(Model.) 2 Sheets—Sheet 1.

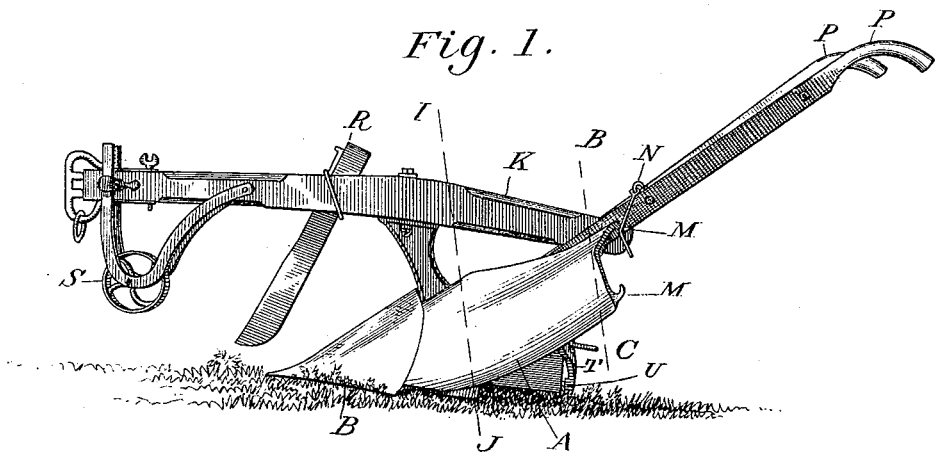
J. A. HOWE, Dec'd.

(E. W. Howe, Administratrix.)

SWIVEL PLOW.

No. 266,627. Patented Oct. 31, 1882.

Fig. 1.



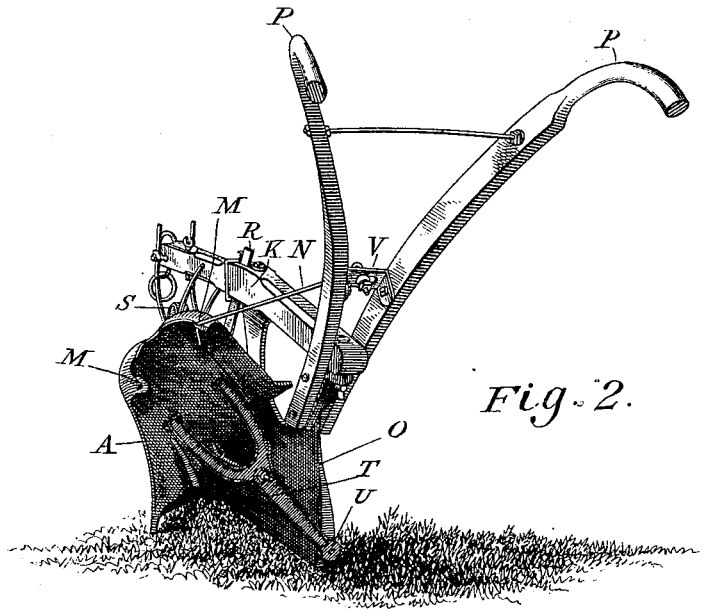


Fig. 2.

Witnesses:
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H. S. Hildreth

Inventor:
Esther W. Howe, Administratrix
of James A. Howe deceased.
Per Geo. C. Burt, Attorney.

(Model.)

2 Sheets—Sheet 2.

J. A. HOWE, Dec'd.

(E. W. Howe, Administratrix.)

SWIVEL PLOW.

No. 266,627. Patented Oct. 31, 1882.

Fig. 4.

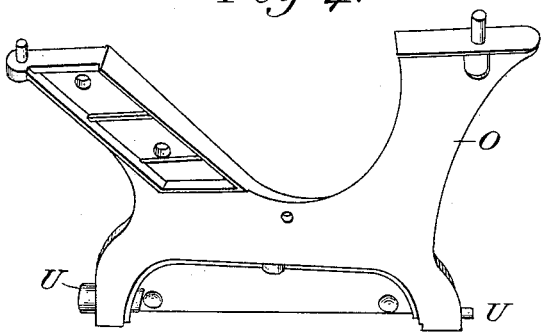


Fig. 5.

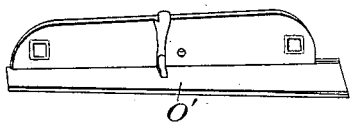


Fig. 3.

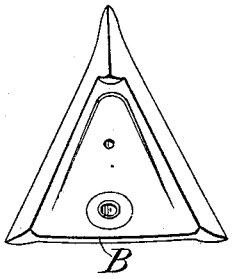


Fig. 7.

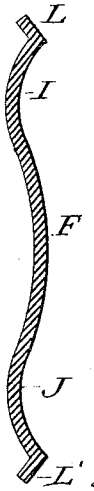
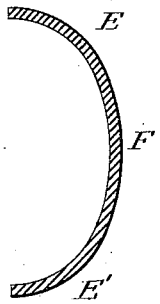


Fig. 6.



Witnesses:
Emory B Page
H. C. Hildreth.

Inventor.
Esther W. Howe, Administratrix
of James A. Howe deceased.
Per Geo. E. Burt Attorney.

UNITED STATES PATENT OFFICE.

ESTHER W. HOWE, ADMINISTRATRIX OF JAMES A. HOWE, DECEASED, OF AYER, MASSACHUSETTS.

SWIVEL-PLOW.

SPECIFICATION forming part of Letters Patent No. 266,627, dated October 31, 1882.

Application filed February 24, 1882. (Model.)

To all whom it may concern:

Be it known that JAMES A. HOWE, late a citizen of the United States, town of Ayer, county of Middlesex, and State of Massachusetts, deceased, did invent a new and useful Improvement in Swivel-Plows, of which the following is a specification.

This invention relates to improvement in swivel-plows to give such form to the mold-board as to disintegrate the soil more thoroughly, to give a longer bearing to the bottom of the plow, so as to cause it to run level and firm in the furrow, and to turn the soil completely over; also, to construct a plow so that it will operate in stubble land having an adhesive soil without the mold-board becoming clogged and cause the furrow to scour the entire mold-board and wear the share even on both sides. To obtain this result the construction is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the plow, showing the various parts. Fig. 2 is a rear view of the plow. Fig. 3 is a view of the detached mold-board. Fig. 4 is a view of the detached share. Fig. 5 is a view of the detached standard O. Fig. 6 is a detached part of standard O. Fig. 7 is a transverse section of the mold-board cut through at the lines B and C. Fig. 8 is a transverse section, showing the form of the mold-board and share at the lines I J.

Similar letters refer to similar parts in all the views.

The mold-board A is constructed by a new and different formula, to wit: The mold-board at the rear is divided transversely into three equal parts, E F E′. The parts E E′ are both constructed with a true arc, and the part F is constructed of twice the radius of the arcs E E′. For a medium-sized plow the arcs E E′ are constructed of radii of three inches, and the center part is constructed of a radius of six inches, (shown in Fig. 7,) and the radii of the diameters are increased until they form the mold-board at line I J. At this point the increased width of the mold-board is curved in an opposite direction of the arcs E E′, and these arcs I J are constructed of the same radii of arcs E E′, as shown in Figs. 7 and 8. This form of the mold-board is extended longitudinally until it fits and connects with share B.

To the outward-curved sections of the mold-board I J, and at an angle of about thirty degrees to them, the supporting-shoes L L′ are attached or cast on. (Shown in Figs. 1 and 8.)

At the rear end of the mold-board A two supporting projections, M M, are constructed to receive the brace-hook N. (Shown in Figs. 1 and 2.)

P P are the handles. K is the beam. R is the cutter; S, the gage-wheel and its supports. V is a pivot-brace. T is a forked pivoted brace, that pivots the mold-board with standard O, and is held in position by wrought-iron rod U, which connects the standard O with the detached part O and the mold-board and share, the rod passing longitudinally through the standard O and pivoting very strongly all the parts together, and permitting the plow to turn from right to left. The share, beam, and handles are attached together in the usual manner. The radii of these arcs may be increased or diminished in proportion to the various sized plows that may be desired to be constructed, and longitudinally curved outward with an arc of a radius of sixty-five inches.

Operation: When a plow of this construction is put to work and propelled by the team, the operator holding it in the right position, it enters the ground easily, and as the furrow-slice is separated by the cutter and share it is raised and turned as it comes in contact with the mold-board. The latter, being constructed with arcs of various radii, gives such form that the soil is more completely disintegrated than it is when the mold-board is constructed with single arcs or constructed with scroll form having straight lines from share to extremity of mold-board. The mold-board of the plow, being constructed with additional outward curves I J and shoes L, has additional width, thus holding the heel of the plow down into the furrow and on the shoe L, the shoe lengthening the bearing of the plow on the bottom of the furrow, which holds the plow level in the work and causes the point of the share to wear sharp and even on both the upper and under side. The hook N is pivoted at V to the

plow-brace. The two projections M M on the mold-board are seats for the brace-hook N, which holds the mold-board in position to work and turn a furrow either to the right or left. Their position on the mold-board raises the hook above the turning furrows, and it is less likely to impede or clog with soil when the plow is being used to turn a deep wide furrow.

I am aware that the mold-boards of swivel-plows have been constructed with one true arc transversely, also with sections of a scroll.

I do not claim a mold-board so constructed, broadly; but

What I do claim as JAMES A. HOWE'S invention, and desire to secure by Letters Patent, is—

1. The mold-board of a swivel-plow, having its rear end convex and its front portion made with a central convex arc and side concave arcs, arranged transversely and increasing in radius from rear to front, substantially as shown and described.

2. The mold-board A, having three transverse arcs, the central convex arc being equal in radius to that of both the side concave arcs and converging at the rear to form a convex mold-board at B C, substantially as shown and described.

3. The combination, with the mold-board A, having at its front end a series of three arcs, arranged transversely to each other, of the supporting-shoes L L′, substantially as shown and described.

ESTHER W. HOWE,
Administratrix.

Witnesses:
LEVI SHERWIN,
GEORGE E. BURT.