

(No Model.)

H. THADEN.  
TURN PLOW.

No. 458,121.

Patented Aug. 18, 1891.

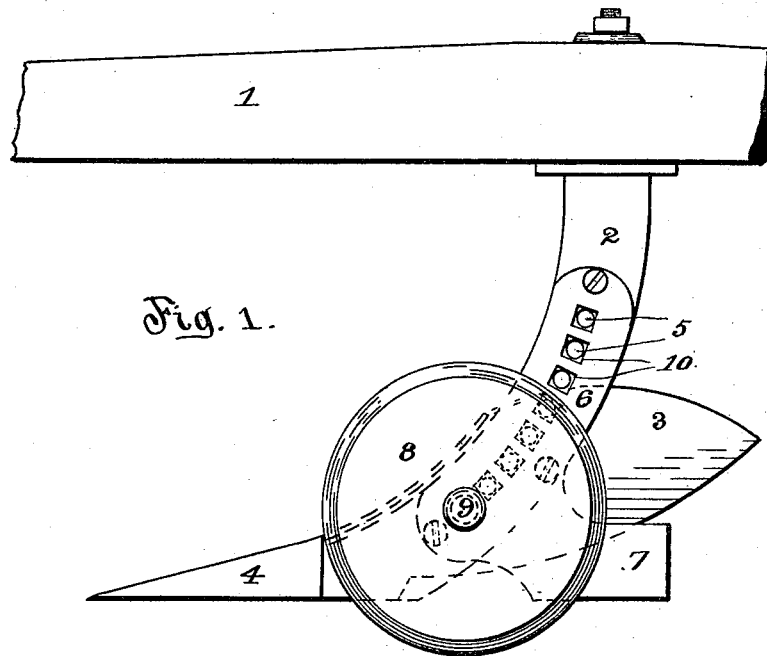


Fig. 1.

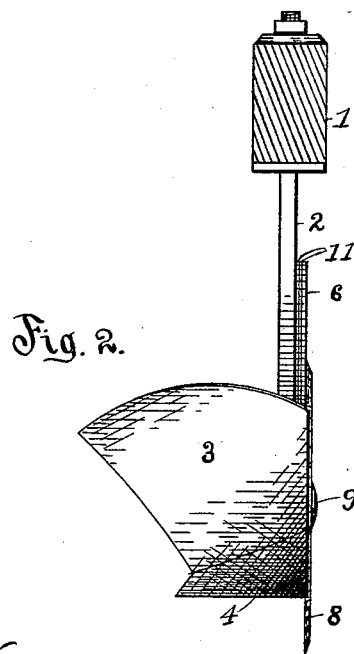


Fig. 2.

Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HERMAN THADEN, OF ATLANTA, GEORGIA.

## TURN-PLOW.

SPECIFICATION forming part of Letters Patent No. 458,121, dated August 18, 1891.

Application filed March 19, 1891. Serial No. 385,667. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN THADEN, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Turn-Plows; and I do hereby 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 figures of reference marked thereon, which form a part of this specification.

This invention, as above stated, relates to turn-plows, having particular reference to so constructing the abrading element and the landside as to reduce the friction of operation, thus obviating to a great extent the wear and reducing the draft required to operate, also providing a plow for turfed or otherwise hard-crusted lands, which will cut a clear uniform furrow, the details of construction of which are hereinafter fully specified. In plows as ordinarily constructed the sod or crust is cut entirely by an upward pressure thereon by the front edge of the mold-board, which is to that end sharp in new plows, soon, however, wearing very much rounded or obtuse, whereupon the sod is broken by an upward wedging action of the share and mold-board, such strain being applied over almost all the entire superficial area of said parts and necessarily causing the plow to draw heavily and the furrow-slice to be rough, broken, and badly turned. In addition to avoiding the above results in this device, it is found that the plow runs much more easily and is more easily kept to a straight line, and that the revolving landside turning with the resistance the friction thereon is removed.

In the accompanying drawings, Figure 1 is a side elevation from the side usually carrying the landside, showing the improved form of the side plate and the attachment of the cutting-disk and means for adjustment thereof. Fig. 2 is a front elevation of Fig. 1. Fig. 3 is a section of the sheth, side plate, and adjusting-plates, the section being taken horizontally near the beam and through one of the disk-attachment holes.

In the figures like reference-numbers are

employed in the designation of corresponding elements of construction.

1 is the beam, 2 the sheth, 3 the mold-board, and 4 the share, any of which may be of any construction adaptable to the improvements added by the present invention.

In the construction shown the sheth 2 is of a single piece of metal, curved forwardly to the proper radii, the upper end reduced and screw-threaded, passed through the beam 1 and therein secured by a nut on said screw-threaded portion, the lower end being sheared off to form the lower portion of the sole, the share 4 and mold-board 3 being secured thereto in the usual manner. Said sheth is provided with a series of holes 5, for a purpose hereinafter seen. The plate 6 is secured to the sheth, as shown, and conforms to the curvature thereof where it contacts therewith and has a backward extension 7, which forms the posterior portion of the sole, said plate 6 and backward extension 7 thereof forming a back bearing for the disk 8, which is pivoted on the shoulder-screw 9, and so prevents the front of the disk from being pressed away from the edge of the mold-board, with which it should lightly contact. The disk is beveled on its outer side so as to form a cutting-edge on the line of the inner side, said bevel causing the front edge of said disk to press inwardly against the mold-board. Holes 10 are punched through or cast in the plate 6 in position corresponding to the position of the holes 5 in the sheth 2, said holes being made square to receive a squared portion of the bolt 9 to prevent its turning, the screw-threaded portion passing through the necessary one of the holes 5, and a nut being screwed thereon the whole structure will be securely clamped together at that point, and the shoulder portion being slightly longer than the disk is thick said disk will revolve freely on said screw. The bolt 9 may be used in any of the holes, according to the size of the disk, diametrically, and to whether it is necessary from the nature of the land that the disk run a greater or less distance below the sole, and also if it is desired to plow deeper than ordinary the disk should be raised so as to cut the sod. Besides cutting the sod, thus taking said friction and the wear resulting therefrom

from the front edge of the mold-board, this disk acts as a caster-wheel, assisting the sole to carry the plow, and also as a revoluble land-side, revolving in contact with the land, all of which obviously reduces friction to a minimum.

The space alongside the lower sheth between the lower ends of the plates 6 and the land-side portion of the share forms a clearance-throat and obviates all danger of the cramping of the disk by soil getting behind it.

In order that the plate 6, and hence the disk, may be moved inwardly to take up wear, liners 11, of thin metal, may be placed between said plate 6 and the sheth 2, a removal of one of which will, for instance, take up one season's wear. The liners 11 may be perforated for each of the series of holes through the sheth and plate 6 or slotted for the entire series.

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

In a device of the class specified, the sheth bolted to the beam and curved downwardly and forwardly therefrom, and the plate 6, carrying the backwardly-projecting arm 7, said sheth and plate being perforated by a series of holes, and a cutting-disk 8, pivoted to the side of said structure by a bolt passing through one of said series of holes, as and for the purpose specified, and a share secured to said sheth.

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

HERMAN THADEN.

Witnesses:

A. P. WOOD,

A. A. WOOD.