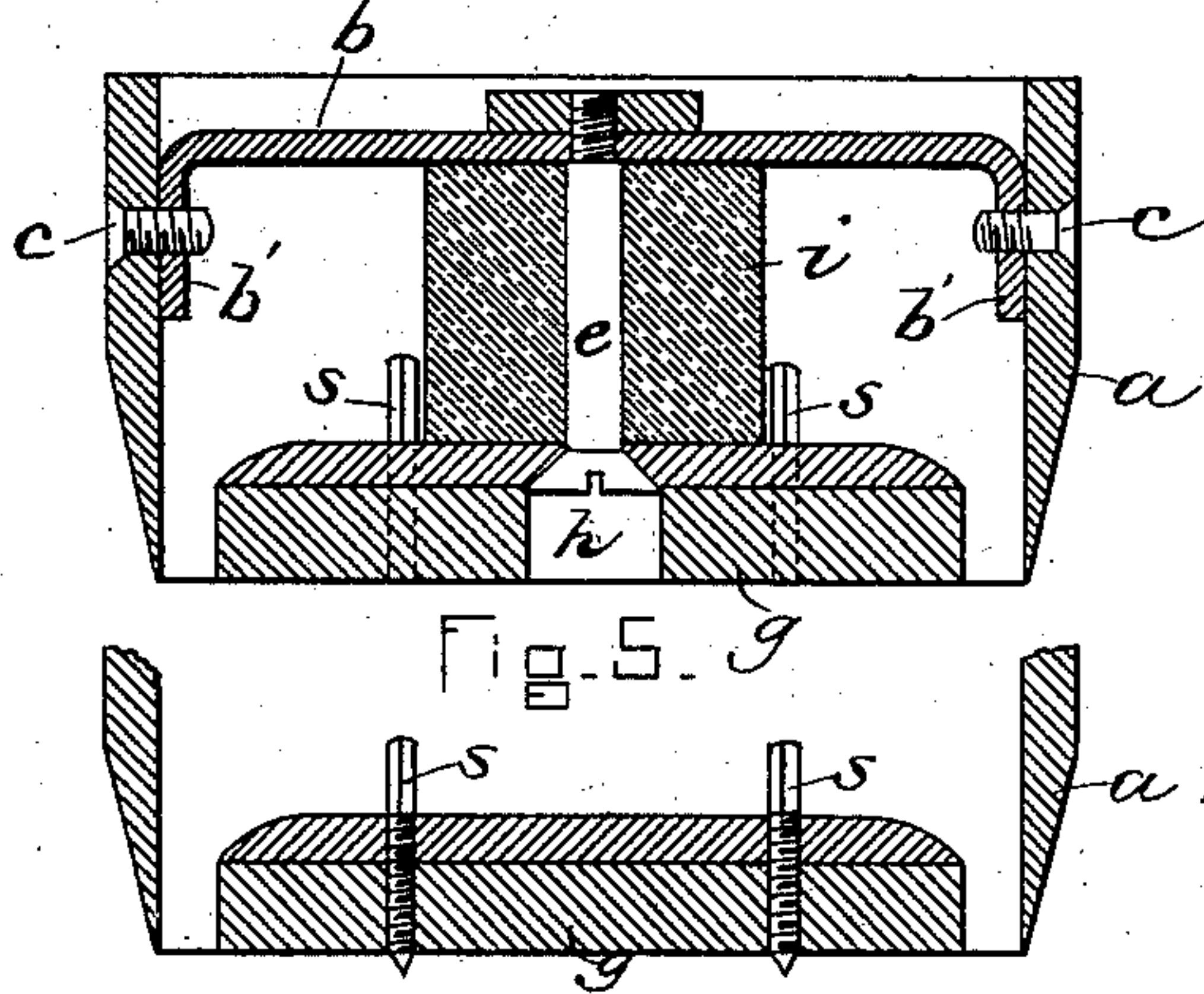
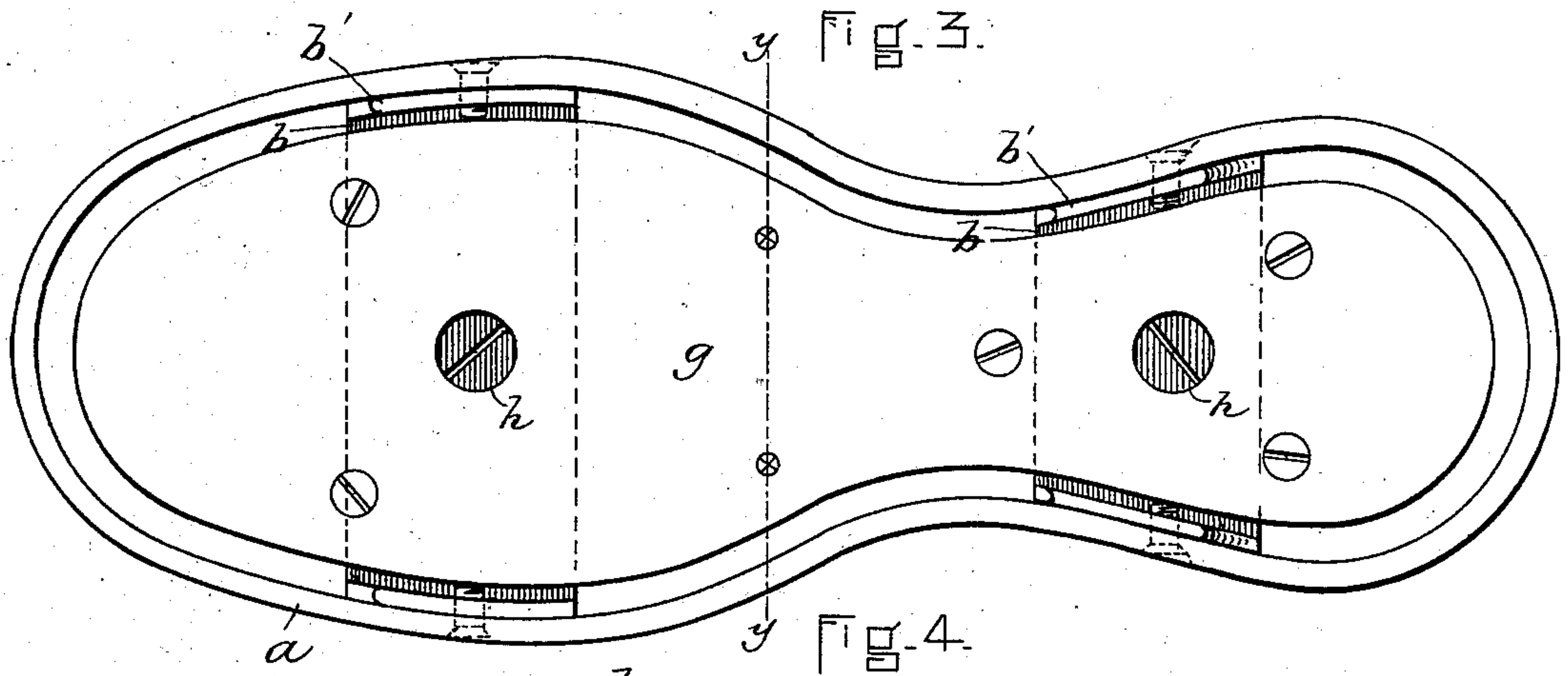
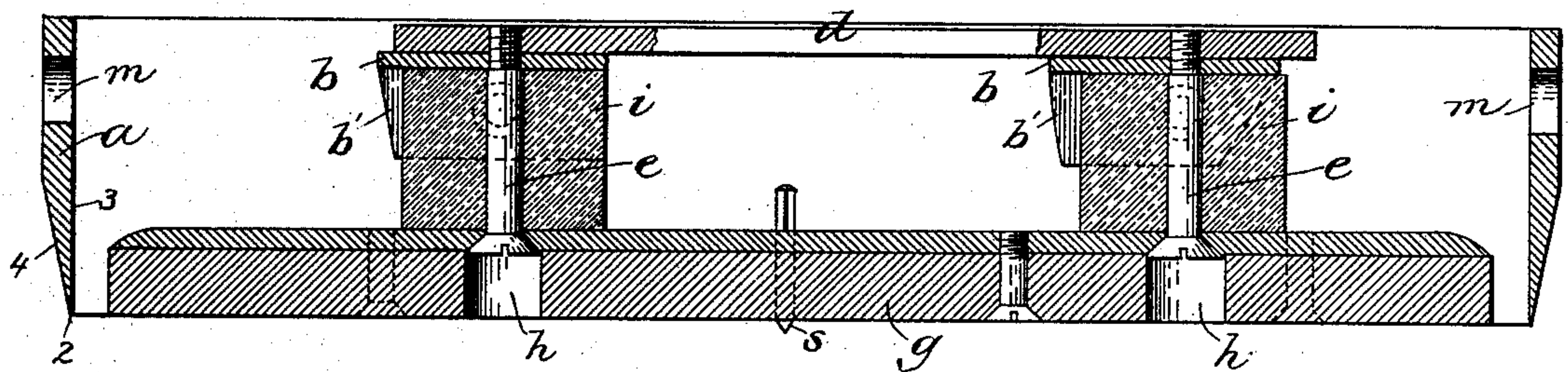
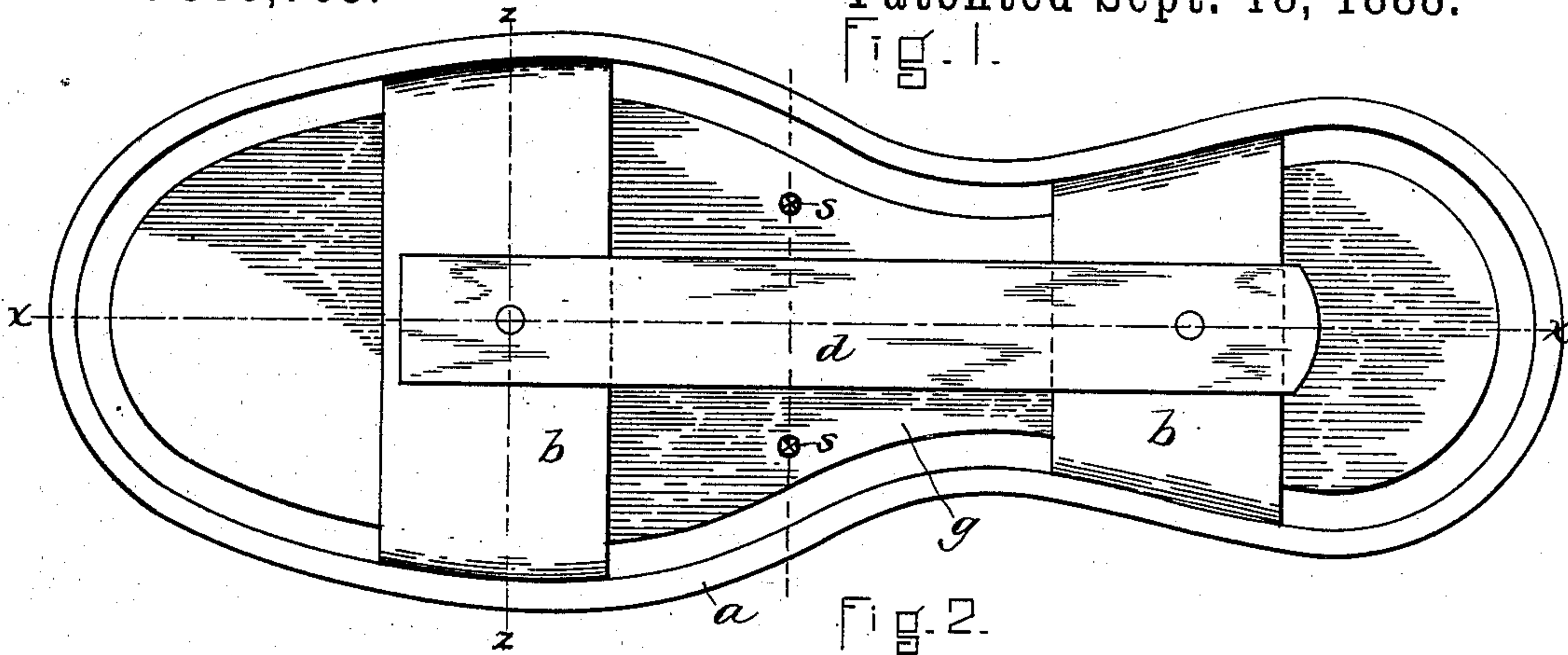


(No Model.)

O. ROCK.
SOLE CUTTING DIE.

No. 389,763.

Patented Sept. 18, 1888.



WITNESSES.
H. Brown
Henry Marsh.

INVENTOR.
O. Rock
by H. Brown (Att'y.)

UNITED STATES PATENT OFFICE.

OLIVER ROCK, OF SOUTHBOROUGH, MASSACHUSETTS.

SOLE-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 389,763, dated September 18, 1888.

Application filed June 22, 1888. Serial No. 277,917. (No model.)

To all whom it may concern:

Be it known that I, OLIVER ROCK, of Southborough, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Sole-Cutting Dies, of which the following is a specification.

This invention has for its object to provide improved means for supporting a spring-pressed foot or ejector within a sole-cutting die; and it consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of a die provided with my improvements. Fig. 2 represents a section on line *x x*, Fig. 1. Fig. 3 represents a bottom view. Figs. 4 and 5 represent sections on line *y y*, Fig. 3.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a sole-cutting die, of the usual form, having a cutting-edge, 2, formed by the intersection of the vertical inner side, 3, with the beveled outer side, 4.

b b represent cross-bars, which are bent at their ends to form ears *b' b'*, bearing against the inner surface of the die and rigidly attached thereto by screws *c c*, the bars *b b* extending across the die, as shown, and strengthening the same so that its sides cannot spring in or out.

d represents a longitudinal bar, which is attached by bolts *ee* to the cross-bars *b b*. Said bar *d* additionally strengthens the die, and serves as a handle whereby it may be moved.

g represents the foot or ejector which forces the sole from the die after the cutting operation. Said foot is adapted to move in and out within the die on the bolts *e e*, the heads of said bolts forming stops which limit the outward movement of the foot by contact with the bottoms of the sockets *h h*, formed in said foot.

i i represent rubber springs, which are interposed between the foot *g* and the cross-bars *b b*, said springs being tubular and inclosing the bolts *e e*, as shown.

When the die is pressed down upon a sheet of leather, the springs *i i* yield and permit the leather to press the foot *g* back into the die as the latter enters the leather. When the sole is cut and the die is raised, the springs, expanding, force the foot *g* outwardly and cause it to eject the sole from the die.

A yielding foot, operating, as above described, in connection with a die, is not new, and I do not wish to be understood as claiming the same.

I have improved the foot by providing it with spurs *s s*, which are screw-threaded, and are therefore vertically adjustable in the foot. Said spurs may be adjusted to project below the cutting-edge of the die, as shown in Fig. 5, and hold the leather while the die is descending, thereby preventing lateral displacement of the leather before the die reaches its upper surface.

The die has orifices *m m* in its end portions to receive lugs or studs, whereby it may be attached to the cross-head or platen which operates it.

I claim—

The combination of the die *a*, the cross-bars *b b*, extending across the die and attached at their ends to the sides thereof, the longitudinal bar *d*, attached to the cross-bars *b b*, the headed bolts *e e*, which connect the bar *d* with the bars *b b*, the foot *g*, having sockets *h h*, which receive the heads of the bolts *e e*, and the springs *i i*, surrounding the bolts and interposed between the cross-bars *b b* and foot *g*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 28th day of April, 1888.

his
OLIVER X ROCK.
mark.

Witnesses:

C. F. BROWN,
W. C. RAMSAY.