(No Model.)

C. W. GLIDDEN.

HEEL CUTTING DIE.

No. 399,608. Patented Mar. 12, 1889.

Fig: 1.

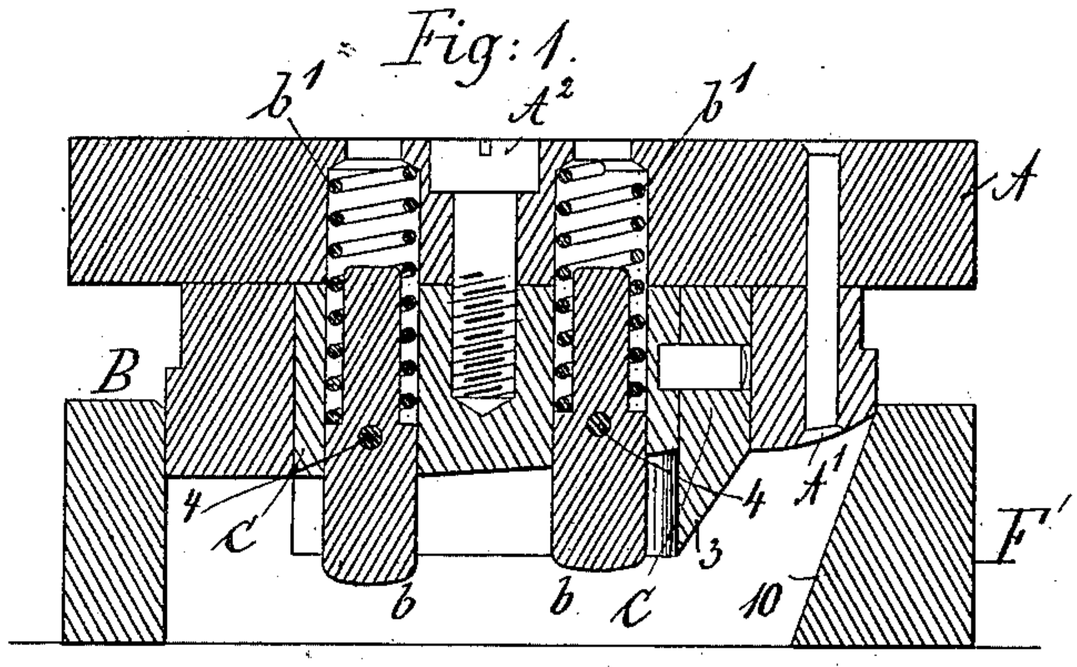


Fig: 2.

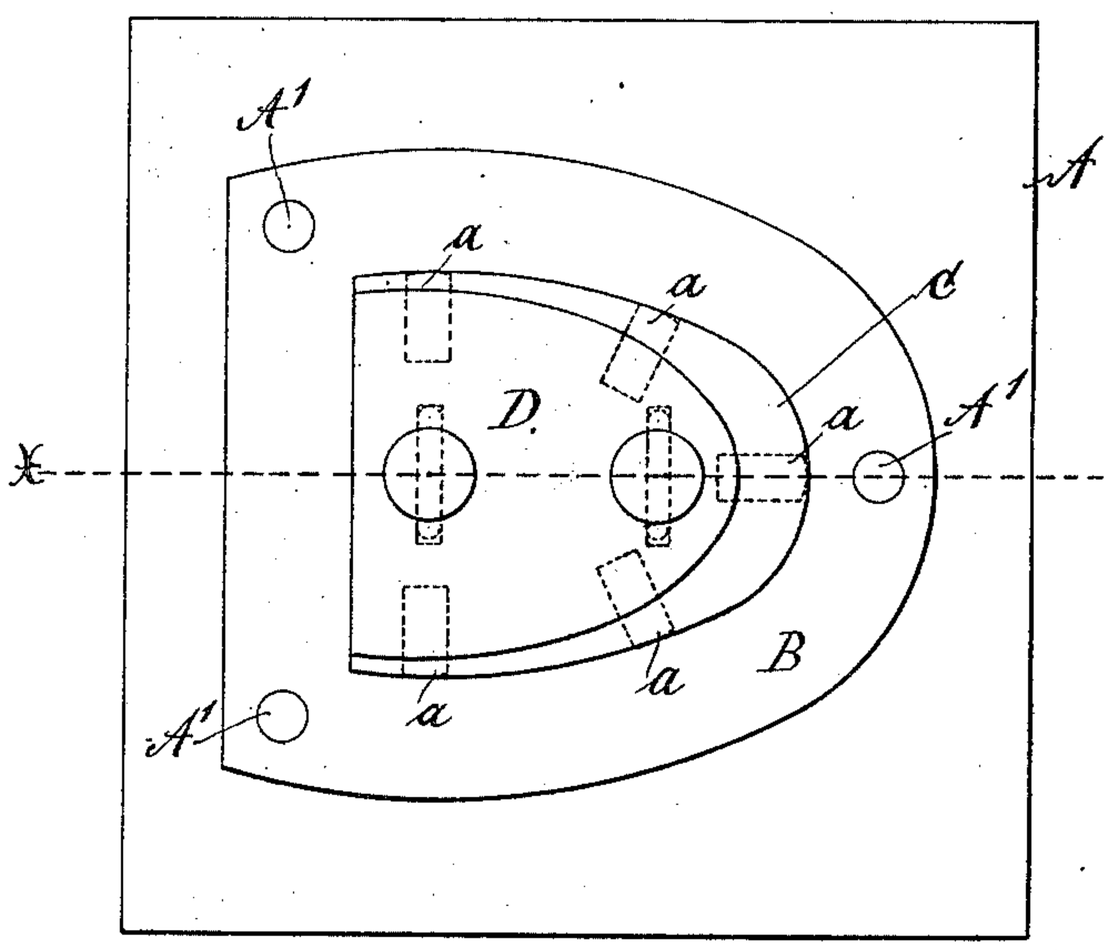


Fig: 4.

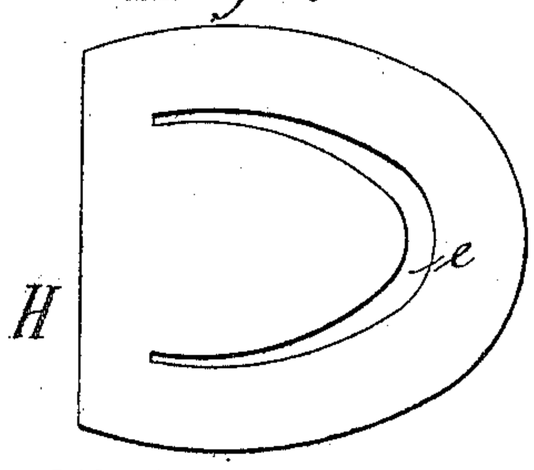


Fig: 3.

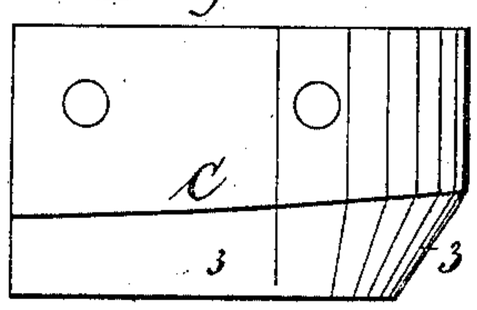
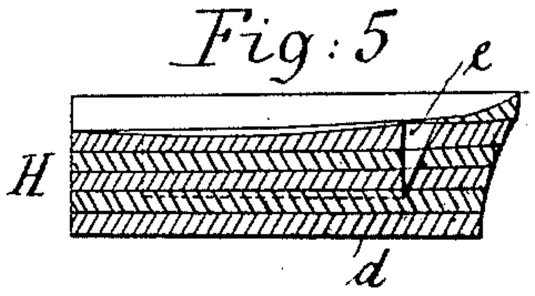


Fig: 5



Witnesses.
Fred. S. Greenleaf
Frederick L. Emery.

Inventor.
Charles W. Glidden
by Lemby & Gregory Attys.

UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, ASSIGNOR TO JAMES W. BROOKS, TRUSTEE, OF CAMBRIDGE, MASSACHUSETTS.

HEEL-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 399,608, dated March 12, 1889.

Application filed June 29, 1888. Serial No. 278,560. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Heel-Cutting Dies, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a cutting die or plunger whereby a heel-pile may be cut at its heel-seat end and expanded to give to the rear of the heel its pitch or bevel and to pitch or bevel the heel more or less along its sides. The die herein shown is also provided with a follower to concave the heel-seat.

My invention consists, essentially, in a die having a cutting-blade beveled at its side next the rear of the heel, whereby the blade, when forced down into the heel-pile, acts to force the portion of the heel outside of the blade outwardly, thus giving to the rear of the heel the bevel or pitch desired.

Figure 1 in vertical section shows a die embodying my invention and a co-operating mold; Fig. 2, an under side view of the die shown in Fig. 1, the dotted line *x* showing the line of section for Fig. 1, the mold being omitted. Figs. 3 and 4 show different views of the blade; and Fig. 5, on a smaller scale, shows a heel-pile cut and shaped in accordance with my invention.

In the manufacture of heels having a "bevel" or "pitch" at the rear and along the sides it is customary to employ heel-lifts of different size and cut and trim the pile by a molded cutter. In this way there is a considerable waste of stock, so I have devised means whereby a heel having bevel or pitch at its rear may be made from a heel-pile the individual lifts of which are only of substantially the size of the small or tread end of the heel.

Referring to the drawings, A represents a plate, which in practice will be attached in usual manner to a plunger, so as to raise and lower it.

The plate A has secured to it, as by bolts A′, a follower, B, having a convex surface, which, by meeting the seat end of the heel, concaves the same. This follower B, as shown, is hollow and receives within it a blade, C, (shown as of U shape,) which blade, beveled at its outer side, as at 3, is entered by holding pins or studs *a*, projecting from a center block, D. (Shown as held in place by a screw, as A².) The center block receives within presser-studs *b b*, the shanks of which are surrounded by spiral springs *b′ b′*, pins 4 acting to prevent the presser-pins from falling out. The presser-pins, by coming in contact with the heel just in advance of the blade C, prevent any twisting or turning of the heel in the mold F, (shown only in section, Fig. 1,) the said mold in practice resting on the bed or other plate, (not shown,) while the said blade enters the heel, the presser-pins also acting to discharge the heel from the cutter. The inner wall of the mold at its rear end is beveled, as at 10.

In accordance with my invention I take a heel-pile, H, and placing it preferably in a mold, as F′, cut into the same from its heel-seat end by the beveled blade C, the latter cutting into the heel for a greater or less distance, causing the beveled outer side, 3, of the blade to push away or outwardly all that part of the rear part and sides of the heel outside of the blade, the heel 3 of the blade causing the rear and sides of the heel to be forced against the mold and assume a pitch or bevel, as at the right of Fig. 5, this pitch or bevel being more or less, according to the bevel of the blade C and of the mold. The hole *e* left by the blade, which hole may extend to or nearly to the tread-lift *d*, may be filled with paper-pulp or other rigid or solid material.

The method of forming a heel as herein described forms the subject-matter of application, Serial No. 278,143, filed June 25, 1888.

I do not desire to limit my invention to the exact form of blade to cut into and expand the heel.

I claim—

1. The mold F′, combined with the die having a cutter-blade beveled at its outer side and acting, when forced into the heel, to force outwardly, as described, the substance of the heel outside the blade to give to the heel at

its rear the desired bevel or pitch, substantially as described.

2. The die having a cutter-blade beveled at its outer side and acting, when forced into the heel, to force outwardly, as described, the substance of the heel outside the blade to give to the heel at its rear the desired bevel or pitch, and the convex-faced follower, substantially as described.

3. The die having a cutter-blade beveled at its outer side and acting, when forced into the heel, to force outwardly, as described, the substance of the heel outside the blade to give to the heel at its rear the desired bevel or pitch, and the center block and presser-pin to operate substantially as described.

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

CHARLES W. GLIDDEN.

Witnesses:
H. P. FAIRFIELD,
W. C. WILLSON.