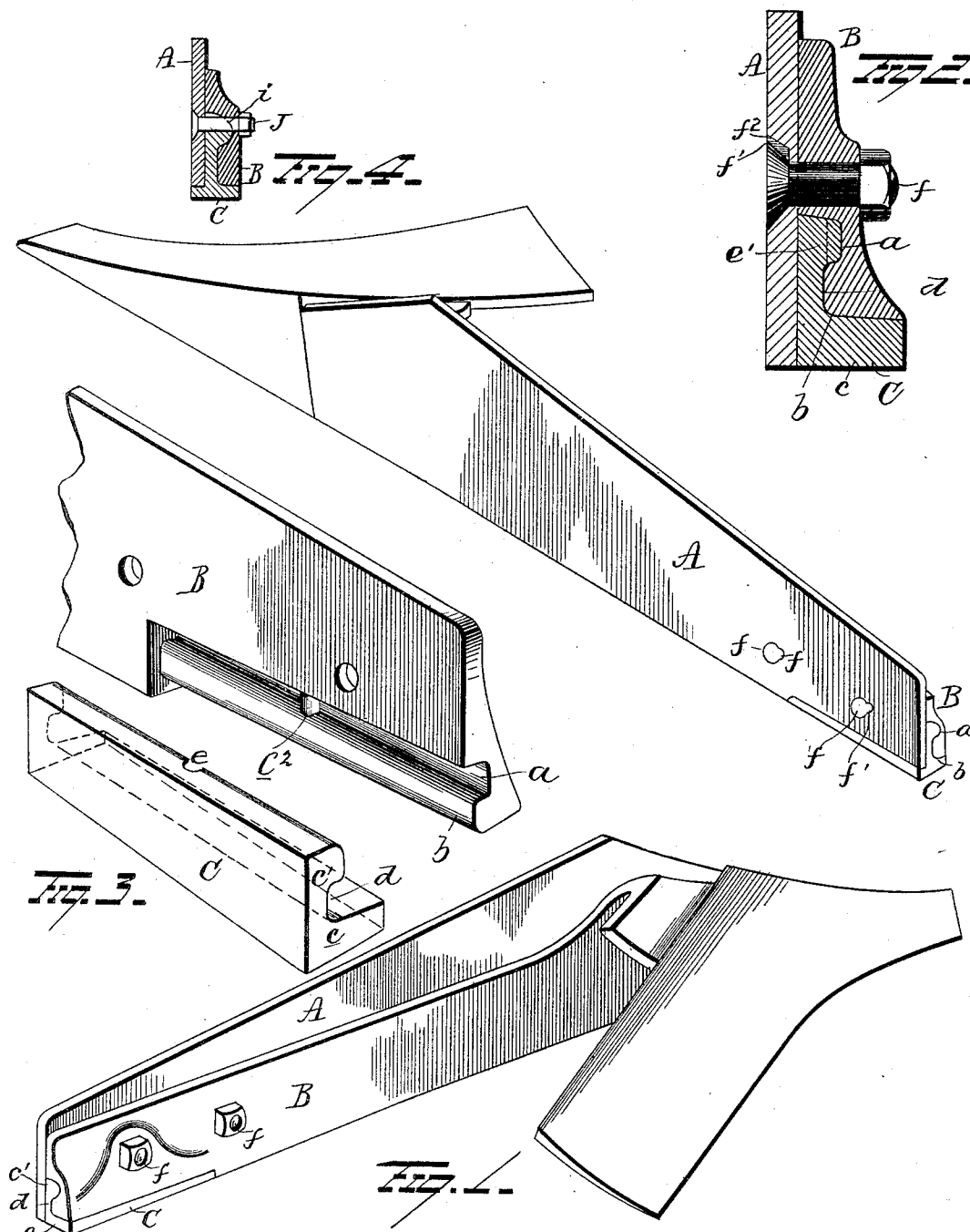


(No Model.)

J. OLIVER.
PLOW.

No. 468,026.

Patented Feb. 2, 1892.



Witnesses
E. Mottingham
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UNITED STATES PATENT OFFICE.

JAMES OLIVER, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE SOUTH BEND
IRON WORKS, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 468,026, dated February 2, 1892.

Application filed July 14, 1891. Serial No. 399,443. (No model.)

To all whom it may concern:

Be it known that I, JAMES OLIVER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in 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.

My invention relates to an improvement in plows, and more particularly to landsides for plows.

It is the object of my present invention to obviate the difficulties heretofore occasioned and to provide an improved removable heel for the landside of a plow.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a plow embodying my improvements. Fig. 2 is a sectional view of the landside and heel. Fig. 3 is a view of the landside and removable heel separated. Fig. 4 is a view of a modification.

A B represent the two portions of the landside of a plow. The lower edge of the portion or plate B is preferably made thicker than the portion or plate A, and is cut away, as shown in Fig. 3, at its rear end. This cut-away portion is made with a groove *a* and a (preferably rounded) flange *b*, said groove and flange being made tapering from end to end. At or near the center of the groove *a* a transverse rib *c*² is made, as shown in Fig. 3.

Adapted to fit into and fill the cut-away portion of the landside is a removable heel C. This heel C is made L shape in cross-section and preferably wider and thicker at its rear end than at its forward end. The portion *c* of the heel C is made thicker at its rear end than the rear end of the part *c'* of said heel and is adapted to run in the bottom of the furrow, while the part *c'* is made with a groove or recess *d* for the reception of the flange *b* of the plate B of the landside, and a notch *e* for the reception of the rib *c*². Thus it will be

seen that the heel C is in effect dovetailed to the plate B of the landside. The plates A and B of the landside are provided with perforations for the reception of securing-bolts *f*, said bolts being provided with projections *f'* on their heads to enter notches *f*² in the plate B. The other ends of said bolts are screw-threaded for the reception of nuts. From this construction it will be seen that when the heel is in place and the parts A and B of the landside secured together the heel will be prevented from falling out by the engagement of the flange *b* in the recess or groove *d* of the heel, its lateral displacement will be prevented by the part or plate B, and its longitudinal displacement will be prevented by the engagement of the rib *c*² with the notch *e*. The heel C is made of ordinary cast or wrought iron or steel, or preferably of chilled iron. Being made of the latter, the wear will be much greater, and when it does become rounding in the course of time it is readily detached and a new piece inserted at small expense. Thus the share is always given the proper suction, the plow-bottom kept in place while at work, and the user can depend upon his plow doing as good work as when the parts were new. The lower edge of the removable heel can be so made as to cover the entire lower surface in place of only a portion of the landside.

In lieu of the construction above described that shown in Fig. 4 may be adopted. In this construction the notch *e* and rib *c*² are dispensed with and perforations made in the parts A B of the landside. A notch *i* is also made in the upper edge of the removable heel C and adapted to align when in its proper position with the notches of the landside. A bolt *j* passes through these perforations and notches and retains the heel in place.

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

1. The combination, with a landside provided with a recessed rear end, one portion of which extends laterally into the body of the landside a greater depth than the remaining portion, of a removable heel corresponding in

shape to the shape of the recess, and means for holding this heel in the recess, substantially as set forth.

2. The combination, with a landside com-
5 posed of two parts secured together and provided with a recess between said parts, portions of the recess extending laterally into the part or parts greater depths than the remaining portions, of a removable heel corresponding in shape to the recess and con-
10 structed to constitute a portion of the lower

edge of one or both of the parts, and means for holding said heel in place in the recess, substantially as set forth.

In testimony whereof, I have signed this 15 specification in the presence of two subscribing witnesses.

JAMES OLIVER.

Witnesses:

F. C. NIPPOLD,
M. M. MATTHEWS.