

T. P. Warren.

Plow.

No 77,855.

Patented May 12, 1868.

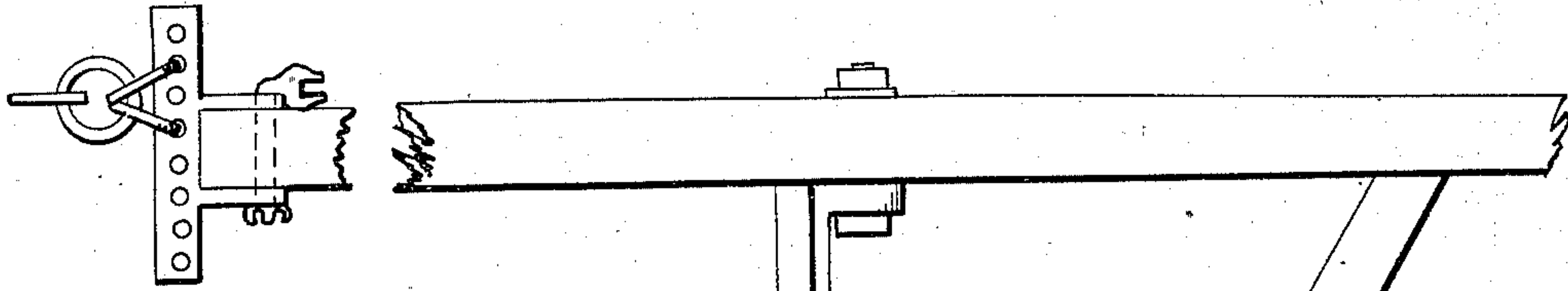


Fig. 1.

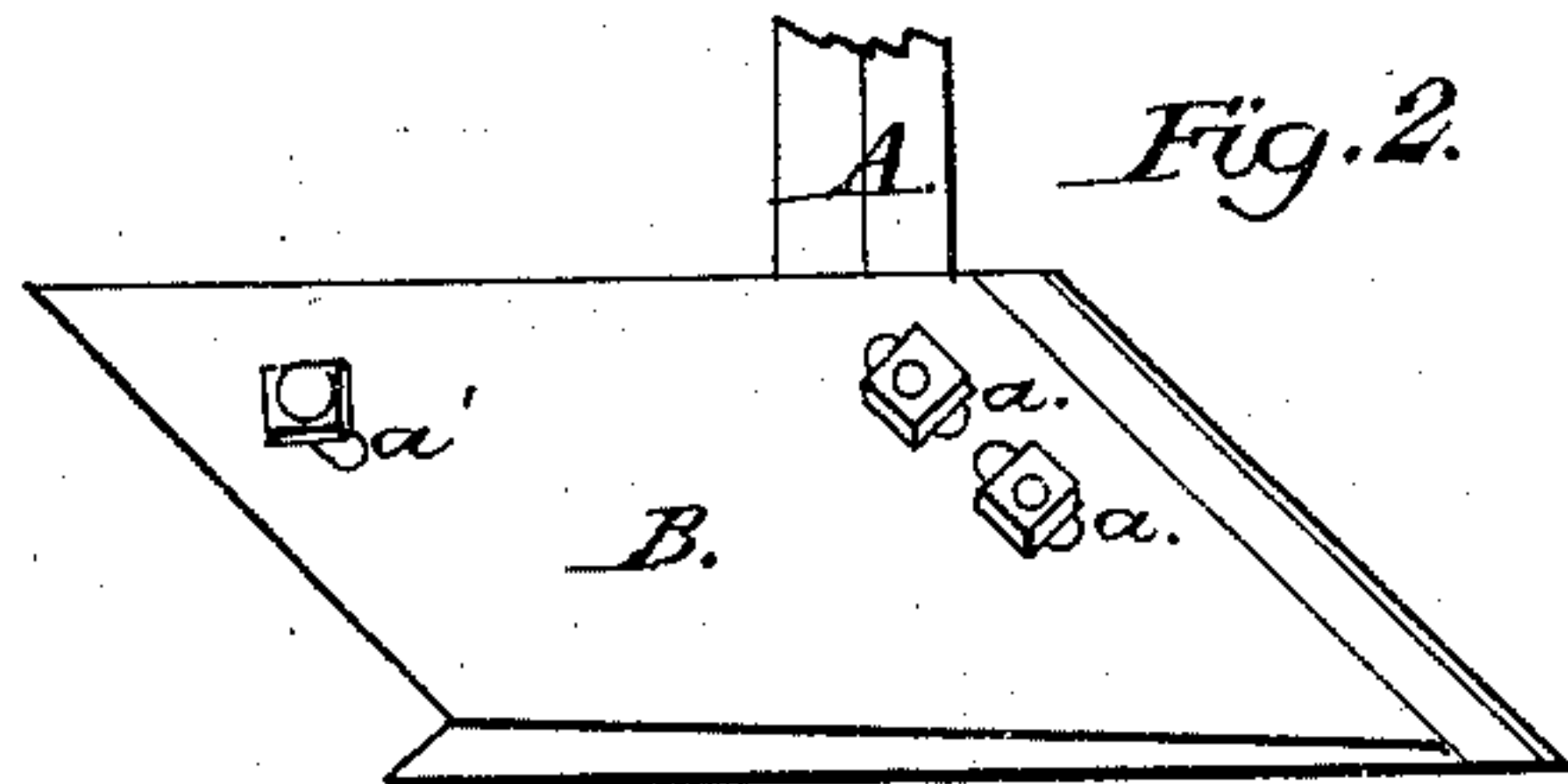


Fig. 2.

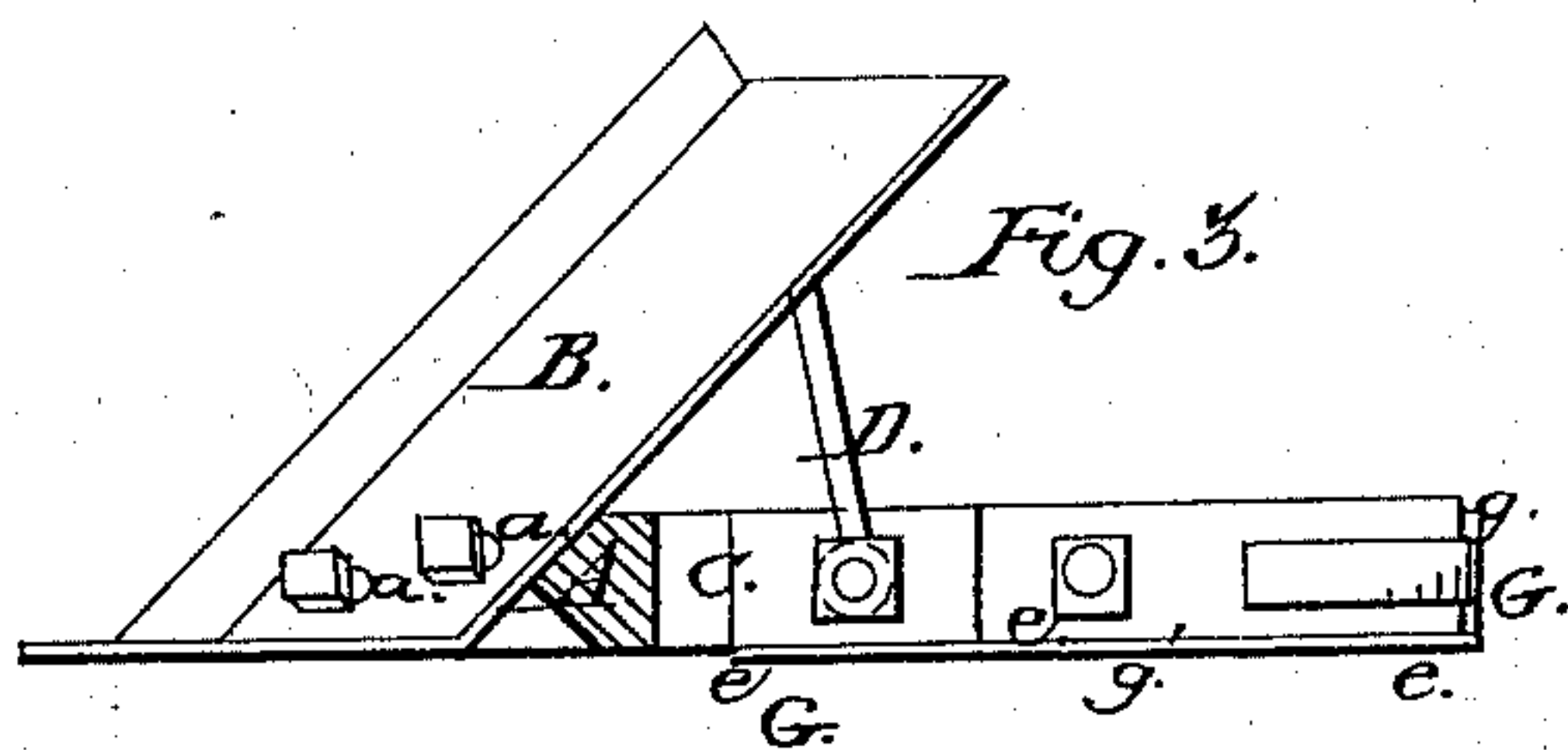


Fig. 3.

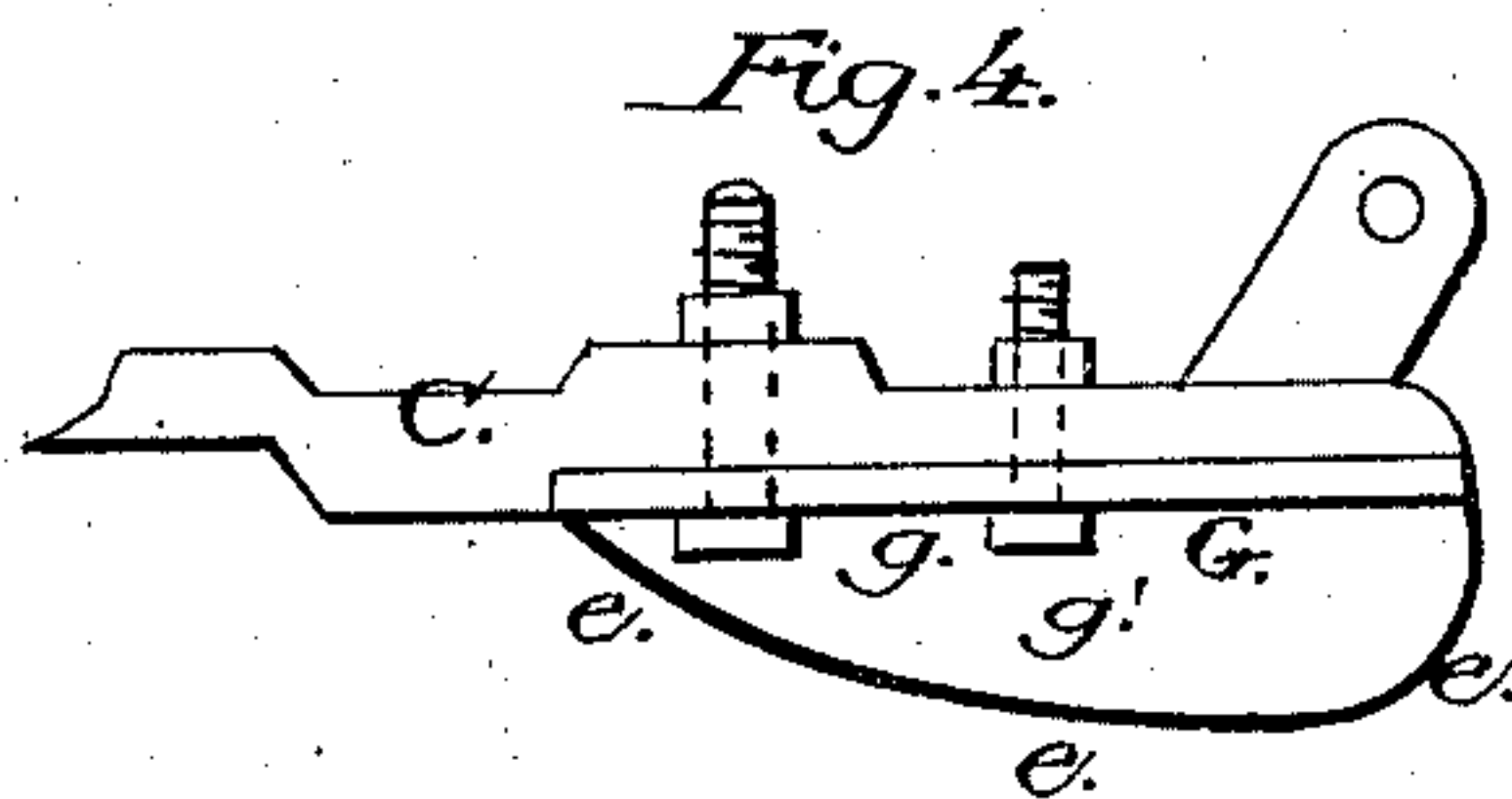


Fig. 4.

Witnesses:
J. C. Kemont.
G. A. Pettit

Inventor:
T. P. Warren
By Munroe & Co.
Attorneys

United States Patent Office.

THOMAS P. WARREN, OF NORFOLK, VIRGINIA.

Letters Patent No. 77,855, dated May 12, 1868.

IMPROVEMENT IN PLOUGHS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THOMAS P. WARREN, of the city and county of Norfolk, and State of Virginia, have invented a new and useful Improvement in Ploughs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation, showing the heel-iron turned up, as when not in use.

Figure 2 is a side elevation, showing the two slots in the mould-board.

Figure 3 is a top view.

Figure 4 is a detached side elevation of the heel, turned down for use.

This invention relates to the plough patented by Warren and Woodhouse, on the 18th day of June, 1867, and consists in a new form and construction of the guide used in connection with the land-side, and in a new method of attaching the mould-board to the standard, by which the parts are rendered more completely adjustable, and the cost of construction is greatly reduced.

In the drawings, A is the standard, and B is the mould-board, fixed to the standard by bolts and nuts, operating in a pair of vertical or inclined slots, *a a*, which extend in the same direction in the mould-board.

C is the land-side, and D is a brace, extending from the land-side to near the outer edge of the mould-board, and supporting the latter in place. It is fastened to the mould-board by means of a bolt and nut, operating through a slot, *a'*, in the latter, similar to the slots *a a*, the object of all the slots being to allow the mould-board to be adjusted up and down, as its lower edge wears away, or when, from any other cause, it needs a change of position.

G is a cast-iron heel, formed in an angle-iron shape, one of its wings or sides, *g*, being provided with two or more holes, through which it can be bolted firmly to the bottom of the land-side, and the other wing or flange *g'* having an inclined sharp edge, *e e e*.

Thus formed, it is, when not in use, bolted to the land-side, as shown in fig. 1, leaving the knife-edge up, and having its under surface flush with the under surface of the land-side, into which it is countersunk. When in use, it is turned over and bolted to the land-side, with its knife-edge down, as seen in fig. 4, for the purpose of forming a guide to steady the plough, and keep it from sliding and dodging when at work. It can be readily attached, removed, or reversed, and can be manufactured at a cost of one hundred per cent. less than the form of guide hitherto in use.

Both the heel, or guide, and the slotted mould-board are particularly designed for use in connection with the plough patented by Warren and Woodhouse, as above referred to; but they can be employed to advantage on many other kinds of plough, and it is my intention to apply them to all ploughs where they can be made serviceable.

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

1. The slots *a a* and *a'*, when arranged in a vertical or inclined position in the mould-board, and all extending in the same or parallel lines, in the manner and for the purpose set forth.
2. The reversible heel-iron and guide G, when constructed so as to be employed in the manner and for the purposes specified.

THOS. P. WARREN.

Witnesses:

D. W. WARREN,

D. H. LONG.