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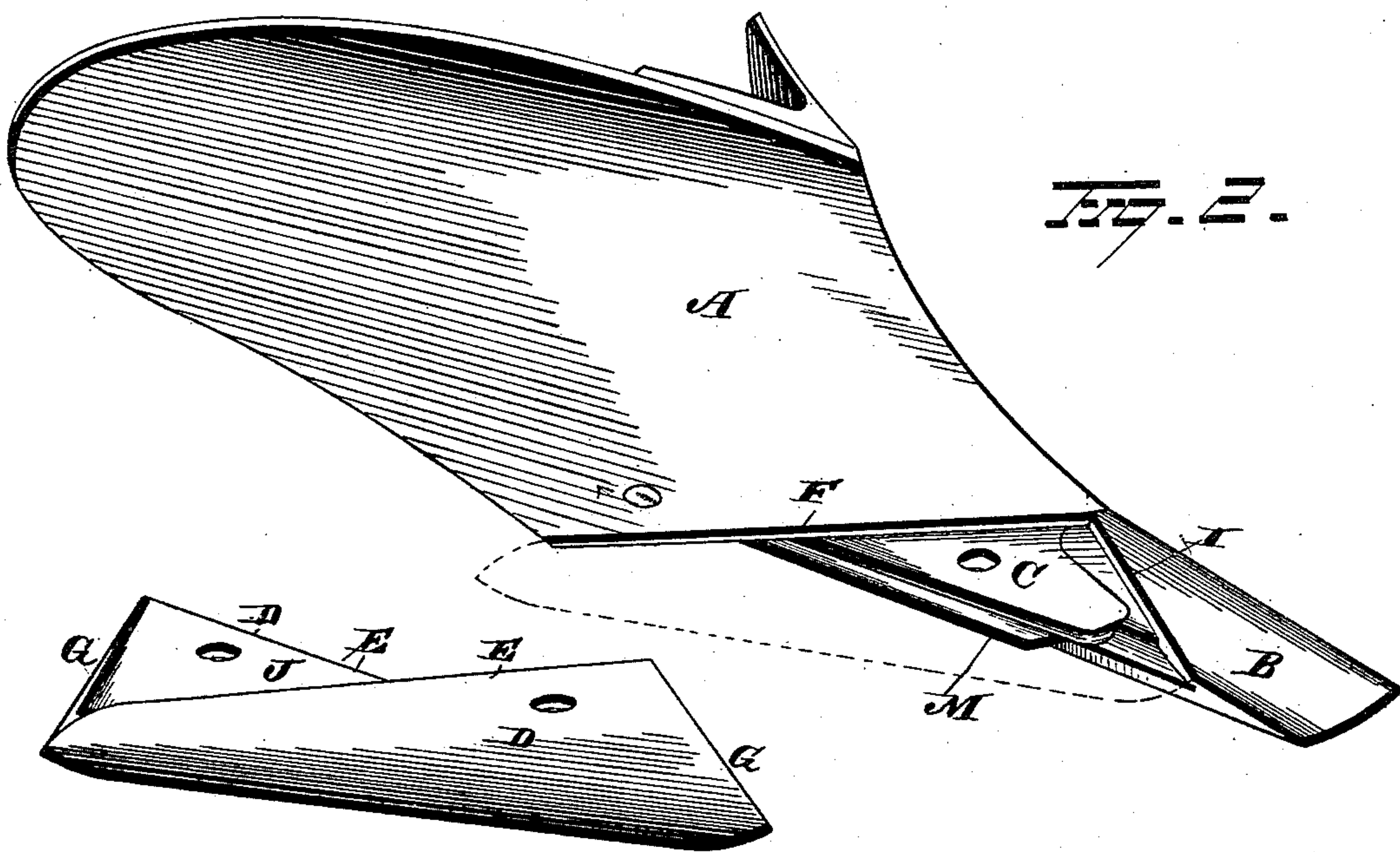
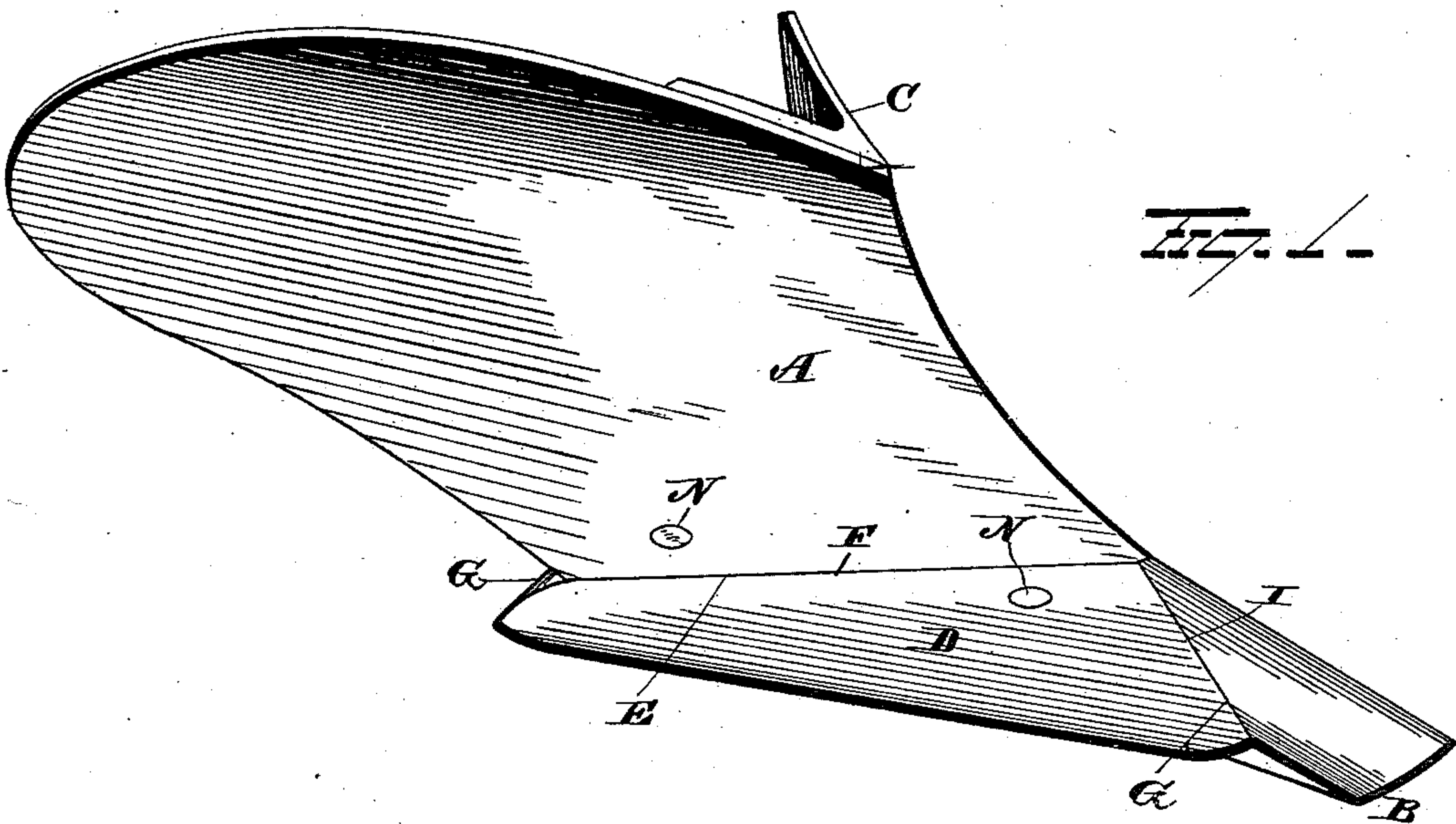
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C. ANDERSON.

PLOW.

No. 277,185.

Patented May 8, 1883.



WITNESSES
G. J. Downing
S. G. Nottingham

INVENTOR
Charles Anderson
by *H. A. Seymour*
Attorney

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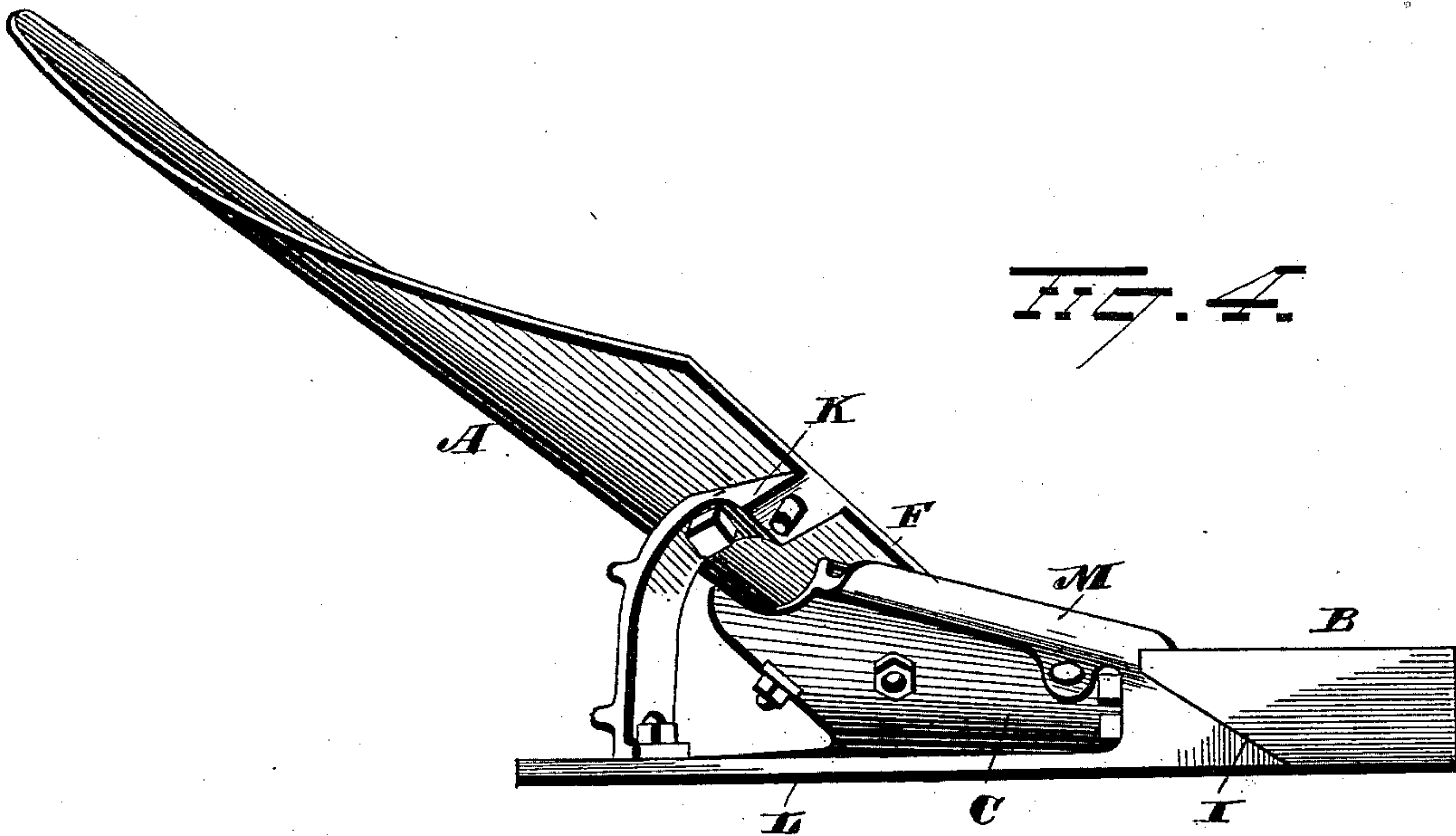
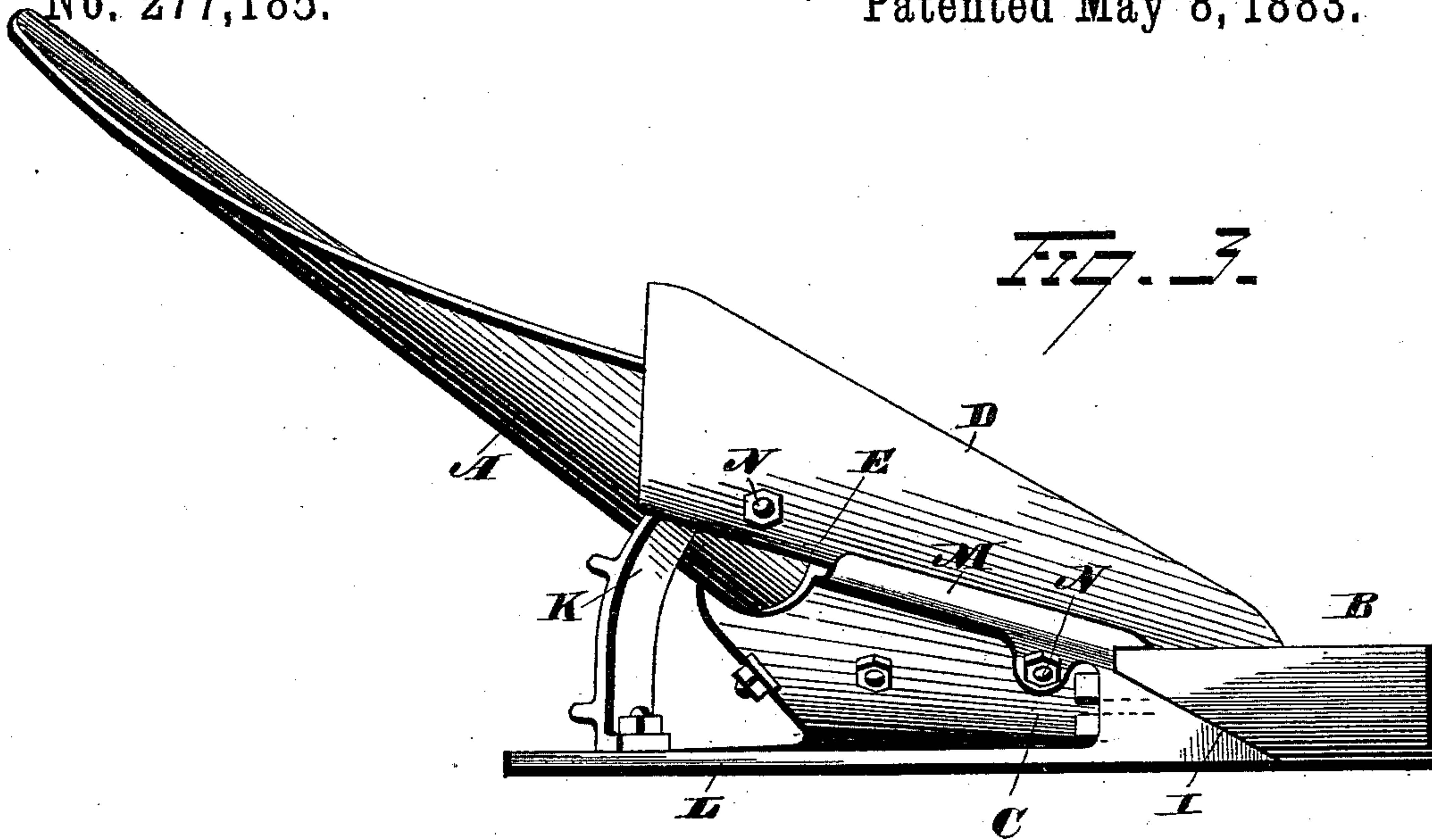
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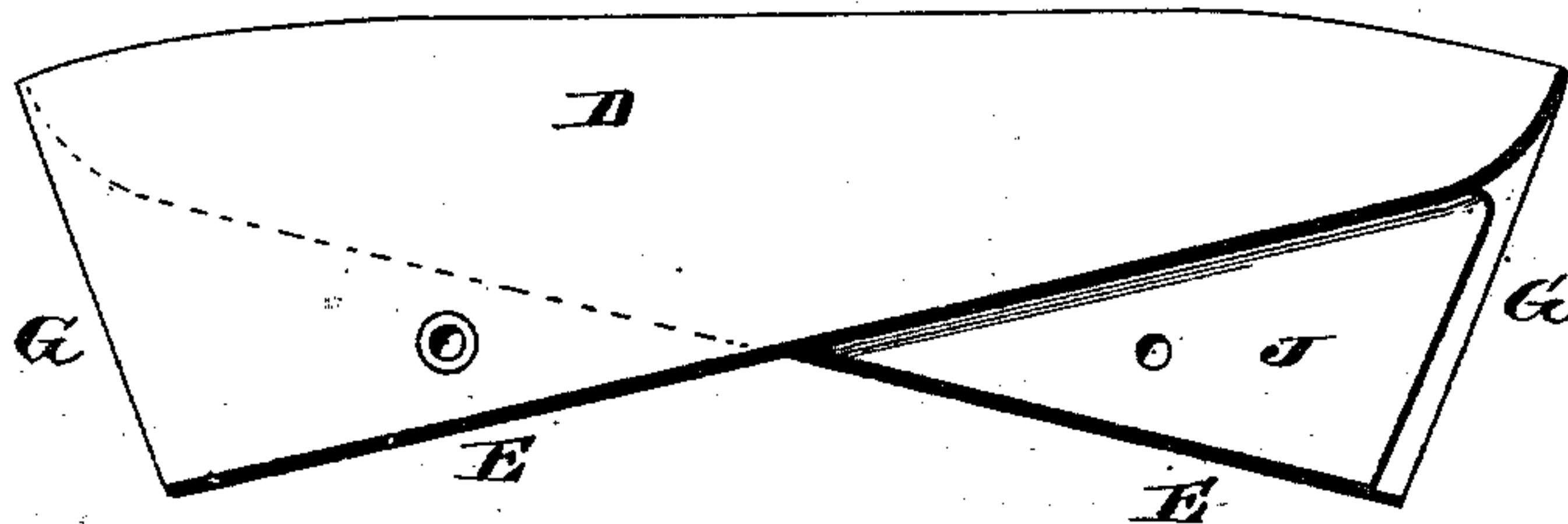


Fig. 4.

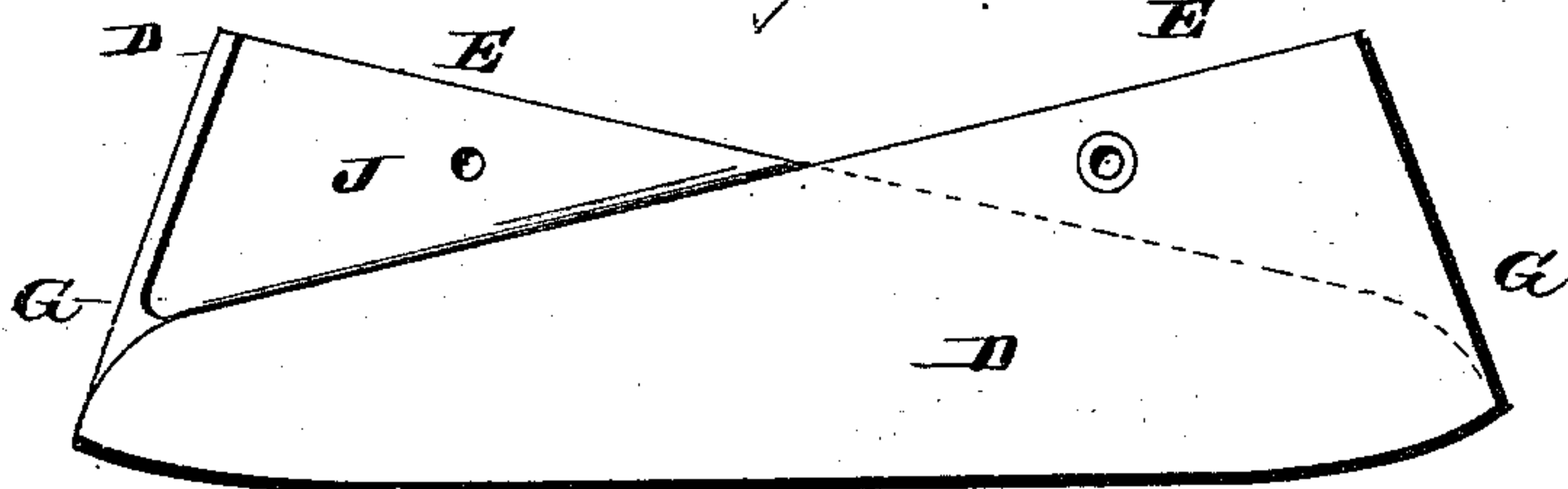
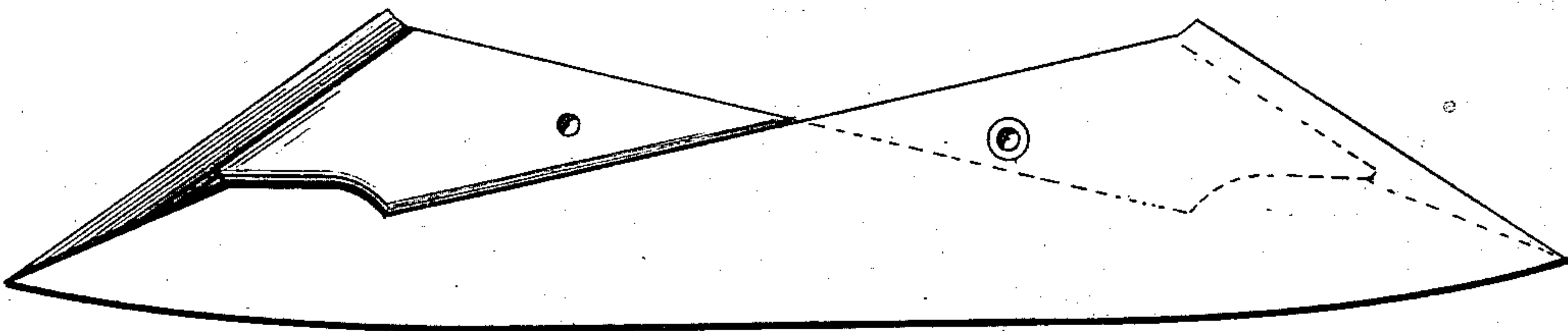


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES ANDERSON, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE SOUTH BEND IRON WORKS, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 277,185, dated May 8, 1883.

Application filed March 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ANDERSON, 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 that class of wings for plows which are adapted to be reversed edge for edge and face for face, the object being to produce articles of this character which shall combine simplicity and cheapness of construction with durability and efficiency in use, and which shall obviate the objections inherent in the wings now on the market.

Heretofore reversible wings of the character designated have been constructed to make that one of the working-faces not in action fulfill the function of a bearing for supporting the other face in its proper position with respect to the mold-board. During the process of manufacture a large percentage of the wings are more or less distorted—a defect which must be remedied, if at all, by reducing them to the required shape by grinding; but here a difficulty arises, for by grinding the working-faces of the wings to conform them to the lines of the mold-board they are unfitted for performing their bearing function, as described. Neither can the distortion of the wings be remedied by grinding or reshaping the mold-boards to conform to them, for when the same is ground to conformity with one face of a wing it will obviously not conform to the other face thereof. It is apparent, therefore, that almost absolute perfection of shape and finish is necessary, not only in the wings, but also in the plows, to enable the former to be reversed and to be used in duplicate, such exactness of construction requiring skilled labor, and rendering plows provided with reversible wings very expensive. Again, the wearing away which the exposed working-face of the wing suffers unfits it to perform the function of a bearing for supporting the other working-face in position when the wing is reversed. Therefore where one face of the wing has been so far worn that it will not do its work and the wing is reversed it will not fit in its bearings

and must be discarded. Again, the prevailing styles of reversible wings necessarily entail in their attachment to the mold-board the formation of bold lines or contours, which interfere with the operation of the plow.

With the end in view of obviating the objections above recited, my invention consists in certain details of construction and combinations of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a plow adapted to receive and provided with a wing constructed in accordance with my invention. Fig. 2 is a similar view of the plow with the reversible wing removed. Figs. 3 and 4 respectively are reverse plan views of the plow with the wing in place and removed. Fig. 5 is a view showing both faces of the reversible wing; and Fig. 6 is a plan view, showing one of the modified forms which the wing may assume.

The lower portion of the mold-board A and the rear portion of the reversible point B are appropriately cut away to expose the plow-standard C, to which they are respectively attached. By cutting away the mold-board and point, as described, a recess is formed, which receives one end of the reversible wing, the other end thereof extending rearwardly under the heel of the mold-board, as shown in Fig. 1 of the drawings. The said reversible wing, which is preferably formed in one piece, consists, essentially, of two triangular working-faces, D, placed back to back, and arranged to cross each other diagonally, as illustrated. The said working-faces are defined apart by ledges E, which coincide with the lower edge, F, of the mold-board, while the bases G of the wings coincide with the edges I of the reversible point B. That portion of the base or rear face of each of the working-faces D which is not occupied by the crossing-point of the other face constitutes a bearing, J. When the wing is in working adjustment, and irrespective of the working-face exposed, the said bearings respectively rest upon the exposed portion of the standard C and the point B and upon the brace K, interposed between the mold-board and the landside L, the said standard being provided with a flange, M, adapted to receive the ledge E of the wearing-face not in action, and thus more firmly support the wing in position. The wing is secured in place by bolts

N, respectively passing through the mold-board, the brace, and one working-face, and through the other working-face and the standard, a very firm seat for the wing and a solid combination of parts being thus obtained. In virtue of the triangular shape of the working-faces D, the extent of surface exposed to direct friction is greatly reduced. Again, in virtue of the described shape of the working-faces and of their relative arrangement with respect to the mold-board, the heel of the latter may be extended as low and shaped as desired to best adapt the plow to the character of the soil and to the use to which it is to be made subservient. In virtue, also, of the construction of the wing and of the adaptation of the plow to receive it, the bearings of both the wing and the plow are protected from wear, and so long as these bearings bear an unchanged relationship to each other the wings can be reversed and replaced in duplicate.

As already referred to, the prevailing styles of reversible wings necessarily entail, in their attachment to the mold-board, the formation of bold lines or contours, which interfere with the operation of the plow, whereas with my plow and wing the working-faces of the latter may be suitably concaved or otherwise conformed to the lines of the mold-board in such manner that the lines of the two parts will shade into each other perfectly, and this without interfering with variation in the lines of the mold-board to adapt it to different kinds of work.

Iron, steel, or other suitable material is employed in the fabrication of my improved wings, which are preferably formed by casting, the operation of finishing them consisting essentially in first grinding them to fit the edges of the mold-board and point, and then attaching them in both positions to a model plow and grinding and polishing their working-faces until the same have the desired contour with respect to its mold-board.

From the foregoing it will be seen that the improved wings, being comparatively simple to manufacture and requiring no more metal than the prevailing styles, may be supplied to the trade at reduced rates.

Although the wing and point have been described as being independent of each other, they may, if desired, be made in one piece, as shown in Fig. 6 of the drawings.

I would have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. A reversible wing for plows, consisting, essentially, of two working-faces placed back to back and crossing each other diagonally.

2. A reversible wing for plows, consisting, essentially, of two working-faces placed back

to back, and crossing each other diagonally and defined apart by ledges.

3. A reversible wing for plows, consisting, essentially, of two working-faces placed back to back and crossing each other diagonally, the rear face of the outer end of each working-face being provided with bearing to support the wing on the plow.

4. A reversible wing for plows, consisting, essentially, of two working-faces triangular in general outline, and conformed in facial contour to the lines of the mold-board, said faces being placed back to back and crossing each other diagonally.

5. The combination, with a plow, of a reversible wing consisting, essentially, of two working-faces placed back to back and provided with bearings, the bearing of one face resting upon the standard of the plow, and that of the other face on a support located under the mold-board, substantially as set forth.

6. The combination, with a plow provided with a mold-board, the lower portion of which is cut away, as described, of a reversible wing having working-faces of triangular outline placed back to back, said wing being adjusted to the mold-board in the manner shown, substantially as set forth.

7. The combination, with a plow provided with a mold-board, the lower portion of which is cut away to expose the standard of the plow, and with a brace, the same being interposed between the landside and mold-board, of a reversible wing having two working-faces of triangular outline and placed back to back, and provided with bearings, the bearing of one face resting upon the exposed portion of the standard, and that of the other face upon the said brace, substantially as set forth.

8. The combination, with a plow provided with a mold-board, the lower portion of which is cut away, as described, and with a reversible point, the rear portion of which is cut away flush with the standard, of a reversible wing consisting, essentially, of two working-faces placed back to back and provided with bearings, the bearing of one face resting on the exposed portion of the standard and the rear of the reversible point, and that of the other face on a support located beneath the mold-board, substantially as set forth.

9. The combination, with a plow provided with a mold-board, the lower portion of which is cut away to expose the standard, the edge of the same being flanged, of a reversible wing consisting, essentially, of two working-faces placed back to back and defined apart by ledges, as described, the ledge of the face not in action having bearing in the flange of the standard, substantially as set forth.

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

CHARLES ANDERSON.

Witnesses:

F. C. NIPPOLD,
E. K. LINDSEY.