

M. Grover.

Plow.

N^o 34,092.

Patented Jan. 7, 1862.

Fig. 1.

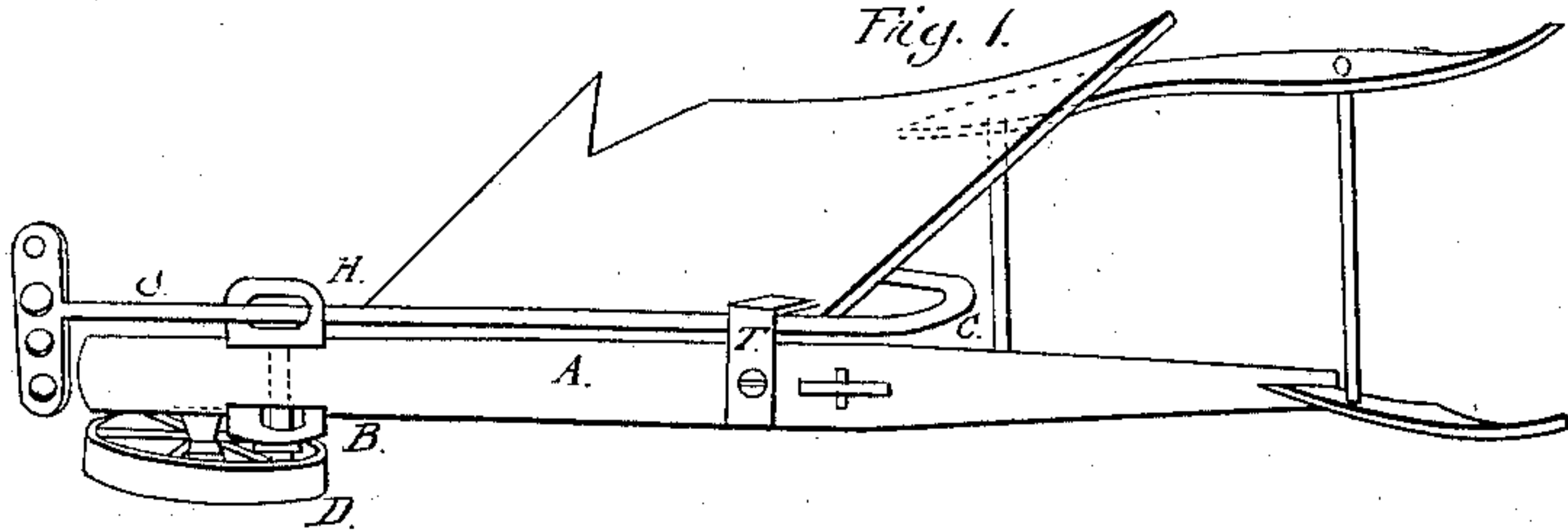


Fig. 2.

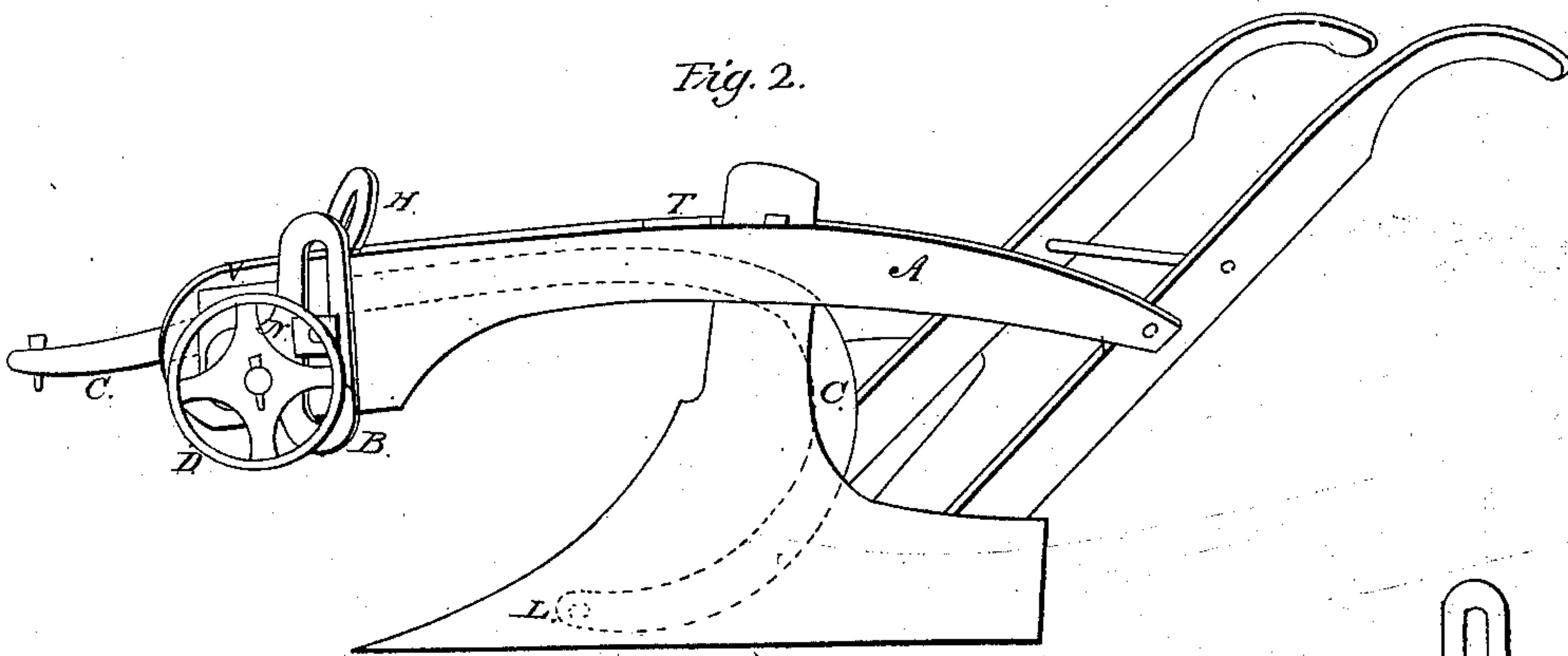


Fig. 4.

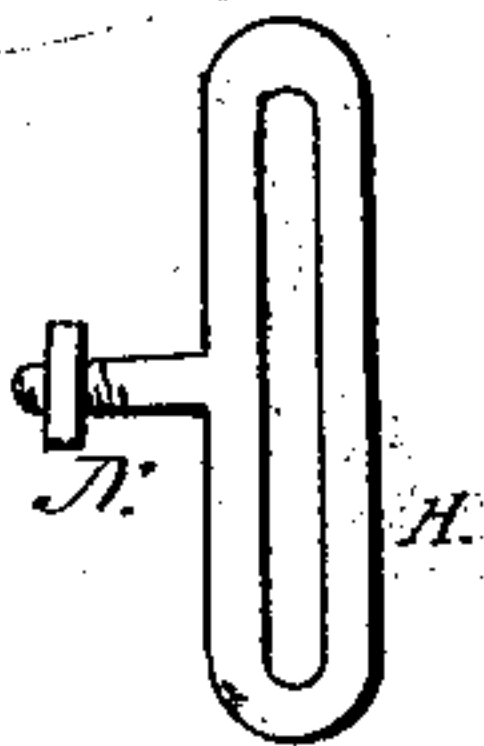
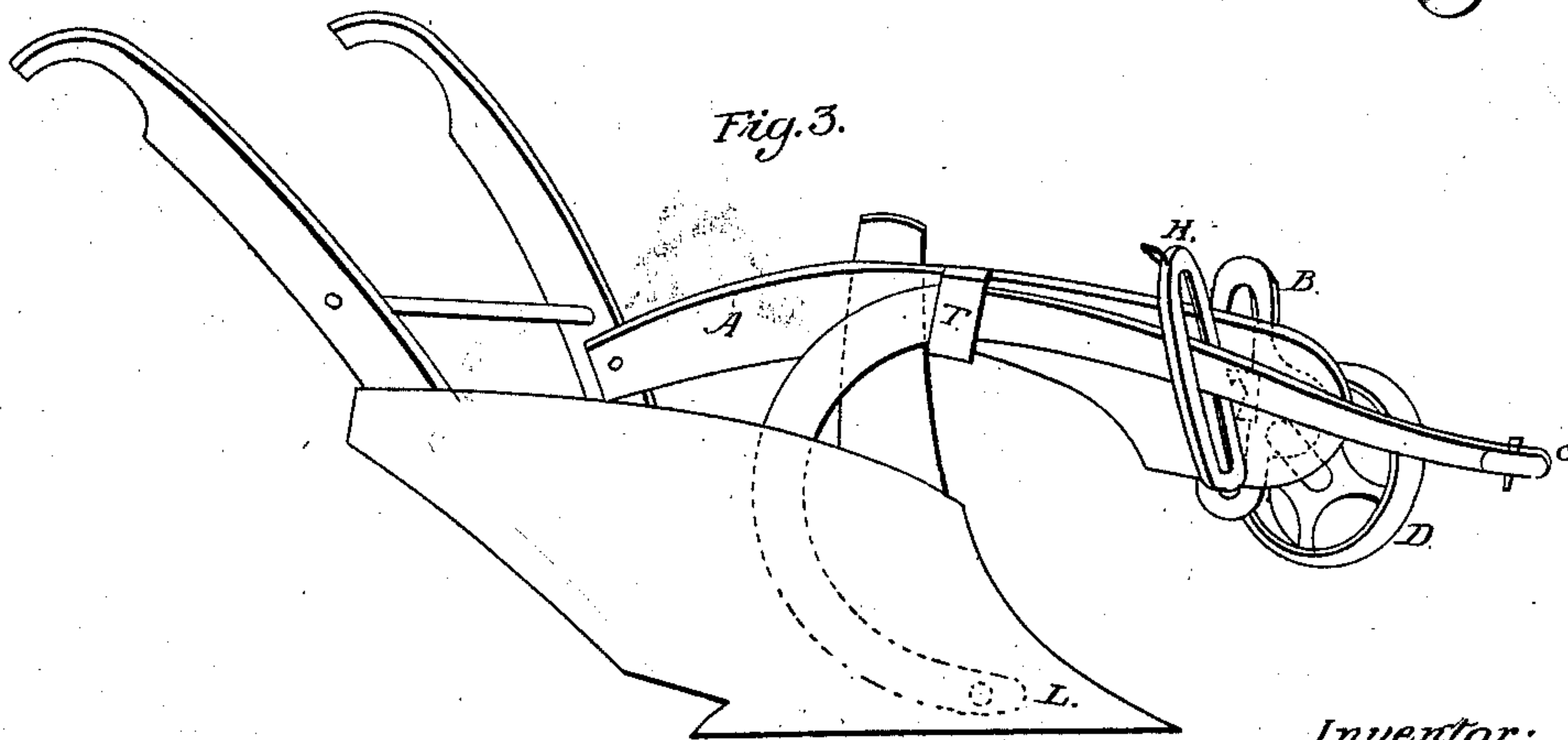


Fig. 3.



Inventor:

Witnesses:

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UNITED STATES PATENT OFFICE.

MANASSEH GROVER, OF CLYDE VILLAGE, OHIO.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 34,092, dated January 7, 1862.

To all whom it may concern:

Be it known that I, MANASSEH GROVER, of Clyde, in the county of Sandusky and State of Ohio, have invented a new and useful Improvement in Plows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view of the plow. Fig. 2 is an elevation of the same representing the mold-board side. Fig. 3 is an elevation of the same representing the land-side view. Fig. 4 is a detached view of a slotted bar hereinafter described.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in a different and improved mode of constructing and arranging the improvement on plows for which I, the said MANASSEH GROVER, did obtain Letters Patent of the United States on the 6th day of October, A. D. 1857.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a beam of common form, but made wide at its front end to permit the secure attachment of bars hereinafter described.

C is a draft-beam, of wrought-iron or steel, bent in curved form as represented, and fastened at L, by a bolt or pivot, between the landside and mold-board as far forward as possible, and about two and a half inches above the bottom of the plow, this being about at the center of resistance on the mold-board. The beam C projects forward beyond the beam A, and, near the front of the latter passes through a vertical slot in a bar, H, so as to afford the beam C a limited vertical play, but secures it against lateral displacement. The slotted bar H is formed with a bolt, N, to attach it to the beam A. The said bolt passes also through a slot in a second bar, B, on the landside of the beam, and a nut, N', secures both bars H and B in position. D is a wheel running upon a stud-shaft projecting horizontally from the bar B. By setting the said bar up or down, the wheel may be fixed at any height and the depth of plowing regulated as required.

T is a guard or yoke confining the beam C

horizontally, but permitting it to move freely in a vertical plane.

V, Fig. 2, is a groove or cavity in which the bar B is received and moves.

The parts are so constructed, connected, and arranged that in plowing on level ground, when the team strains upon the draft-beam, the latter will occupy such a position within the slot of the bar H as to allow the draft-beam several inches vertical play. The plow, being thus attached to the draft-beam by a hinge-joint at the center of resistance on the mold-board, is enabled to conform freely to undulations in the surface of the ground, and the direct line of draft is always retained. The line of draft extending from the center of resistance on the mold-board or share to the hitching-place at the shoulders of the team forms an angle with the horizon of eighteen degrees or more.

In the present invention, the attachment of the draft-beam being by a hinge-joint at the center of resistance of the mold-board, the effect is to apply a strong upward draft, which counteracts much of the downward pressure which otherwise occurs between the landside and the bottom of the furrow. By this means the power required to draw the plow is greatly reduced and the implement is preserved from violence and undue strain. In the event of the point of the plow striking against an immovable obstruction, the beam C, coming in contact with the top of the slot, prevents the heel of the plow being thrown up to an inconvenient extent. In order that the bar H and other attachments to the beam A may be placed at a sufficient distance above the ground without confining the draft-beam C in a wrong position or holding its front end above the line of draft, the said draft-beam is bent downward in front so as to project below the bar H. With plows as commonly constructed with rigid draft-beams, as the team begins to descend an inclination in the ground the tendency is to drive the plow into too great a depth. This tendency must be counteracted by pressure upon the plow-handles, applying a leverage force to bear down upon the bottom of the furrow, and thus causing great frictional resistance in addition to that resulting from indirect draft. With my invention the holder is enabled easily to regulate the plow at all

times without resistance from the team or leverage force exerted against the team.

Under the present improvement plows can be constructed more substantially, durably, and cheaply, and with less mechanical skill, than by my former invention.

The present invention also is based upon more correct and scientific principles, and the operation is more effective and easy.

What I claim as my invention, and desire to secure by Letters Patent, is—

The draft-beam C, fastened by a hinged joint, arranged and operating substantially as and for the purpose hereinbefore set forth.

MANASSEH GROVER.

Witnesses:

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