

R. GLOVER.
Mechanism for the Manufacture of Heel Stiffeners.

233,848.

Patented Nov. 2, 1880.

Fig:1.

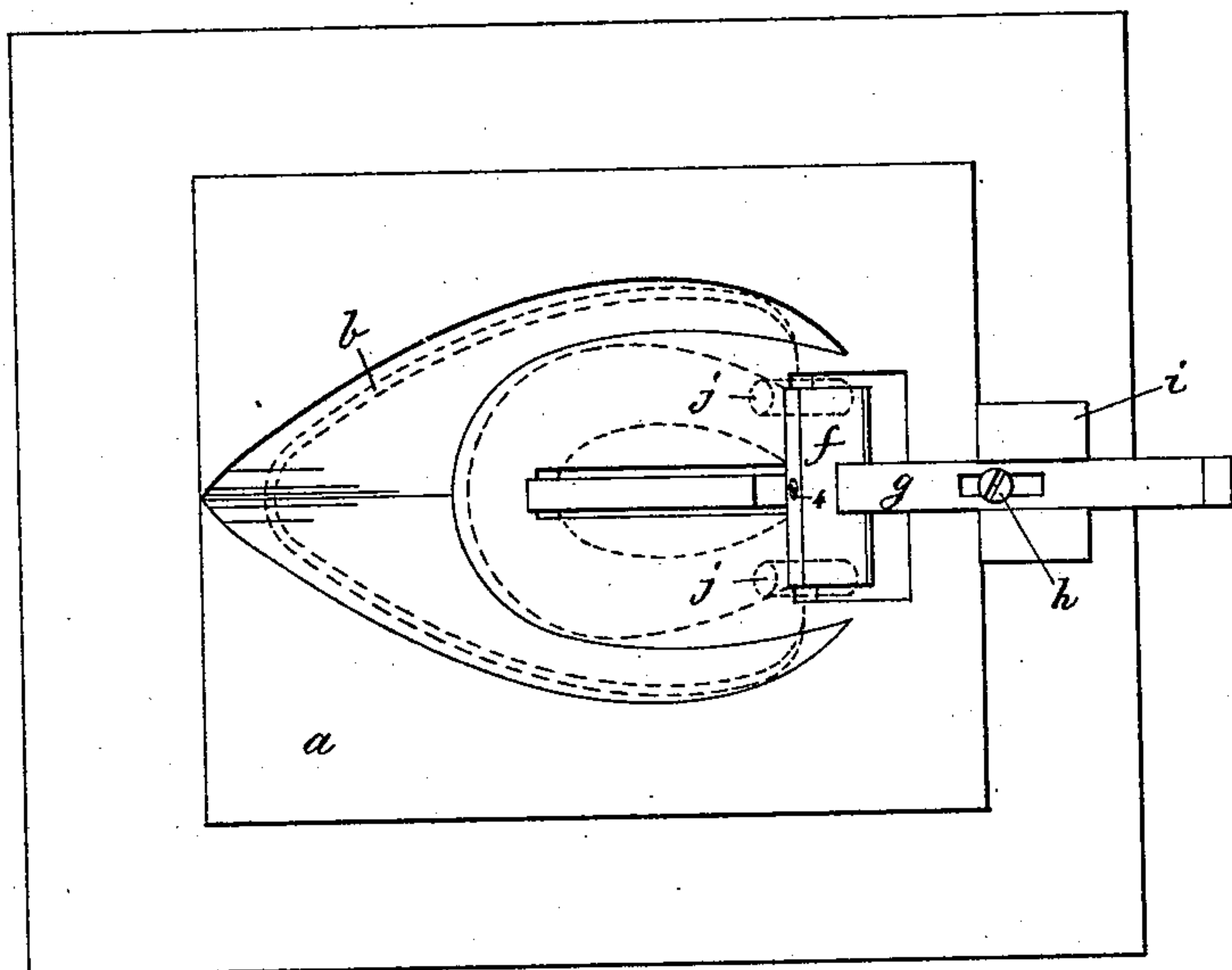


Fig:2.

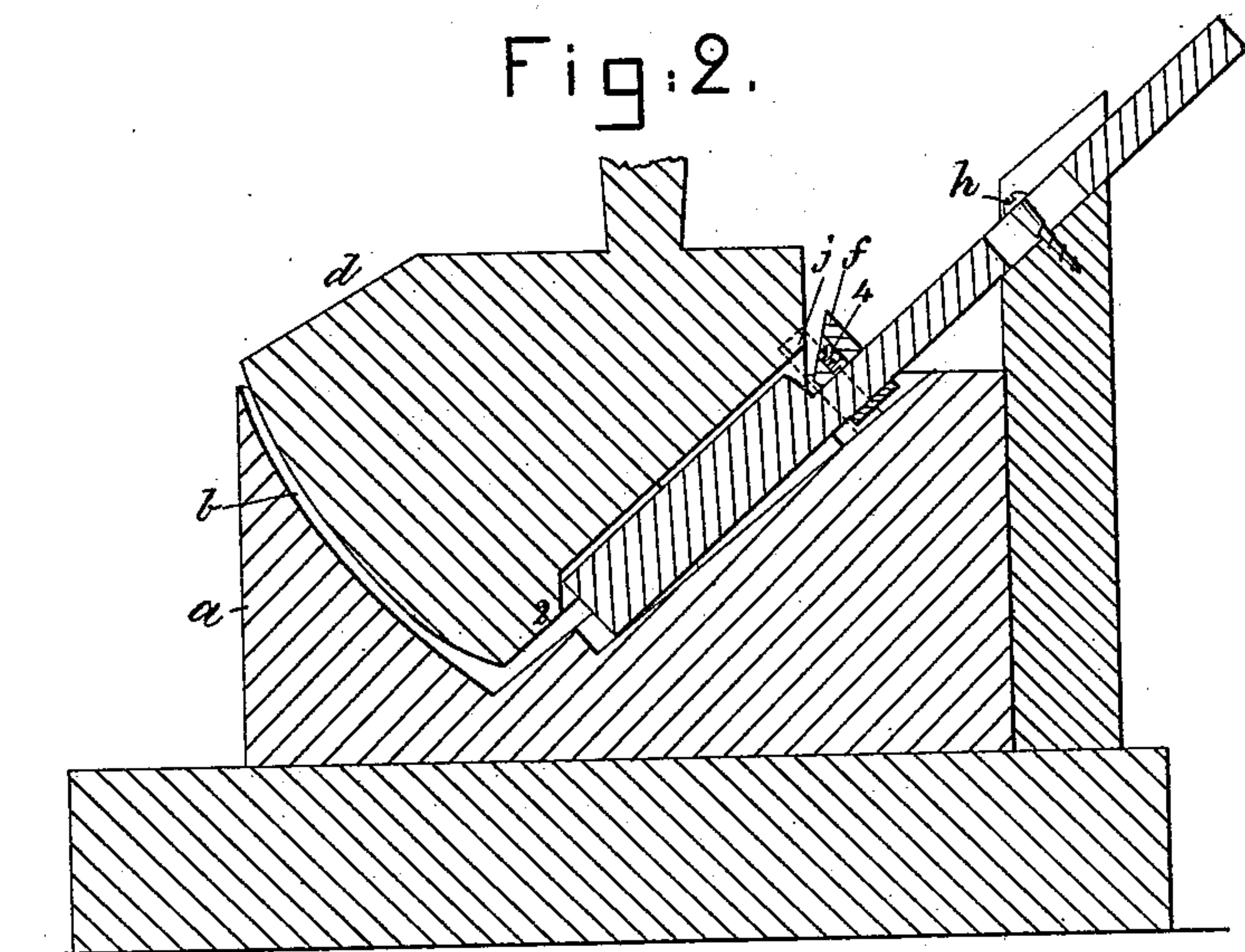
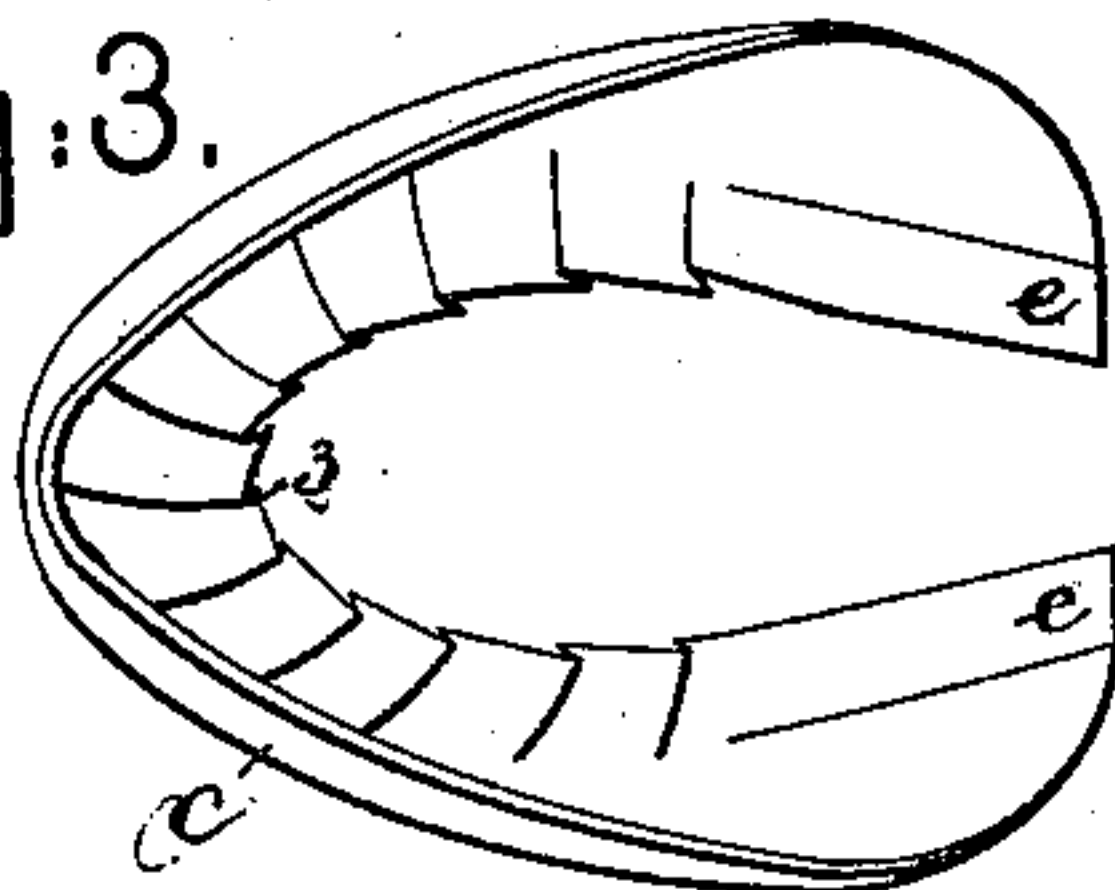


Fig:3.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT GLOVER, OF LEOMINSTER, ASSIGNOR TO JOSEPH A. HARWOOD, OF LITTLETON, AND NAHUM HARWOOD, OF LEOMINSTER, MASS.

MECHANISM FOR THE MANUFACTURE OF HEEL-STIFFENERS.

SPECIFICATION forming part of Letters Patent No. 233,848, dated November 2, 1880.

Application filed January 19, 1880.

To all whom it may concern:

Be it known that I, ROBERT GLOVER, of Leominster, county of Worcester, State of Massachusetts, have invented an Improve-
5 ment in Mechanism for the Manufacture of Heel-Stiffeners, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to mechanism for the
10 manufacture of heel-stiffeners for use in the manufacture of boots and shoes, and has especial reference to a mold or die by which the stiffener has given to it its final shape.

In the manufacture of heel-stiffeners it is
15 now common to partially curve the leather-board or other blank by rollers, and then to subsequently shape the stiffener and complete the turning of the flange in a mold. The concaved or hollowed-out part of these molds have
20 been provided with a plate having a configuration or outline of the size and form of the oval space to be left between the inner edges of the turned-over flange, and so also have such molds been provided with spurs or stops
25 to prevent the too close approach of the free ends of the flanged parts of the stiffeners; but in none of these molds has provision been made to gage the free ends of the counter so as to insure a uniform length of flange and stiffener
30 at each side, to thereby insure that the ends of the stiffener which are nearest the shank of the shoe be in line with each other, and at the same time insure a definite amount of flange.

My invention therefore consists, essentially,
35 in a heel-stiffener mold provided with an end gage to act upon the free ends of the flanged parts to insure uniformity in the length of the stiffener at both sides; also, in the combination, with such an end gage, of a center gage
40 or stop to check the forward position of the flange at the center of the stiffener and gage its width.

Figure 1 represents, in top view, a stiffener-
45 mold provided with my invention; Fig. 2, a vertical central section thereof, together with the male part of the mold, and Fig. 3 a shaped stiffener in top view.

The mold *a* is suitably recessed, as at *b*, to correspond with the external shape to be given
50 to the leather-board or other stiffener, *c*. The male die to act upon the interior of the stiffener *c* within the mold to force the stiffener down therein, completely turn and set the
55 flange, and shape the interior of the stiffener is shown at *d*. Such a mold, *a*, and male part *d*, broadly considered, are common.

The stiffener *c*, when placed in the recess *b* to be acted upon by the male part *d*, has been
60 curled and partially flanged, and so partially shaped. The corners *e e* of the stiffener are placed against the end gage, *f*, herein shown as adjustably connected with the center gage,
65 *g*, in turn adjustably connected by any suitable adjusting device—as, for instance, a screw, *h*, with a suitable standard at the end of the mold *a*. This end gage, acting upon the ends
70 *e* of the stiffener, insures equal length of stiffener at each side, so that the free ends of the flanged stiffener may fall exactly opposite each other in the shoe in which said stiffener is placed.

The end 2 of the center gage is adapted to act upon the flange of the stiffener at its central part, 3, and serve as a stop for that part
75 of the flange, and consequently determine with accuracy the width of the flange at the extreme rear part of the stiffener. Were it not for this gage *g* the male die would be likely to carry the stiffener so far as to make the
80 flange thereof at its rear part too wide.

By adjusting the center gage I am enabled to exactly determine the width of the flange at the center of the stiffener, and by the end
85 gage I also insure exact uniformity of length.

Instead of making the end gage adjustable and holding it upon the center gage by a screw, as at 4, I may place in the mold at each side
90 of said center gage two pins, as shown in dotted lines at *j*, which will serve to act as stops or gages for the free ends of the flanged part of the stiffener. Such pins would in operation be equivalents of the end gage.

In Fig. 1 the dotted lines represent a stiffener as it will appear after having been pressed
95 into the mold.

I do not desire to limit myself to the devices herein shown for adjusting the center gage or the end gage.

5 By making the gages adjustable, as described, I am enabled to shape more than one-sized stiffener in the same mold, and give to stiffeners of the same size flanges of greater or less width, according to the desire of individual manufacturers.

10 The end gage, by its action on the partially-formed stiffener placed in the mold, presses and holds it well back and down into the mold.

I claim—

15 1. The mold *a*, to shape and finish heel-stiffeners, combined with the end gage, to act upon the free ends 2 of the flanged part of the stiffener, to insure uniformity of length of stiffener at both sides, substantially as described.

2. The mold *a* and die *d*, to shape and finish

heel-stiffeners, combined with the center gage, 20 *g*, made adjustable in the direction of the length of the mold, to regulate the width of the flange of the stiffener, substantially as described.

3. In a mold to shape and finish heel-stiffeners, a center gage to determine the width 25 of the flange of the stiffener, and an end gage to control the length of the stiffener at each of its sides, substantially as described.

4. The center gage placed within the recess *b* of the mold, as described, combined with the 30 adjustable end gage, to operate substantially as set forth.

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

Witnesses: ROBERT GLOVER.
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