(No Model.) 4 Sheets—Sheet 1.

C. ANDERSON & J. OLIVER.

PLOW.

No. 275,744. Patented Apr. 10, 1883.

Fig. 1.

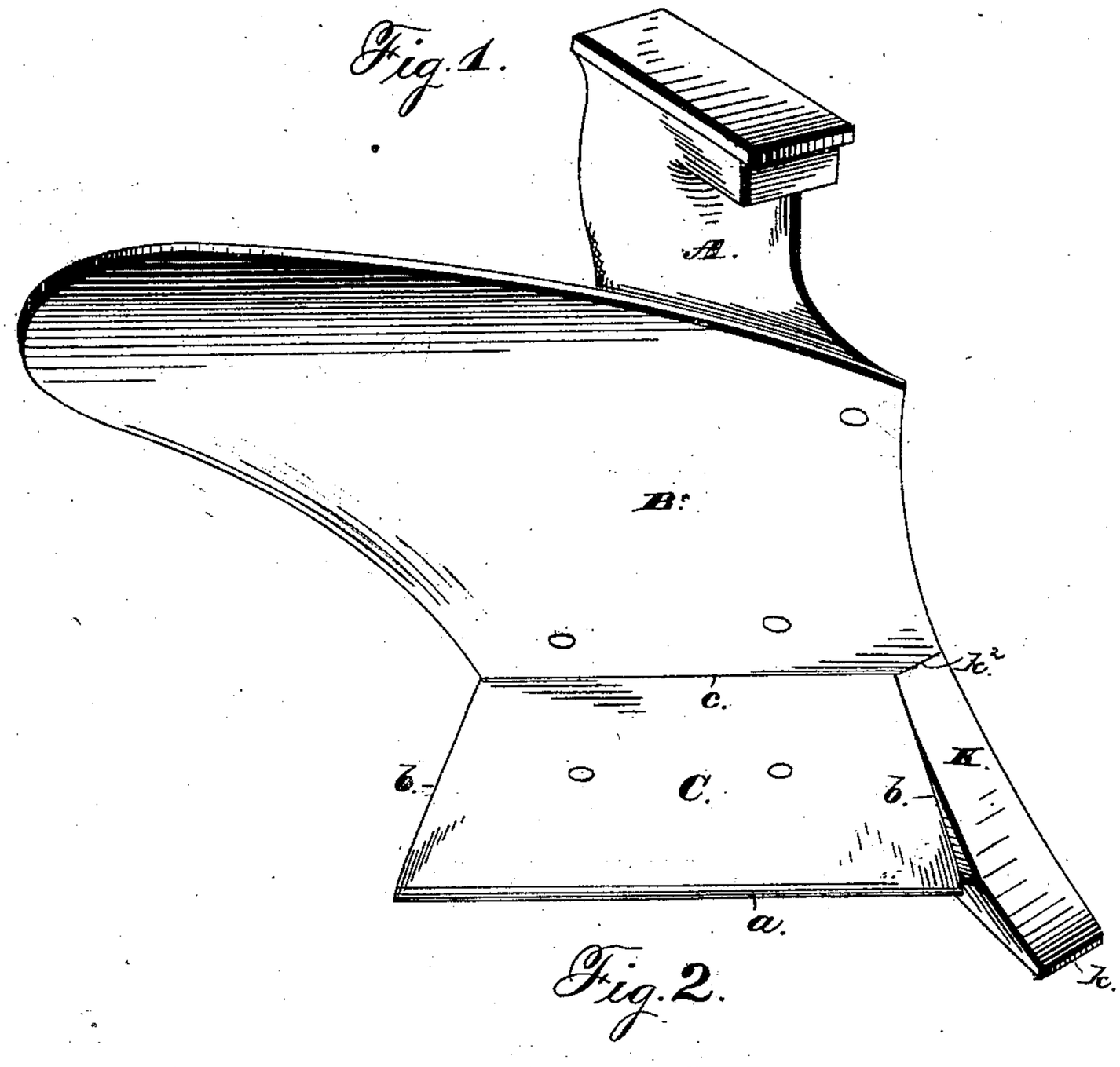

Fig. 2.

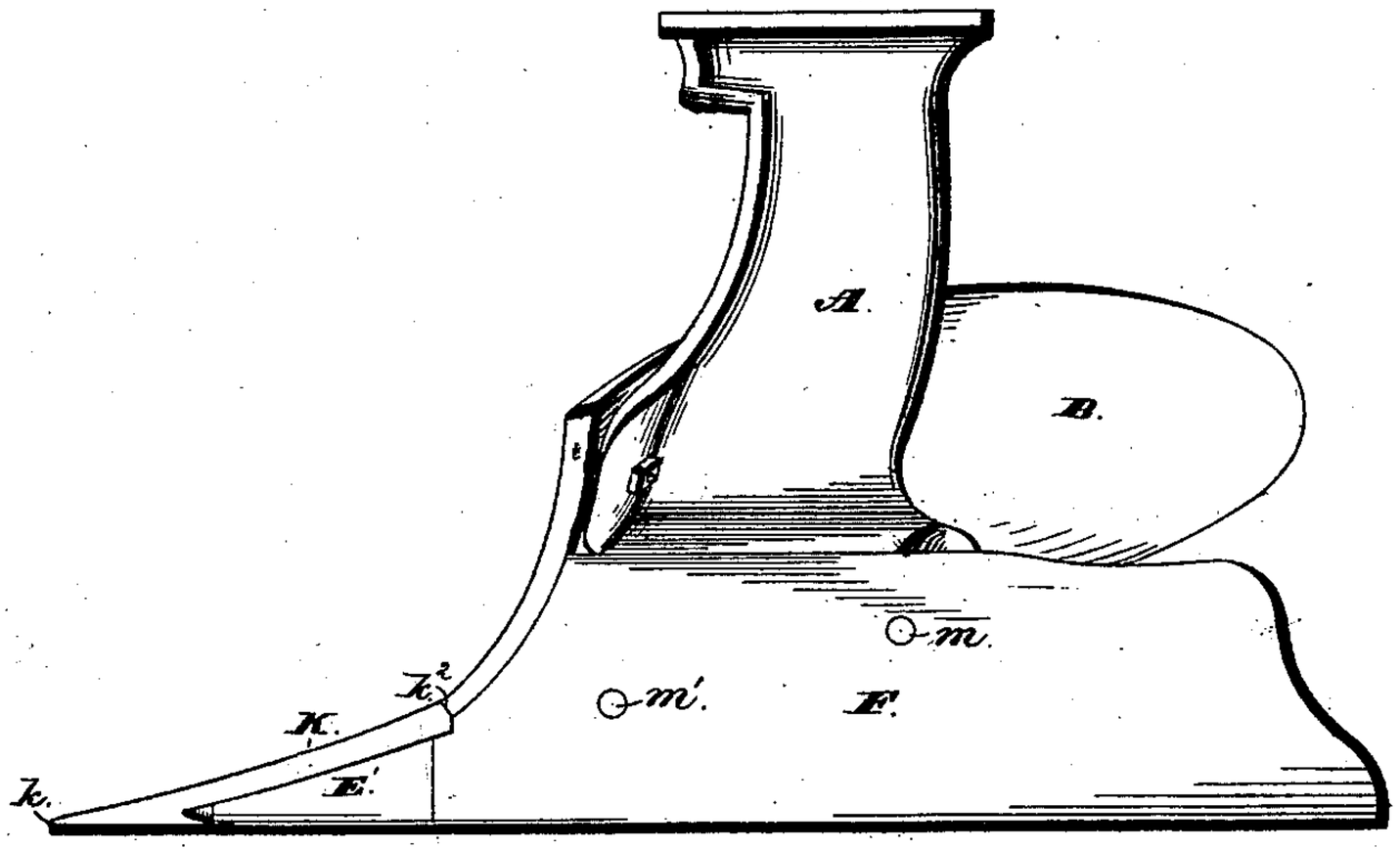

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Fig. 3.

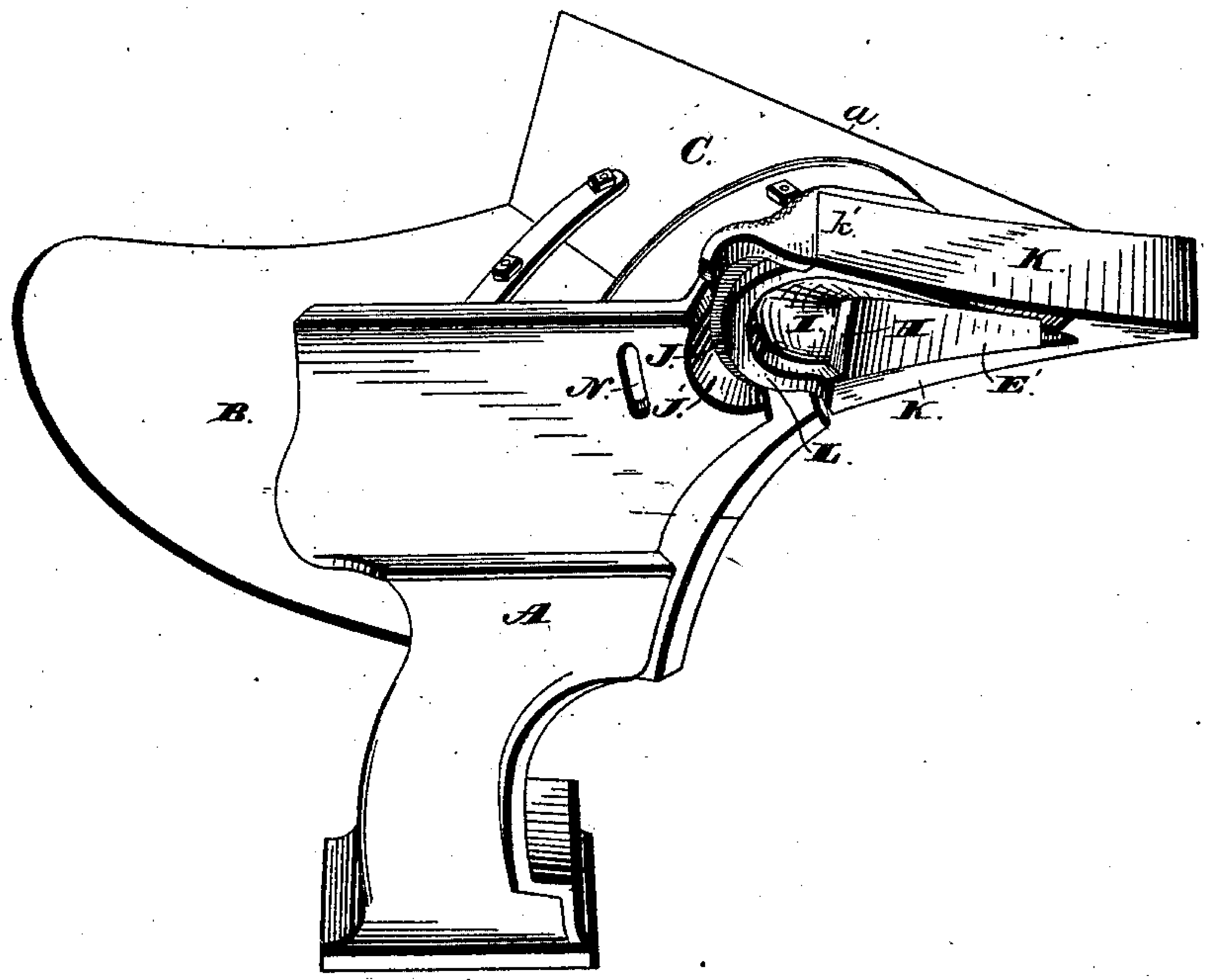
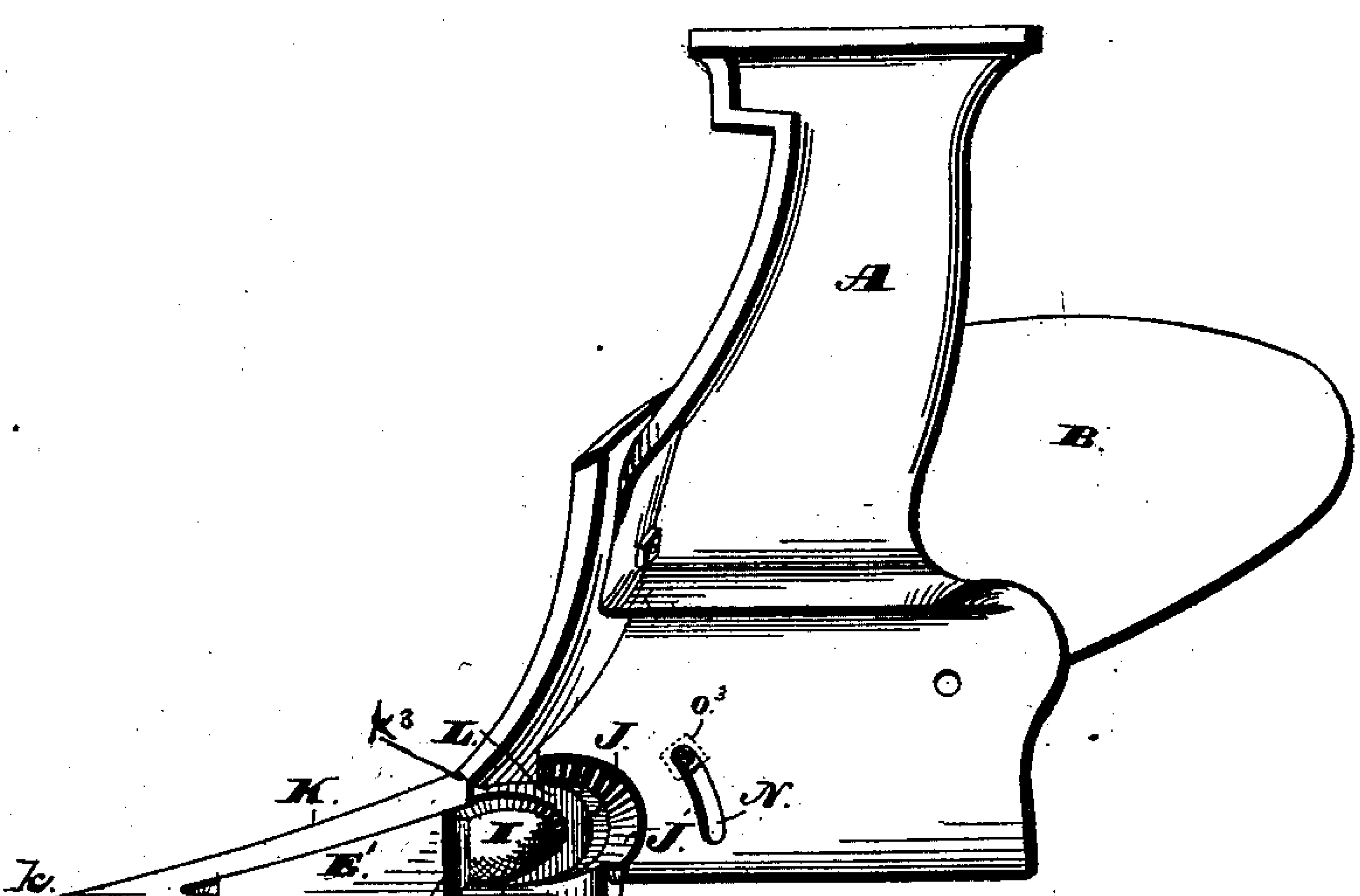


Fig. 4.



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(No Model.) 4 Sheets—Sheet 3.

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Fig. 5.

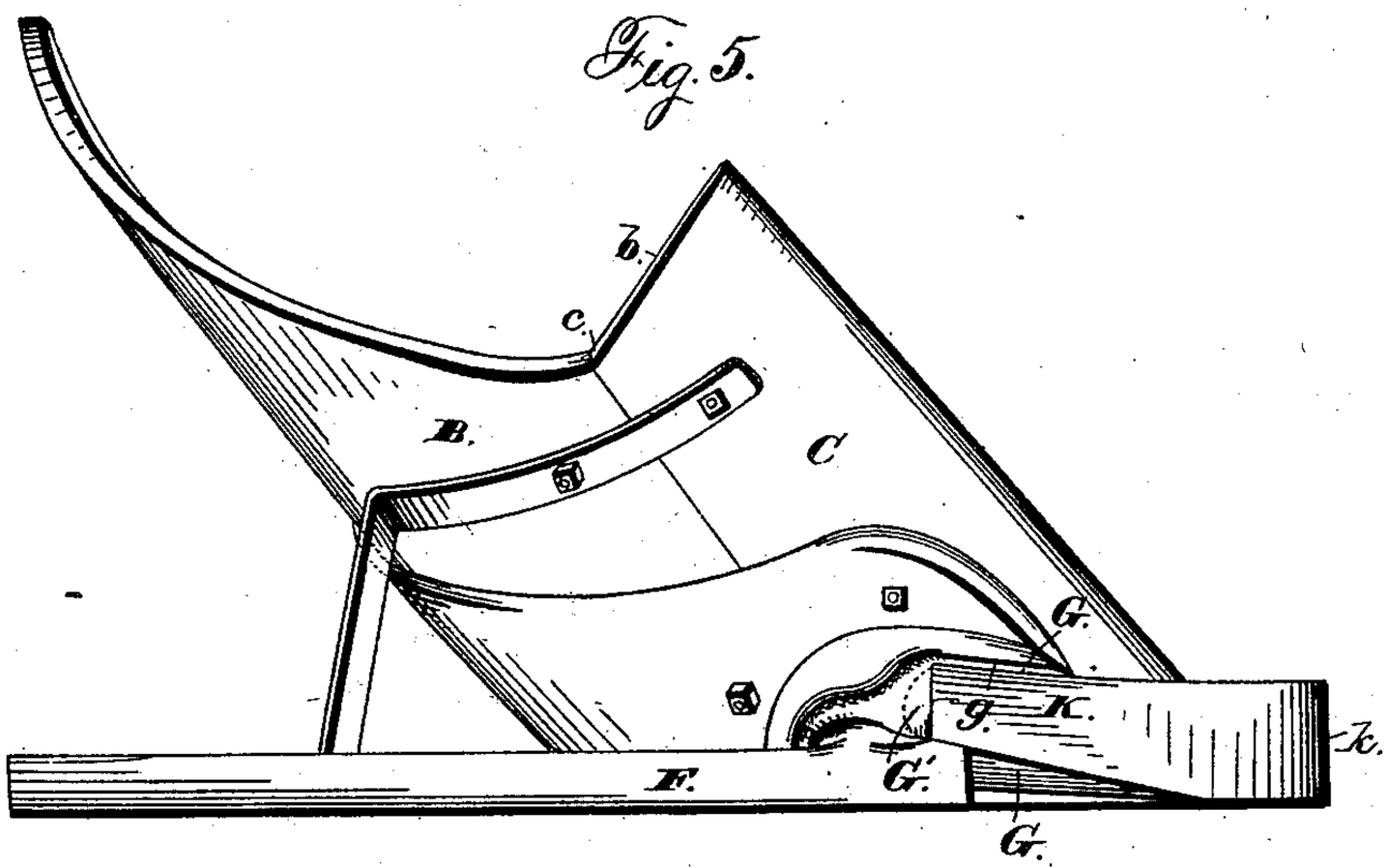
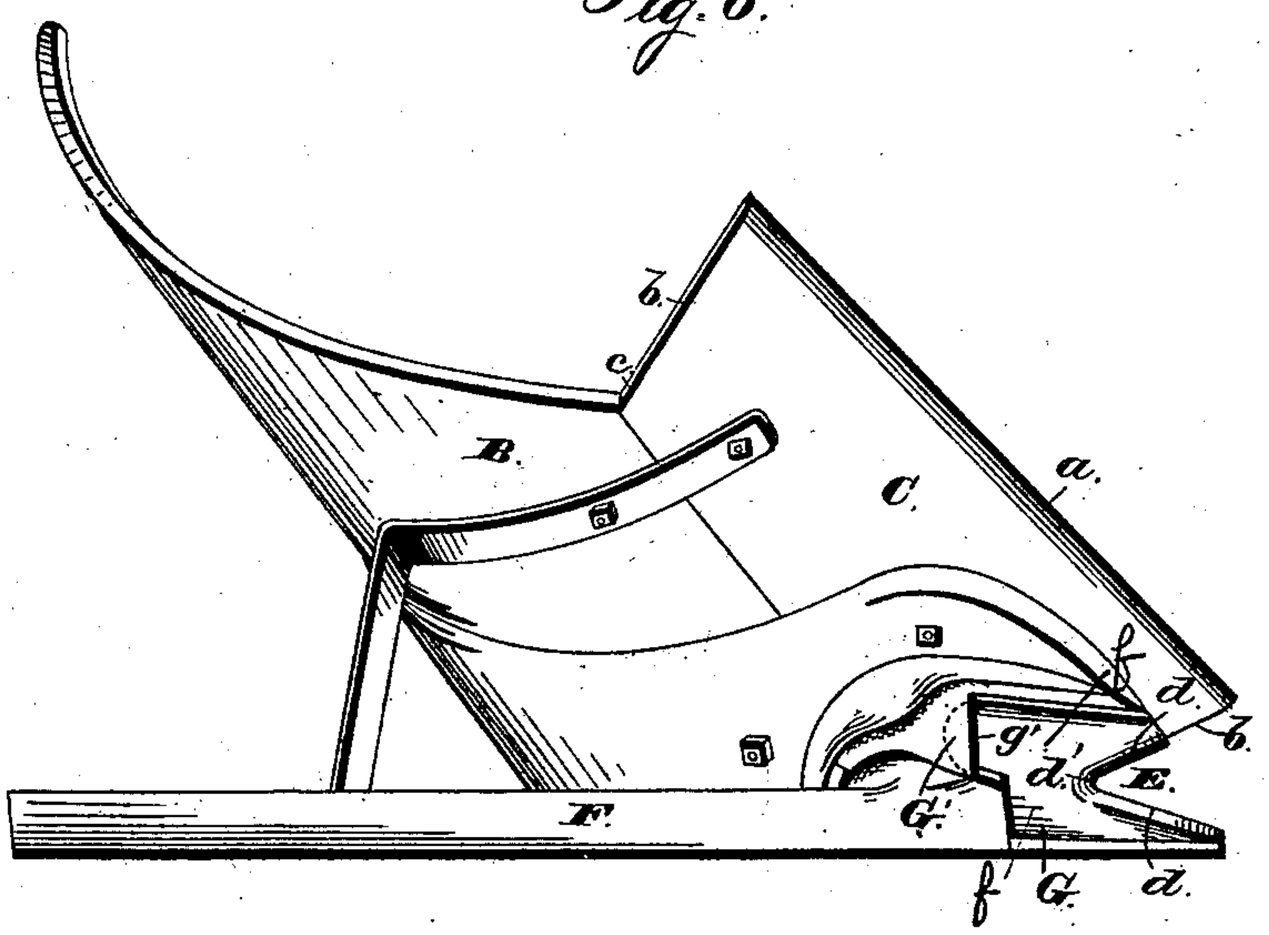


Fig. 6.



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(No Model.) 4 Sheets—Sheet 4.

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PLOW.

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Fig. 7.

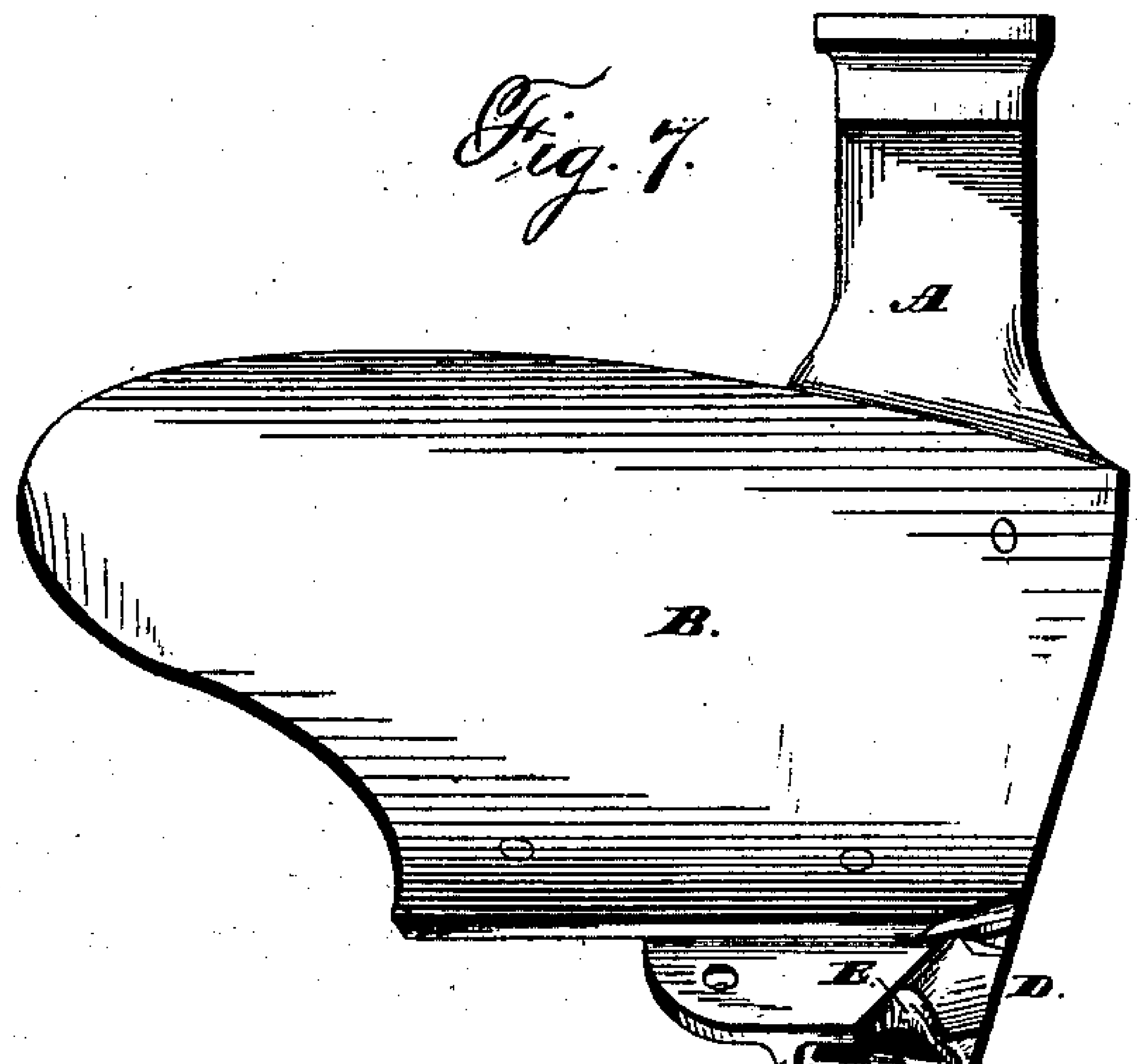


Fig. 9.

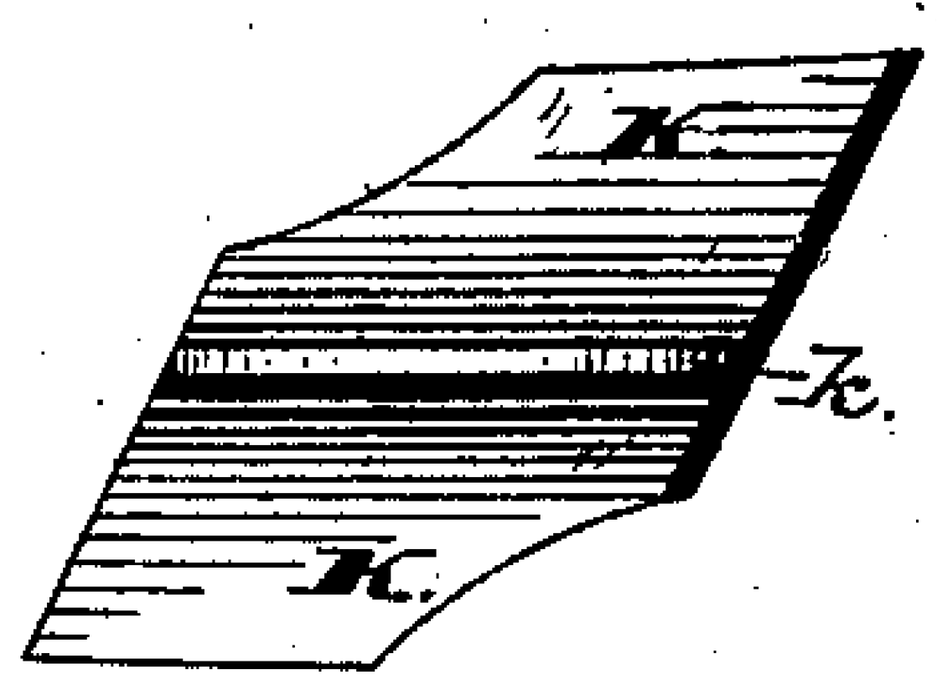


Fig. 8.

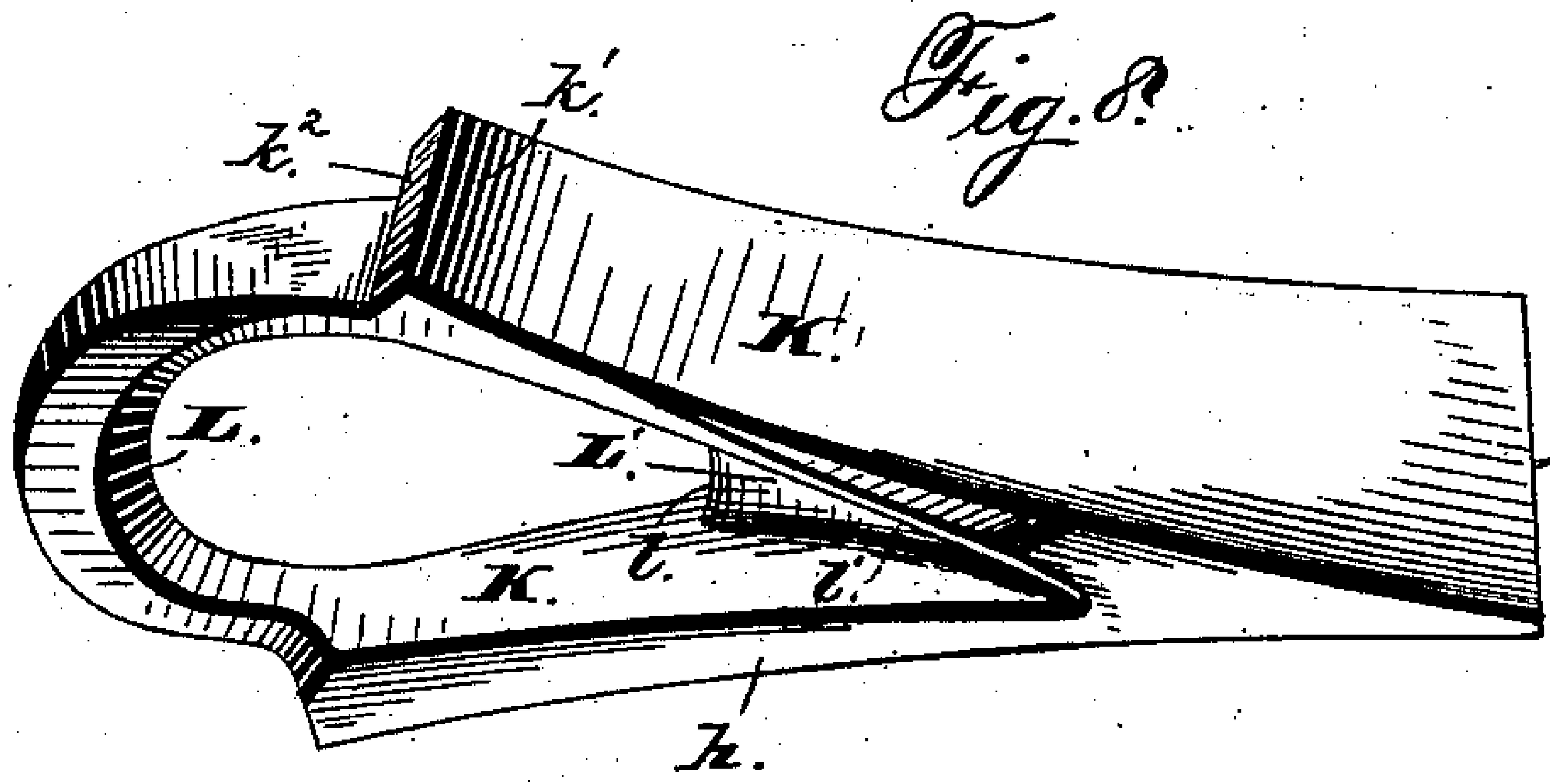


Fig. 10.

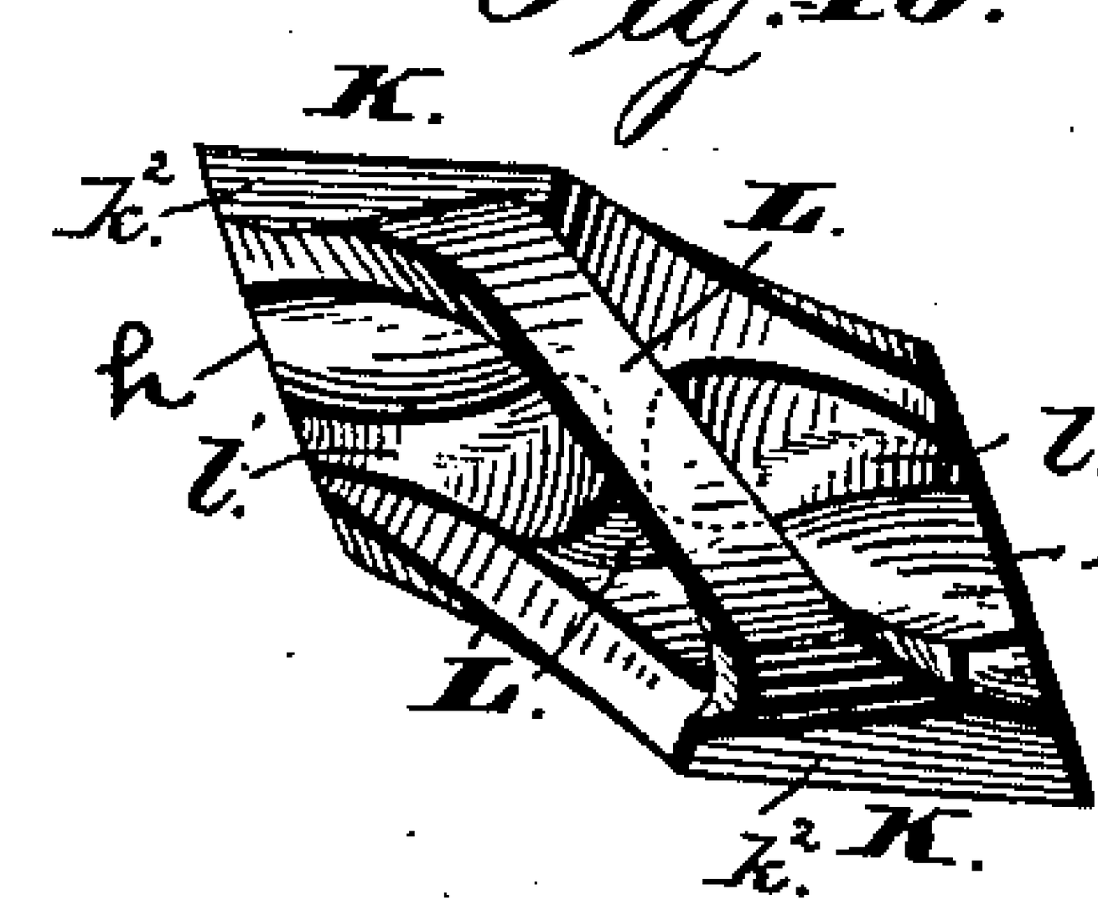


Fig. 11.

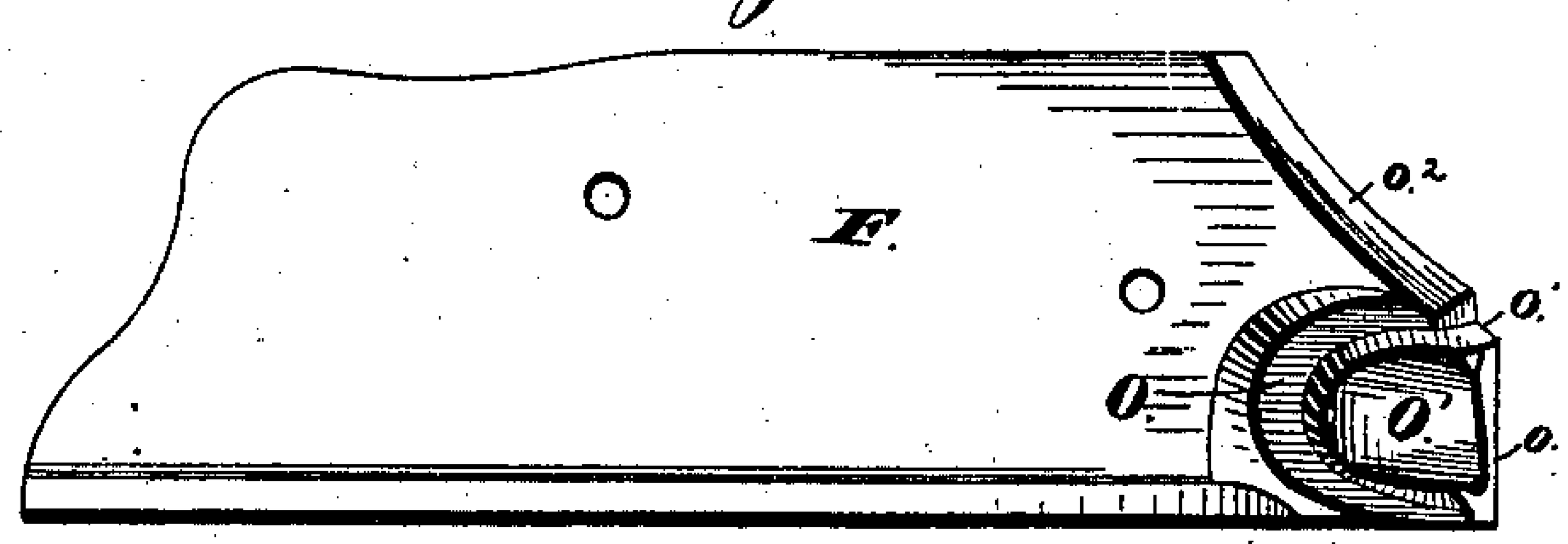
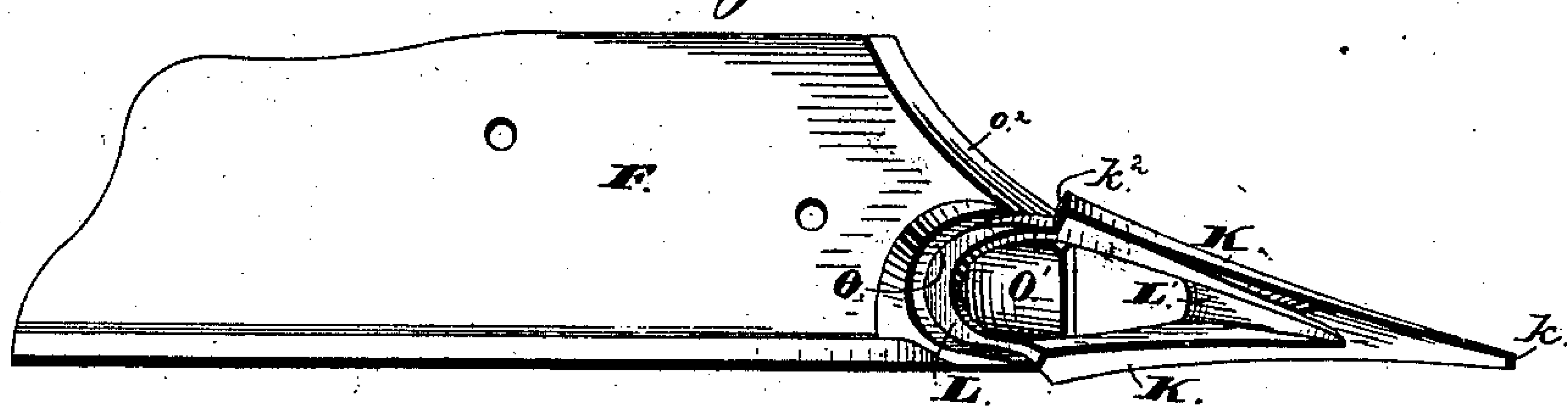


Fig 12.



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N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES ANDERSON AND JAMES OLIVER, OF SOUTH BEND, INDIANA, ASSIGNORS TO THE SOUTH BEND IRON WORKS, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 275,744, dated April 10, 1883.

Application filed January 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, CHARLES ANDERSON and 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 we 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 pertains to make and use the same.

Our invention relates to an improvement in plows, the object being to provide a plow with a reversible plow point and share, the parts to be firmly secured in place by a simple construction and arrangement of parts; and with these ends in view our invention consists in certain features of construction and combinations of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a plow embodying our invention. Fig. 2 is a view in side elevation. Fig. 3 is a view in perspective of the plow inverted, the landside being removed. Fig. 4 is a view of the same in side elevation. Fig. 5 is a plan view of the under side of the plow. Fig. 6 is a similar view, the point being removed. Fig. 7 is a front view of the plow, the point being removed. Fig. 8 is a view in perspective of the reversible point. Fig. 9 is a front view. Fig. 10 is a rear view. Fig. 11 is a plan view of the inner side of the landside; and 12 is a plan view of the inner side of the landside, the point applied thereto.

A represents the plow-standard; B, the mold-board, and C the reversible plowshare, the latter being constructed with a cutting-edge, *a*, inwardly tapering or inclined ends *b b*, and thick rear edge, *c*, which latter fits against the lower and forward edge of the mold-board and forms a smooth joint. When the under side of the cutting-edge becomes unduly worn away the share may be reversed, and thereby present the upper surface of the cutting-edge to the soil. The nose D of the standard has an open wedge-shaped slot, E, formed therein. The upper face of the nose is a plane surface, and the outer side, E′, thereof is also a plane surface, it being slightly inclined inwardly to correspond to the inclination of the landside F, and in connection therewith constitute the landside of the plow. We do not restrict ourselves to these particular features, as they may be varied, and yet embody our improvement. The walls *d d* of the wedge-shaped slot E gradually increase in thickness from the forward end of the nose to the crotch *d′* of the slot. The outer side, E′, of the nose is of greater width than the wall *d*, and forms a depending flange, *e*, which serves to lock the reversible point against displacement, as will hereinafter be explained. On the under side of the nose D of the standard is formed a recess, G, formed by the converging surfaces *f f′*, the side flange, *g*, the rear shoulder, *g′*, and the overlapping web or flange G′. The rear end of the nose D is formed with a shoulder, H, from which extends rearwardly a curved and inclined bearing, I, having an arc-shaped bearing, J, at its base, which is inclosed by the wall J′, formed in the standard.

The reversible point is formed with inclined edges *h h* and correspondingly-inclined surfaces *h′ h′* and extensions or flanges K K, the inner edges of which are outwardly inclined from the point *k* to the rear ends, *k′*, of the flanges, which are outwardly beveled, as shown at k^2. The flanges are connected by a bail, L, which may be of the curved form shown; or it may be of any other desired form, it being understood that the bearing on the standard must conform to the shape of the bail or loop. The ends of the bail are wide, in order to insure the proper degree of strength, and also permit of the beveled shoulders k^2 extending above the bail ends. The flanges K K are connected by a wedge-shaped web, L′, which extends from the point *k* to the point *l*, the construction being such that wedge-shaped grooves *e′* are formed on each side of the web between the flanges. To secure the reversible point in place the bail is placed over the nose and the point moved rearward until the bail is nearly or quite in contact with its seat J, as illustrated in Fig. 3. In this position the upper flange rests upon the upper surface of the nose D. The tapering walls *d d* of the wedge-shaped slot E fit into the wedge-shaped grooves *l′* on opposite sides of the web L′. The lower flange fits within the recess G on the under

side of the nose, and the depending flange *e* on the side of the nose overlaps the edge of the lower flange of the point, and hence it will be seen that the reversible point has an extended bearing-surface, and is securely locked against vertical or lateral displacement. The beveled end k^2 of the upper flange fits beneath the beveled edge k^3 of the mold-board, while the beveled edge k^2 of the lower flange fits beneath the beveled edge of the overlapping web or flange G′ on the under side of the nose of the standard. This construction and arrangement of parts operates to prevent the spreading of the flanges. The upper portion of the bail is located between the mold-board and the nose of the standard, and the lower portion of the bail is located between the overlapping web and the bottom of the standard, while the rear portion of the bail rests on its curved seat, or on the inclined bearing leading thereto.

F is the landside, and is secured to the rear portion of the standard by a round bolt, *m*, while the forward end of the landside is secured in place by a bolt, *m′*, that extends through an elongated slot, N, formed in the standard. On the forward end of the landside is formed a lug provided with a curved seat or bearing, O, which fits against the bail of the reversible point. The lug is recessed at O′ to receive the inclined bearing I. The forward end, *o*, of the landside fits against the shoulder on the rear end of the nose of the standard, and is provided with a notch, *o′*, that receives the rear end of the reversible point, while the curved edge o^2 fits beneath the edge of the mold-board. By tightening the nut o^3 on the forward bolt, *m′*, the bearing O on the landside engages the bail or loop on the reversible point, and forces it against its inclined bearing until it has reached its seat, and thus drawn the point rearwardly until it has reached a snug bearing on the different parts of the nose of the standard.

When it is desired to remove the point for reversal or renewal the nuts on the bolts *m* *m′* are loosened, and the forward end of the landside pulled outwardly a slight distance, and then lowered, the bolt *m* serving as a pivot until the landside is free from the nose of the standard, when the point can be readily removed.

By the construction of parts described we are enabled to securely fasten the plow-point in place without employing a bolt or hook to engage any portion of the point.

Instead of using a curved bail such as described, we may use a straight bail located between the flanges, and have a flat inclined face on the standard. Again, many other changes in the construction, form, and relative arrangement of the parts might be resorted to without involving a departure from the scope of our invention, and hence we would have it understood that we do not restrict ourselves to the exact construction and arrangement of parts shown and described; but,

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

1. The combination, with the plow-standard having an overlapping web on its under side, said web provided with a beveled edge, and a mold-board provided with a beveled edge adjacent to the rear end of the plow-point, of a reversible plow-point having extensions or flanges constructed with beveled ends adapted to fit beneath the mold-board and said web, substantially as set forth.

2. The combination, with the standard having an open wedge-shaped slot formed in its nose portion, and a downwardly-projecting flange on the side, of a reversible plow-point constructed with rearwardly-projecting flanges, and with a wedge-shaped partition or web that fits within said open slot, substantially as set forth.

3. The combination, with a standard provided with an open slot and an inclined bearing in rear of the slot, of a reversible point provided with a wedge-shaped web adapted to fit within said slot, and with a bail or loop that engages said inclined bearing, substantially as set forth.

4. The combination, with the standard and the reversible plow-point provided with a bail or loop, of the landside provided with a lug having a seat adapted to fit over and engage the bail or loop, substantially as set forth.

5. The combination, with the standard and the reversible plow-point, of the landside secured at its forward end to the standard by a bolt passing through an elongated slot in the standard, substantially as set forth.

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

CHARLES ANDERSON.
JAMES OLIVER.

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