

(No Model.)

2 Sheets—Sheet 1.

G. W. STOW.
PLOW,

No. 505,732.

Patented Sept. 26, 1893.

Fig. 5

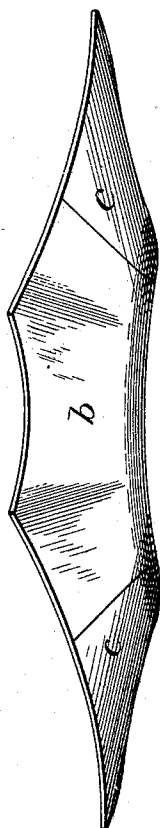
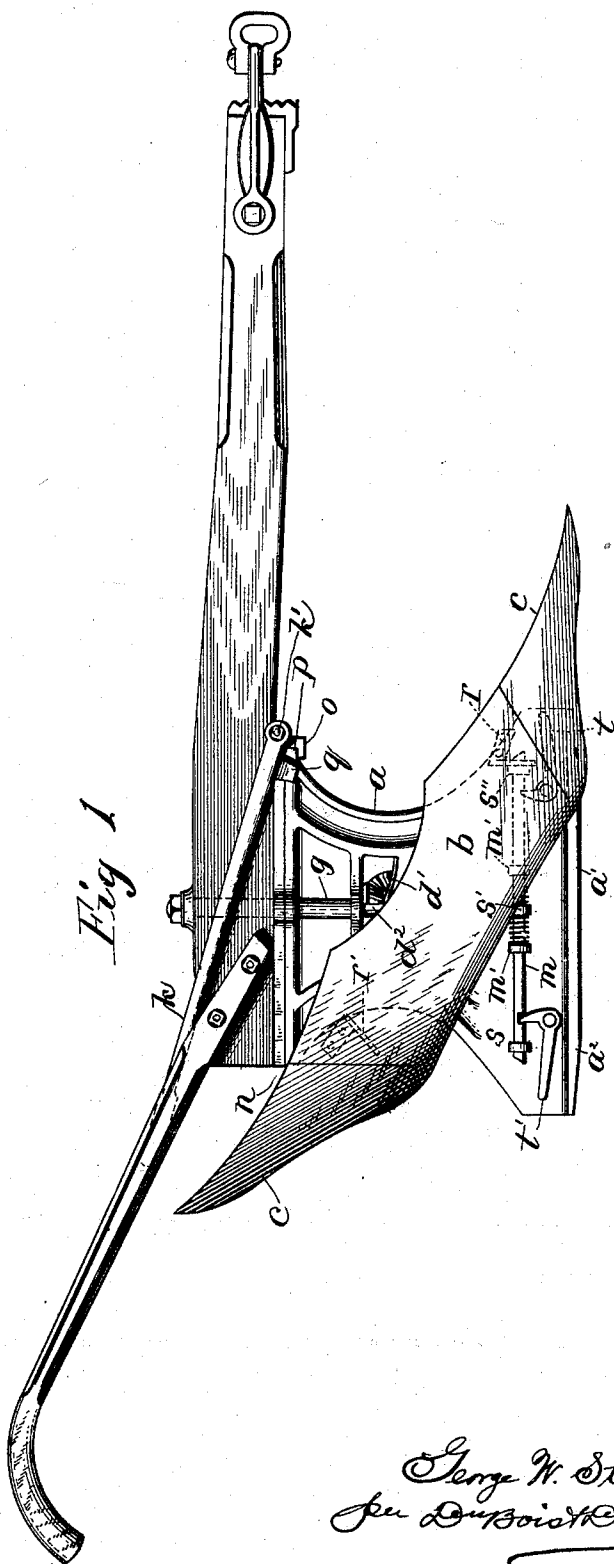


Fig. 1



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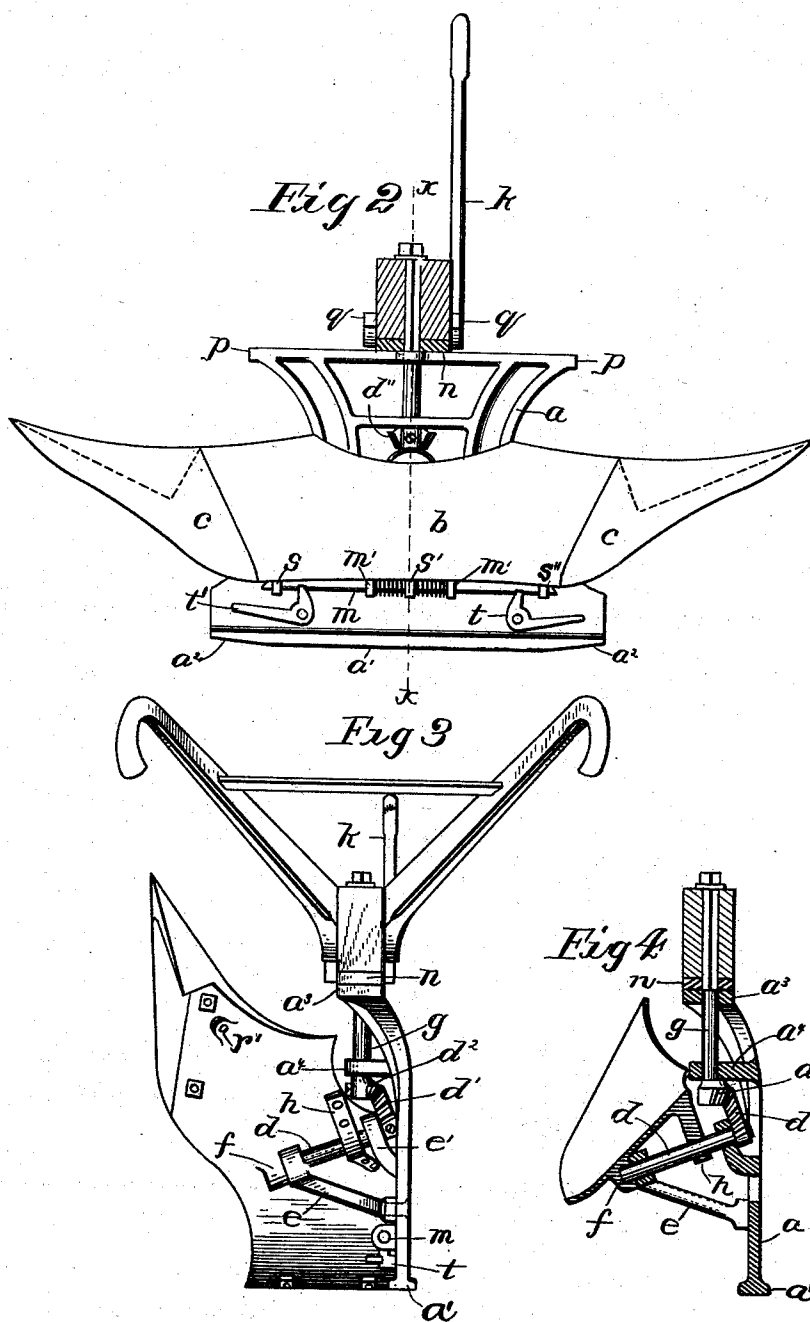
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No. 505,732.

Patented Sept. 26, 1893.



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UNITED STATES PATENT OFFICE.

GEORGE W. STOW, OF BINGHAMTON, NEW YORK.

PLOW.

SPECIFICATION forming part of Letters Patent No. 505,732, dated September 26, 1893.

Application filed April 4, 1893. Serial No. 469,018. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. STOW, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Plows; 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 letters of reference marked thereon, which form a part of this specification.

The object of my invention is to produce an automatic reversible plow which will be lighter, more simple in construction and easier to handle than anything of the kind heretofore known or used.

To accomplish this purpose I employ a reversible mold-board of peculiar construction, carrying plow-points on its opposite ends together with certain reversing gear and locking and unlocking mechanism, all of which will be fully described hereinafter and pointed out in the claims.

In the accompanying drawings: Figure 1 represents a side elevation of my complete invention; Fig. 2 a rear view showing the relative positions of the mold-board, the standard to which it is attached, and the plow-points, when the beam is turned at right angles to the standard, or half way round; Fig. 3 a rear view of the plow; Fig. 4 a transverse section through X—X of Fig. 2; Fig. 5 a detail top view of the mold-board and the points fixed thereto.

The reference letter *a* represents the standard which is by preference made of a single casting and as light as consistent with strength. The bottom of the standard is provided with a shoe *a'* which is beveled at *a''*. On one side of this standard is pivoted a single mold-board *b*, having rigidly fastened to its opposite ends, the plow-points *c*, thus making one mold-board serve for both points, which effects a great saving of material and labor in the construction of the plow. This mold-board is so formed as to have the same action or effect upon the ground that the mold-board of an ordinary plow does. No matter which end of the board is thrown into use, it

is so "dished" or concaved as to have the same effect, there being no surplus or idle material excepting the elevated point and its contiguous portion of the mold-board.

The reversing mechanism consists of a pivot *d* having its axis extending laterally in relation to the standard and plow-beams and at an inclination of about forty-five degrees to a vertical line. It is mounted to oscillate in bearings *e*, *e'*, extending laterally from the standard, and its lower end is fixed within a recess or socket *f* on the under side and central portion of the board, and its upper end is provided with a toothed segment *d'* which meshes with a toothed segment *d''* on the lower end of a vertical bolt *g*, mounted in an overhanging portion *a''* of the standard and forming the pivot for the plow beam. The upper end of this vertical bolt is squared, and passes through a square aperture in the plow beam. The top of the bolt is provided with a nut. The lower end passes through the portion *a''* and revolves within bearing *a'''* cast integral with the standard. By this means the bolt is fixed to the beam to oscillate the mold-board by the action of the beam, and to reverse the mold-board and its points as will be better explained hereinafter.

By providing the top of the standard with an overhanging portion or off-set *a''*, the plow-beam and hence the handles are thrown more nearly over the center of the furrow, which allows the plowman to walk within the furrow instead of on the side. The under side of the mold-board is provided with a supporting bracket *h* through which the pivot *d* passes. This bracket aids in supporting and steadying the mold-board.

The locking and releasing mechanism consists in a hand-lever *k* at the top of the standard, and a horizontal spring-actuated bolt *m* at the lower portion. The bottom portion of the plow-beam which lies directly over the standard, is provided with a metal plate *n*, in the forward end of which is pivoted the lever *k*.

The plate is provided with a lip *o* which overlaps a ledge *p* on the front of the top of the standard, and the lever is provided with a lug *q* near its pivot *k'*, so that when the standard passes around in alignment with the beam, and the ledge passes over the lip *o*,

the lug will, when the lever is depressed, drop down and lock the standard in position for plowing.

The locking bolt *m* at the lower part of the standard, serves to lock the mold-board and its plow-points down against oscillatory movement, and to relieve the gears from strain.

The under side of the mold-board is provided with a keeper *r*, which is automatically engaged by the beveled end of the bolt when the board descends into operative position. The bolt moves in three guide-lugs *s*, *s'*, *s''*. Two collars *m'* are placed on the bolt, and coil springs are interposed between them and the central lug *s'* so that the bolt will be automatically advanced in opposite directions. A similar keeper *r'* is placed on the opposite end of the mold-board and is engaged by the opposite end of the bolt in the same manner the other is.

Two foot-levers *t*, *t'* are pivoted below and engage the bolts near their ends at a point convenient to the plowman, so that by treading on the arm of one of the levers, the opposite end of the bolt is withdrawn from its keeper and the board liberated for reversal.

Having thus set forth the preferred construction of my invention, I will now proceed to describe its operation. To reverse the mold-board and its plow-points, the operator simply lifts the hand-lever *k* until the lug thereon clears the standard, and he also withdraws the bolt *m* with his foot. The beam is then turned to the right or left as the case may be, until its position in relation to the standard, is reversed. In so doing, the bolt *g* makes half a revolution which is communicated to the pivot *d* of the board through the medium of the beveled gears *d'*, *d''*, and causes the rear or elevated point to descend and assume the position formerly occupied by the opposite point, thereby converting the plow from right to left and in position to make a return furrow. When these movements have taken place, the lever is lowered to fasten the standard to the beam, and the locking-bolt

will have automatically engaged the keeper on the mold-board to hold the latter firmly in place.

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

1. In a reversible plow, the combination of a body-portion or standard a revoluble plow-beam mounted on the standard, a vertically extending bolt journaled revolubly in the standard and positively connected at its upper end to the plow-beam, a double mold-board pivotally mounted on the standard and geared with the vertically extending bolt, whereby upon revolving the plow-beam the disposition of the mold-board will be changed, a longitudinally-movable spring-pressed bar arranged horizontally on the standard and having beveled ends, eyes or keepers formed on the underside of the mold-board and adapted to alternately receive the beveled ends of the horizontal bar and thereby lock the mold-board in position, and a foot-lever fulcrumed to the standard and having one arm connected to the bar whereby the bar may be retracted to disengage the keeper and release the mold-board, substantially as described.

2. In a reversible plow, the combination of a standard, a reversible double mold-board pivoted thereto, a longitudinally movable spring-pressed bar arranged horizontally on the standard, eyes or keepers on the mold-board adapted to receive alternately the ends of the horizontal bar whereby the mold-board is locked in position, and a foot-lever fulcrumed to the standard and having one arm connected to the bar whereby the said bar may be retracted to disengage the eye or keeper and thus release the mold-board, substantially as described.

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

GEORGE W. STOW.

Witnesses:

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