D. SMITH.

Plow Moldboard.

No. 80,314. Patented July 28, 1868.

Fig 1.

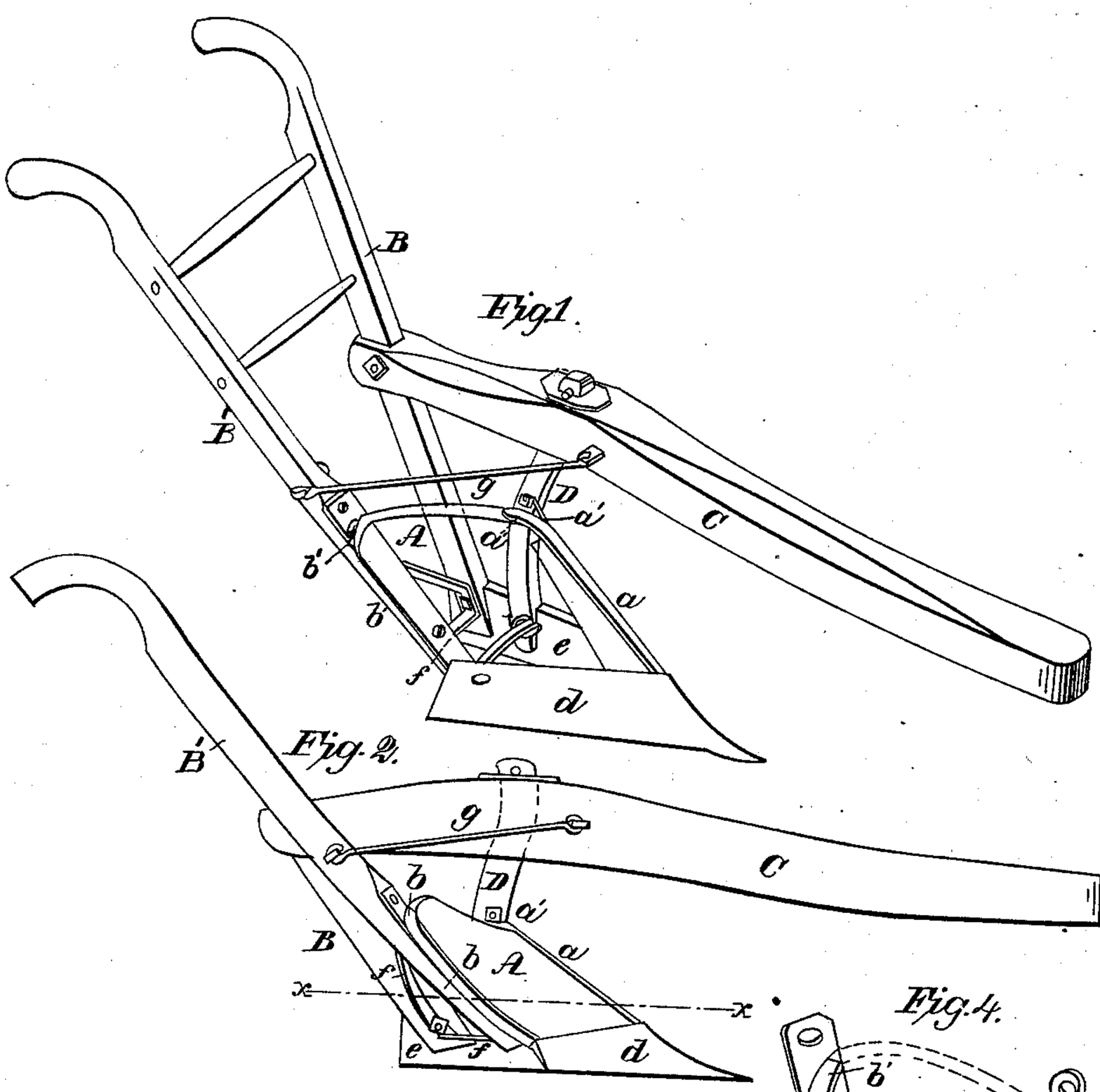


Fig. 2.

Fig. 3.

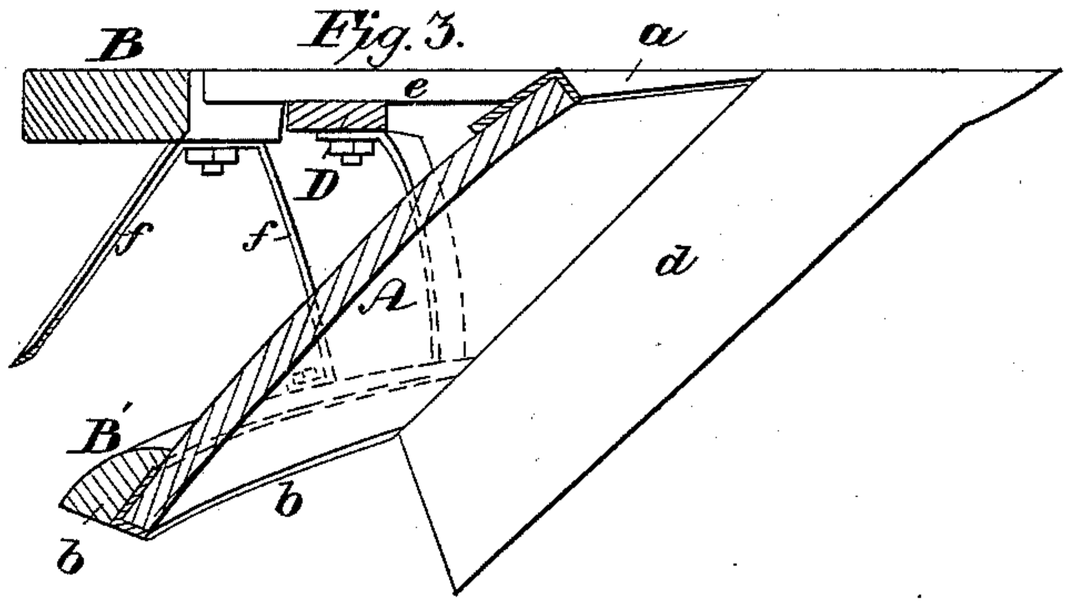
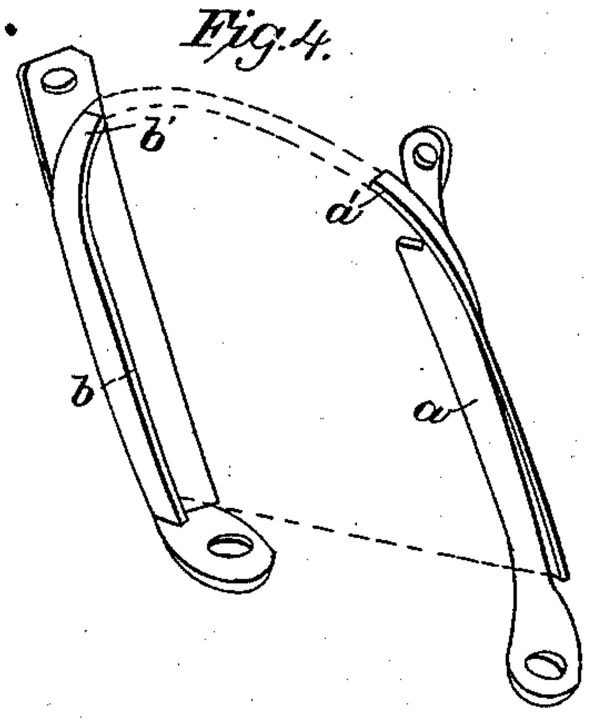


Fig. 4.



Witnesses

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United States Patent Office.

DANIEL SMITH, OF CEDAR FALLS, IOWA.

Letters Patent No. 80,314, *dated July* 28, 1868.

IMPROVEMENT IN PLOWS.

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, DANIEL SMITH, of Cedar Falls, in the county of Black Hawk, and State of Iowa, have invented a new and improved Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my plow.

Figure 2 is an elevation of the mould-board side of the plow.

Figure 3 is an enlarged horizontal section, taken at the point indicated by the line *x x* in fig. 2.

Figure 4 is a perspective view of the front and the rear clamping-plates for confining the mould-board in place.

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

The object of this invention is to construct mould-boards for plows of a substance which will be more durable than metal, and which will always present a smoother surface and offer less resistance to the earth than mould-boards made of metal, as will be hereinafter described.

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

In the accompanying drawings, A represents a mould-board, which I make entirely of glass, and of any suitable shape, by taking plates of glass of the proper size and pressing them upon a suitable form while in a heated state. The glass mould-boards should be properly annealed, so as to render them less brittle, and not liable to break under ordinary usage.

The edges of the mould-boards may be slightly bevelled, for receiving the clamping-plates *a b*, and for forming a close joint at the junction of the lower straight edges of the boards with the shares *d*. The share *d* is made of metal, and suitably secured at its front part to the landside-plate *e*, and at its rear part to the lower end of the plow-stilt or handle B′. The handle B is secured at its lower end to the landside-plate *e*, and above this plate the handle is secured rigidly to the rear end of the plow-beam C, as shown in fig. 1. The two handles B B′ are braced against lateral strain by the cross-bars *f f*, and the handle B is further sustained by the forward diagonal brace *g*, which connects this handle to the beam C.

In front of the handle B, a standard, D, is securely bolted to the landside-plate *e*, and extended upward through the beam C, to which the standard is secured by a pin or key, as shown in figs. 1 and 2.

The clamping-plate *a* is, in cross-section, of a V-shape, and is rigidly bolted at one end to the share *d*, and at the other end to the standard D. The clamping-plate *b* is similarly constructed, and secured at its lower end to the share *d*, and at and near its upper end to the front edge of the handle B. These two plates, *a* and *b*, embrace the edges of the glass mould-board, and confine it in place.

To prevent the mould-board from slipping upward, the upper ends *a′ b′* of said plates extend over the upper corners of said board, as indicated in figs. 1 and 4. The lower edge of the mould-board abuts snugly against the upper edge of the share *d*, and the surfaces of the mould-board and share are flush at such junction.

Thus, it will be seen that the mould-board can be rigidly secured in place upon the plow without making holes through it, which holes would be liable to crack the glass or weaken it at the points of attachment.

I have thus described one practical mode of securing a glass mould-board to a plow, but I do not desire to confine my invention to such mode, as other modes equivalent to this may be adopted.

A glass mould-board will always present a smooth surface to the earth, and pass through it with less friction than metal. It will be more durable than metal, when used upon land which is free from stones, and, when properly mounted, it will not be liable to break. Such a mould-board will not rust, nor allow moist, clayey soil to adhere to it.

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

1. A mould-board for plows, which is made entirely of glass, substantially as described.

2. The combination of a glass mould-board and a metal share, substantially as described.

3. Securing a glass mould-board to a plow-frame, by means of clamps *a b*, or their equivalents, substantially as described.

4. The construction of the side-clamps *a b* with curved overhanging lips *a′ b′*, substantially as described.

DANIEL SMITH.

Witnesses:

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W. B. HAMILL.