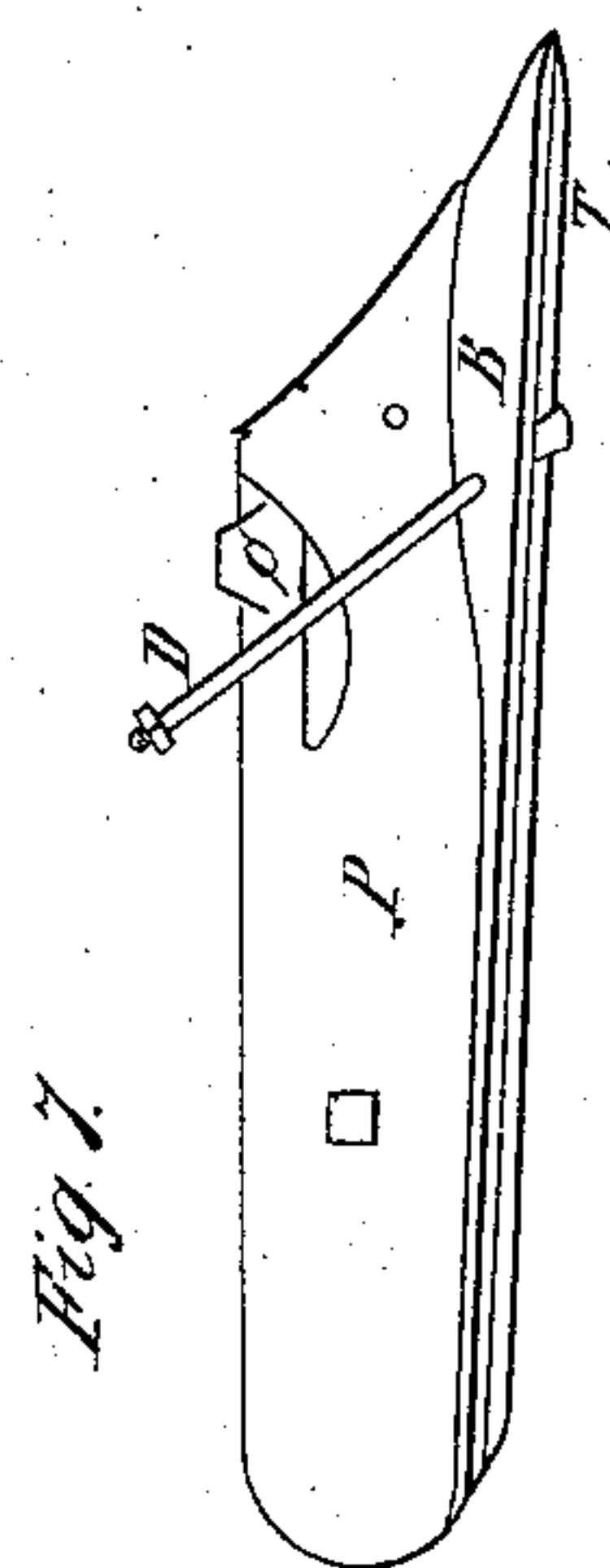
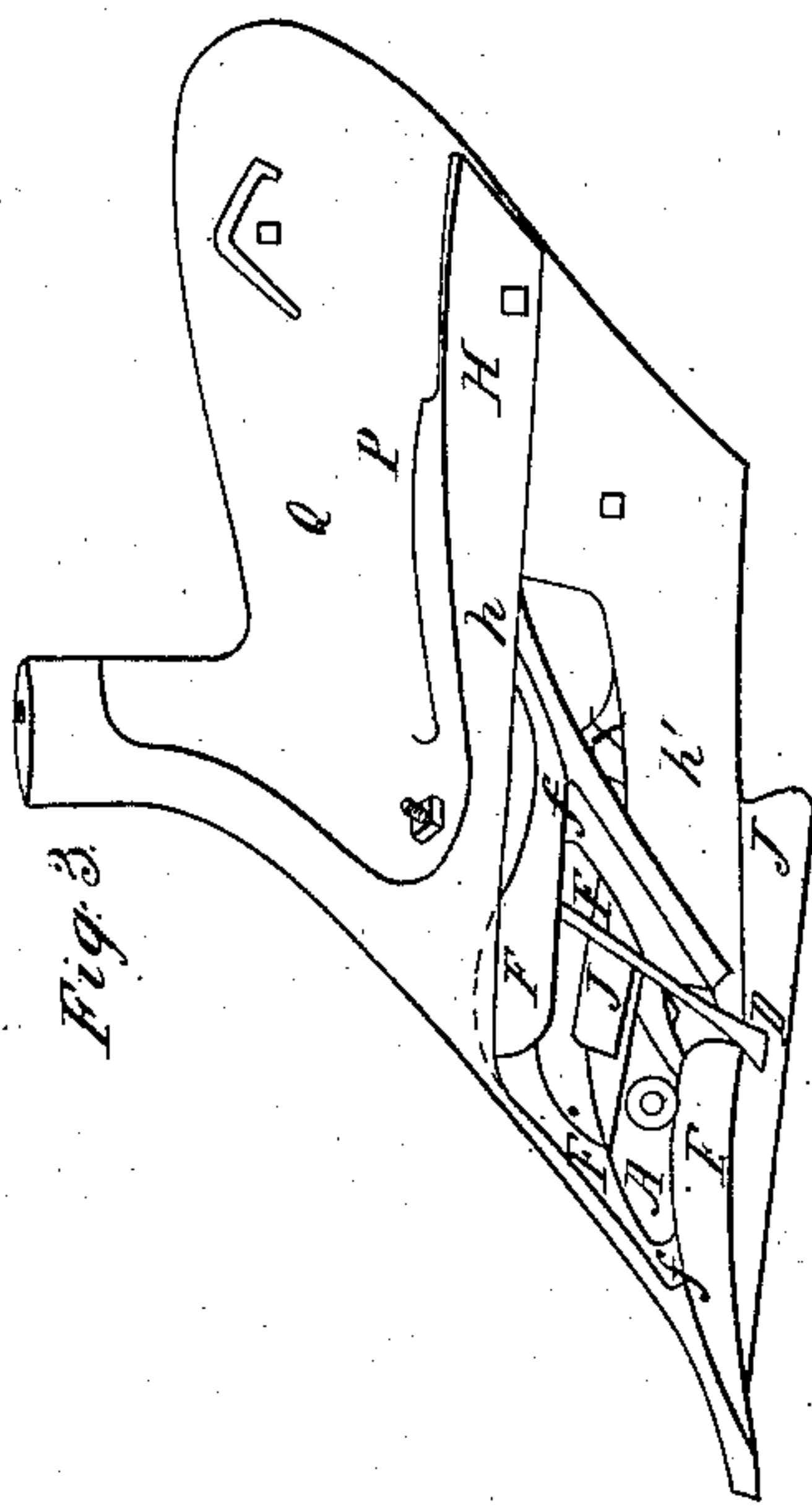
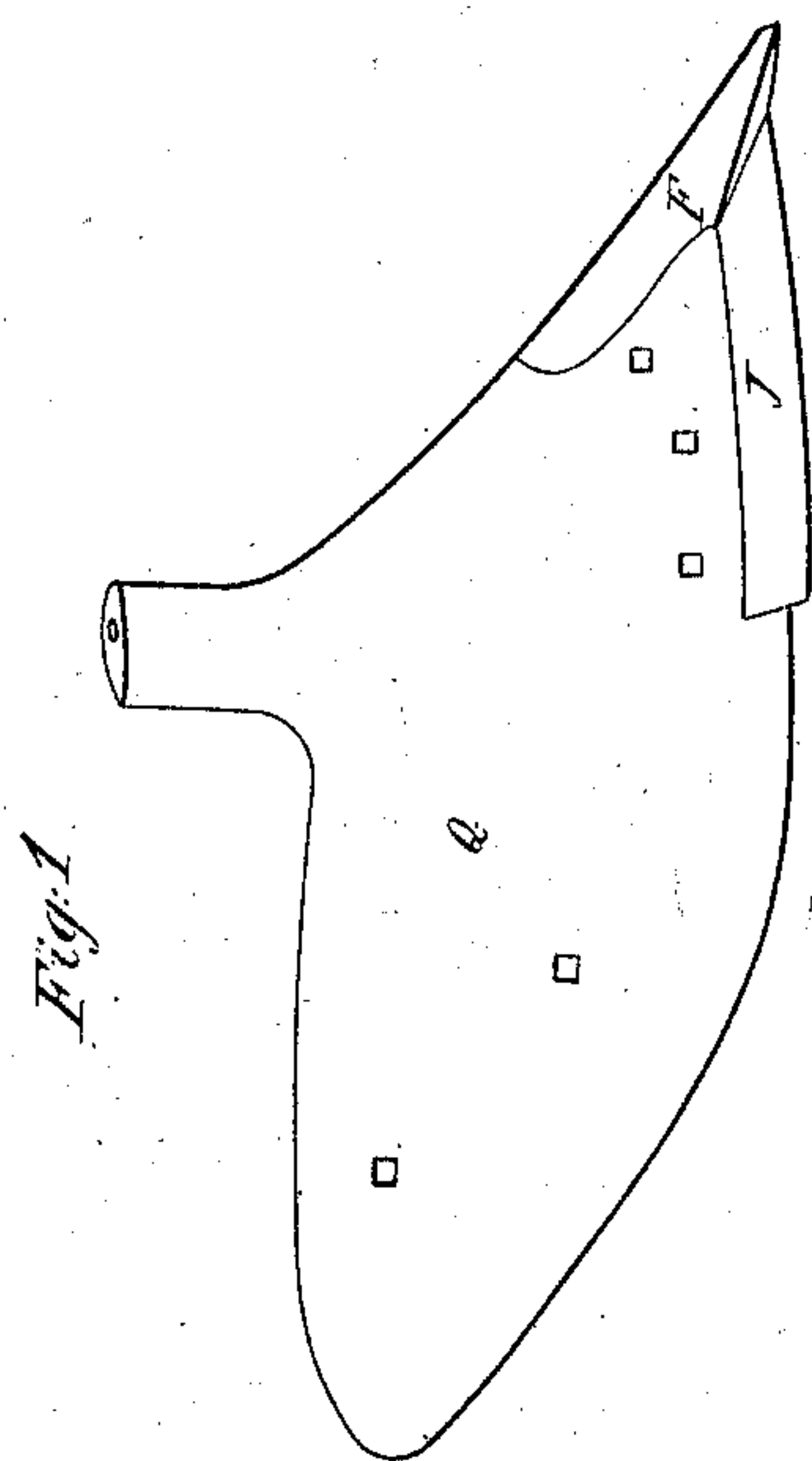
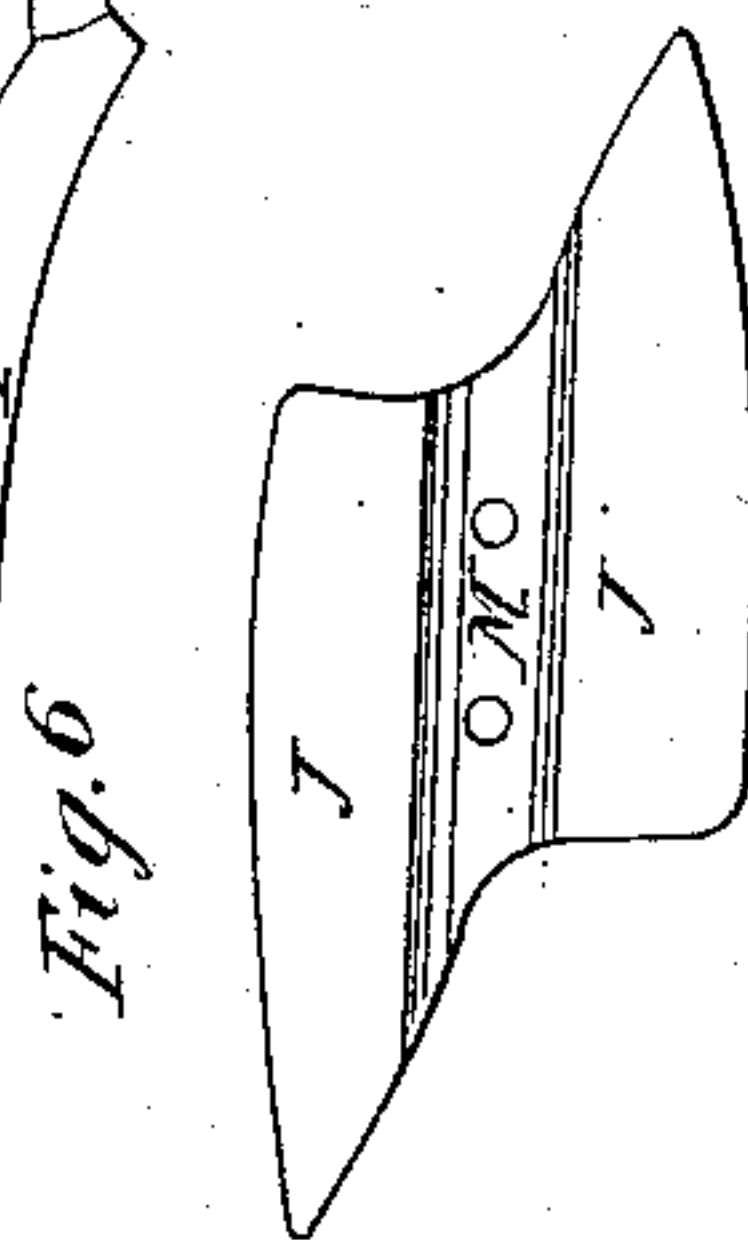
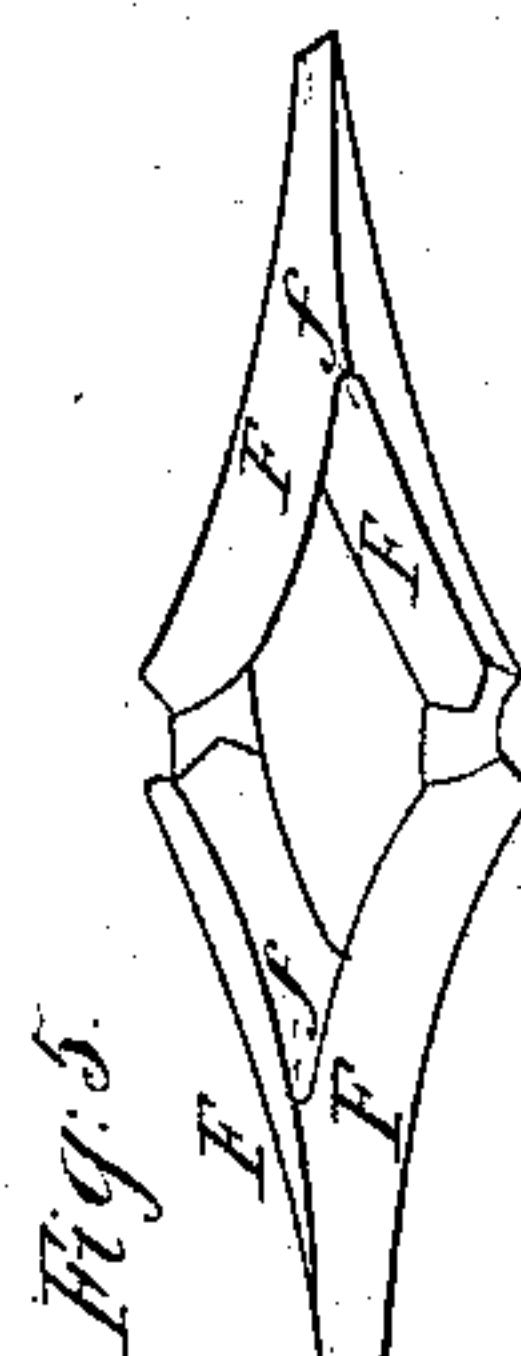
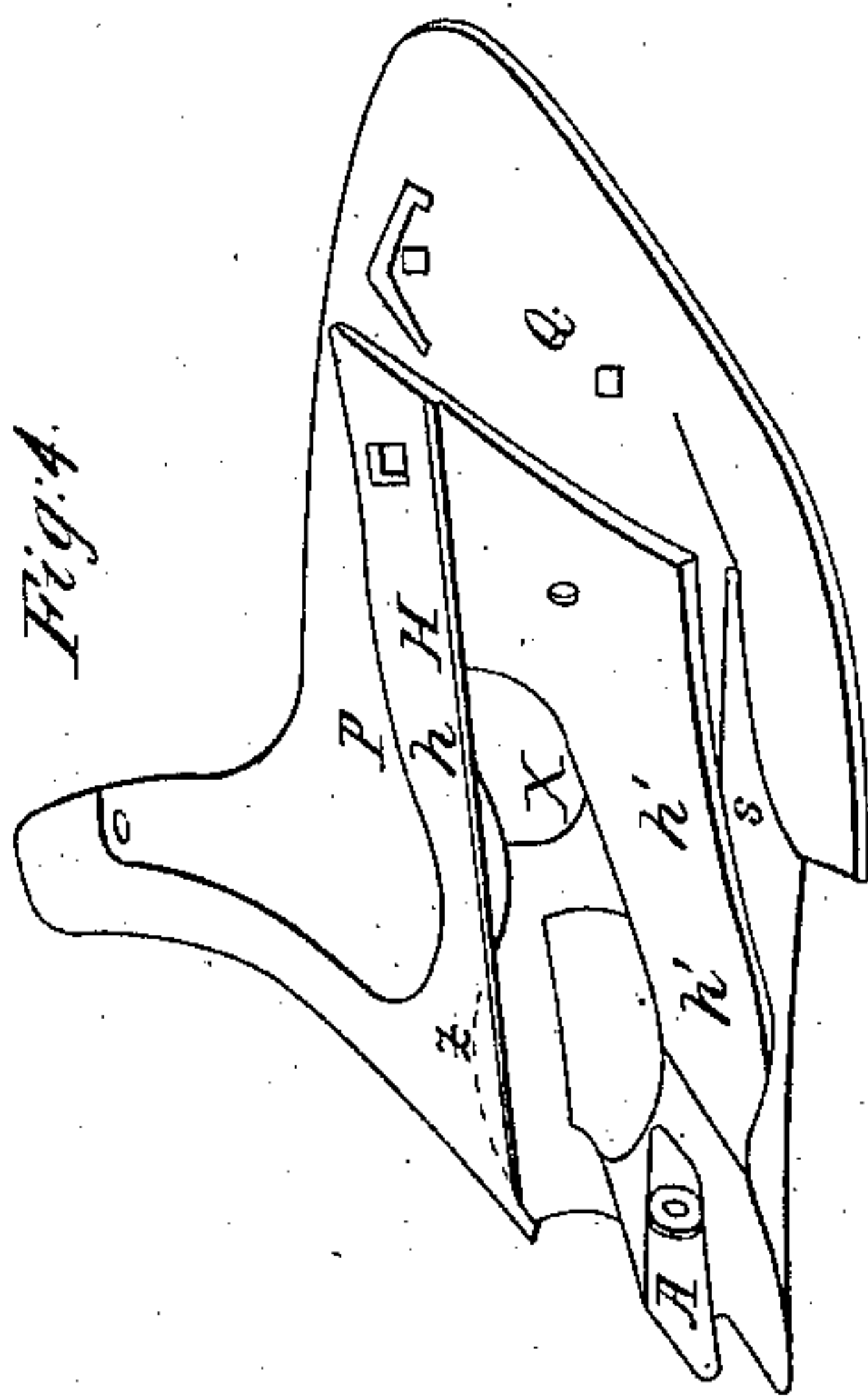
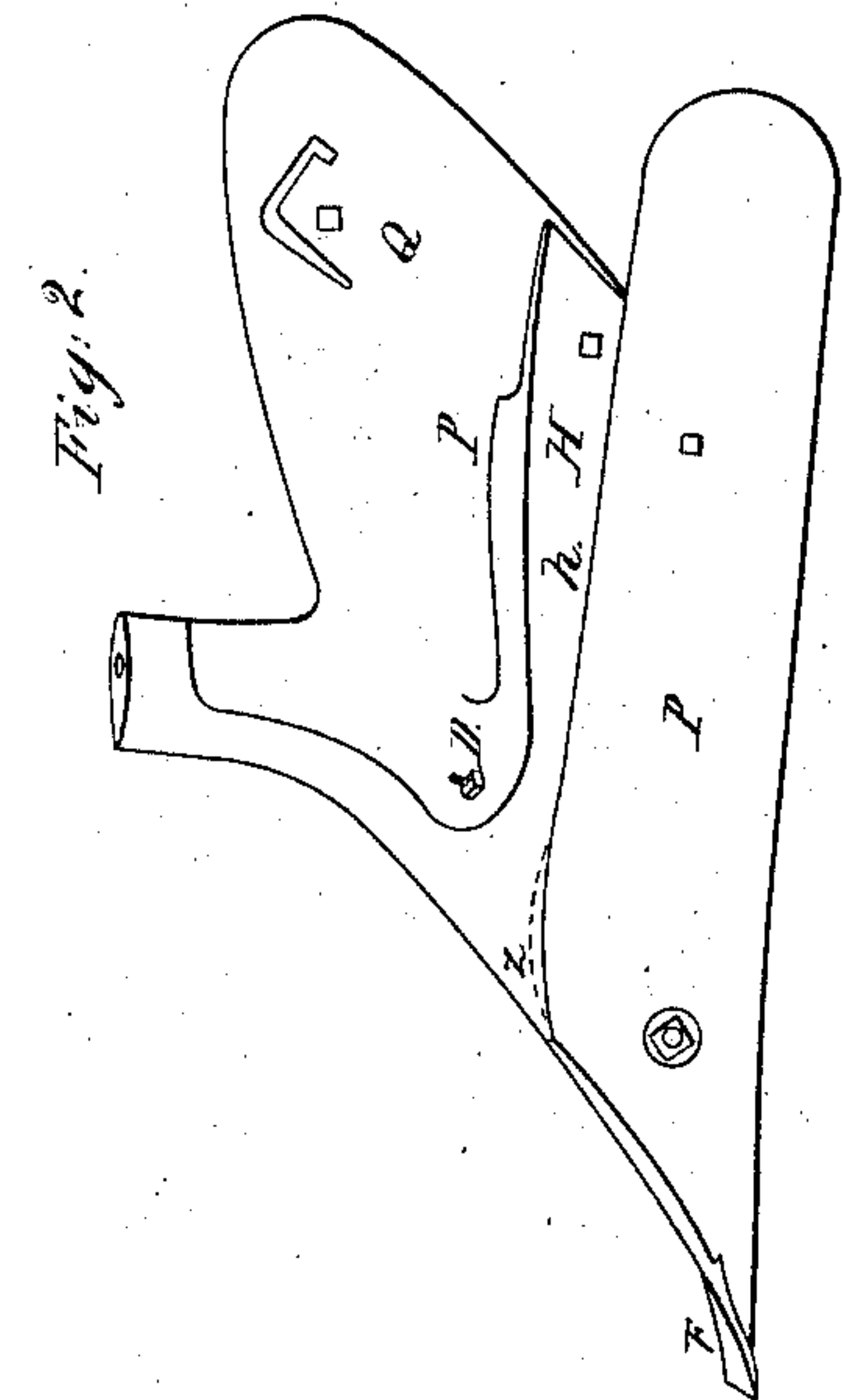


*J. Hechendorf.*

*Plow.*

*N<sup>o</sup> 16,277.*

*Patented Dec. 23, 1856.*





# UNITED STATES PATENT OFFICE.

JACOB HECKENDORN, OF ELKTON, MARYLAND.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 16,277, dated December 23, 1856.

*To all whom it may concern:*

Be it known that I, JACOB HECKENDORN, of Elkton, in the county of Cecil and State of Maryland, have invented a certain new and useful Improvement in the Construction of Self-Sharpening Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents, partly in perspective, a mold-board side view of the plow without the beam and handles; Fig. 2, a landside view of the same, and Fig. 3 a similar view with the detachable landside removed; Fig. 4, a view in perspective of the interior of the mold-board with its permanent landside; Fig. 5, a view in perspective of a four-coltered reversible self-sharpening point; Fig. 6, an interior face view of a double-bladed share, and Fig. 7 an interior side view of the detachable landside.

Like letters refer to like parts throughout the several figures.

To enable others skilled in the art to make and use my invention, I now proceed to describe fully and in detail the construction and relative arrangement of the several parts of the plow as depicted in the accompanying drawings, commencing with Fig. 3, which represents the plow with the landside removed for the purpose of showing the position and arrangement of the four-coltered reversible self-sharpening point F F F F, that is placed in a crotch formed by a projection, A, and the upper end of one of the colter portions of said point placed in a recess, z, that is made by the junction in front of the upper part of the main landside H with the mold-board, thence extending back and under a flange-top, p, of said main landside. This figure also shows the position of the securing-bolt D, that passes up through the sole or base flange B of the detachable landside P in Fig. 7, over a colter portion of the point lying on a curved part of the lower section of the main landside, thence over one blade of the share J and another colter portion of the point lying under the upper section of the main landside, and up through the top flange, p, of the main landside, where and on which the bolt is held by a tightening-nut.

In Fig. 4 the mold-board Q alone is shown, with the main landside H cast fast to it, consisting of an upper and lower section, h h', the

upper section, h, having the before-referred-to top flange, p. Where the lower section, h', joins the mold-board in front is the projection A, which forms a crotch to receive and to support endwise the four-coltered double-ended point, Figs. 3 and 5. The middle of the lower section, h', joins the back of the mold-board so high up as not to interfere with the edge of the blade J, Fig. 3, of the double-bladed share, Figs. 3 and 6. This junction forms a stiffening-brace, X. The mold-board Q has a swell, s, along the lower part of the inside, which fits in a cavity, M, in Fig. 6 of the double-bladed share, Fig. 6, and serves to hold said share in proper place.

In Fig. 5 is shown the point already mentioned, and which is made up of or forms four colters, either of which may be used at pleasure, and two self-sharpening points, being pointed and sharp at both ends, either end or either side up being used at pleasure, and all made of one casting. The middle of this four-coltered double-ended self-sharpening point is open, and it is spread or distended, and so curved or twisted, the twist being made, as it were, by turning on the whole casting from both ends in reverse directions, as to form four bevel-flanges, the outer edges of which are sharpened and form four colters, F F F F. At the junction of said colters with the points or ends are formed crotches f, which fit the crotch formed by the projection A on the mold-board. Thus constructed and fitted, the one bevel-flange serves to shield the front end of the mold-board, and the one side, being concave, of said flange receives and protects the front end of the landside. Thus constructed and fitted, as represented in Fig. 3, this twisted point has the same steady bearing whichever way it be turned, is reversible four times—that is, either end foremost or either edge uppermost—and forms four colter-surfaces and two self-sharpening ends or points, turning the end upside down effecting self-sharpening by wear, as in other self-sharpening points.

The double-bladed share represented in Fig. 6 fits, as described, by its cavity M, on a swell, s, along the lower edge of the inside face of the mold-board, the one blade J in Fig. 1 projecting from the outside of the mold-board in front, to cut the ground, and the other blade J lying close against the back or inside face of the mold-board, to strengthen it, prevent the



accumulation of wet clods, &c., and not interfering with the other fitting parts, the share being of such twisted configuration as to cause it to be close to the inside of the mold-board whichever blade J of the share be arranged to cut, it being reversible.

The detachable landside P, Figs. 2 and 7, is the principal support to the plow. It incases such of the cutting parts as are not in use for cutting. It has a sole or base flange, B, on which rests one side or bevel-flange of the four-coltered reversible point, which it clamps and holds from coming off, and prevents the point from breaking by downward thrust or being moved from its place by oblique pressure; and said sole B should be suitably curved to give such bearing to the point and be of such a width as that a bearing, T, may be formed along its outer edge for the support of the cutting-blade J of the double-bladed share. This landside S has a locking-shoulder, o, on its inside face,

which serves to support and lock yet further the four-coltered point by the latter fitting on and against said shoulder in one of the angles formed by the meeting of two of the colters—that is, the back two.

The securing of the landside by bolt D has already been described.

I do not claim as new a reversible or self-sharpening point; but

I do claim as new and useful—

The twisted four-coltered double ended and reversible self-sharpening point F F F F, essentially as described, and represented in Fig. 5 of the drawings, formed of one piece or casting and operating as point and colter, as specified.

JACOB HEUKENDORN.

Witnesses:

ROBERT MARSHBANK,  
D. H. COCHRANE.