of the levers 14 and 15 to lower and thereby raise the locking pins 17 out of their sockets or keepers, whereupon the entire beam may be swung around or reversed in position relative to the double ended mold-board 1 and a new furrow may then be started by merely pulling the plow over the required distance.

It is evident that a plow constructed in accordance with our invention, is composed of comparatively few parts that may be cheaply manufactured and readily assembled and which may be easily operated, as above set forth.

It is to be understood that the invention is not limited to the exact construction, arrangement and proportions of the parts hereinbefore set forth and illustrated in the drawings, but that various changes may be made without departing from the scope of the invention, as defined in the appended claims.

Having thus described the invention, what is claimed as new is:

1. A plow, embodying a double-ended mold-board, a beam reversibly mounted on said mold-board, handles secured to said beam, a curved bar mounted upon the mold board and having a guiding connection with the beam brackets secured to the beam, levers fulcrumed on the respective brackets, locking pins carried by the outer ends of said levers and arranged to engage the bar so as to rigidly connect the beam to the bar, the inner ends of said levers overlapping and being slotted, and an actuating handle extending upwardly along the main handles of the plow and having its inner end laterally bent and engaged in the slot of both overlapping ends of the levers, as and for the purpose set forth.

2. A plow of the character described, embodying a mold-board, a reversible beam mounted upon said mold-board, means for holding said beam in rigid relation to the mold-board, said means including brackets secured to the beam, levers fulcrumed on said brackets, and having overlapping slotted ends, and latch pins carried by the outer ends of said levers, and a handle actuated lever operatively connected to the overlapping ends of both levers, one of said brackets being formed with an opening through which said handle extends.

3. A plow of the character described, embodying a mold board, a beam reversibly mounted upon said mold board, handles secured to said beam, a curved bar mounted upon the mold board and having a guide connection with the beam, brackets secured to the beam, levers fulcrumed on the respective brackets, locking pins carried by the outer ends of said levers and designed to extend through the beam into the curved bar to rigidly connect the beam to the bar, the inner ends of said levers overlapping and being slotted and having a pin connection with each other, an actuating handle extending upwardly along the main handles of the plow and operatively connected to the levers to move the same, and an angularly slotted plate carried by the main handles of the plow and designed for engagement by the actuating handle, as and for the purpose set forth.

4. A plow embodying a double-ended mold-board, a beam reversibly mounted on said mold-board, handles secured to said beam, a curved bar mounted upon the mold board and formed with a flanged outer edge, curved shoes secured to the beam and formed with angular lower edges engaging said flange whereby to effect a guiding connection between the beam and the bar, brackets secured to the beam, levers fulcrumed on said brackets and formed with overlapping slotted ends, pins carried by the outer ends of said levers and designed to rigidly connect the beam to the bar, an actuating handle formed with a laterally projecting inner end extending through the slotted overlapping ends of the levers, one of the brackets being formed with an aperture through which said lever extends and the outer end of the lever passing upwardly between the handles of the plow, as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN N. WATROUS. [L. S.]
CHARLES S. MINOR. [L. S.]

Witnesses:
G. A. STOUGHTON,
CELIA L. HEMINGWAY.