(No Model.)

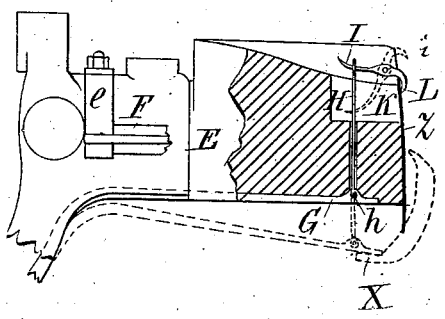
2 Sheets—Sheet 1.

M. HYNES.

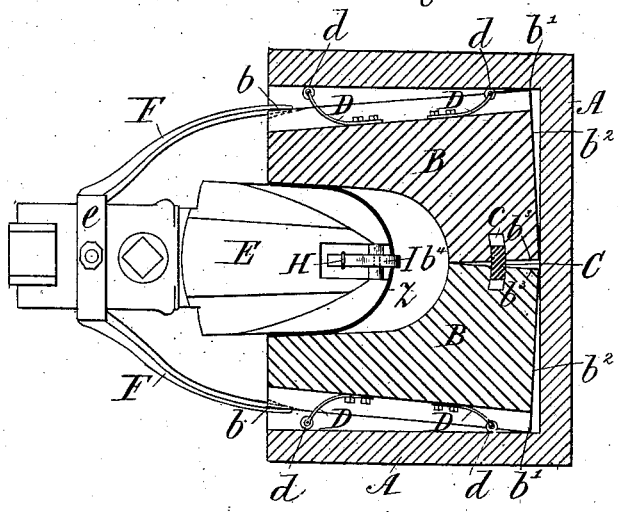
DIE FOR SHAPING HEEL COUNTERS.

No. 260,205. Patented June 27, 1882.

— Fig. 1. —



— Fig. 2. —



Witnesses:

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(No Model.)

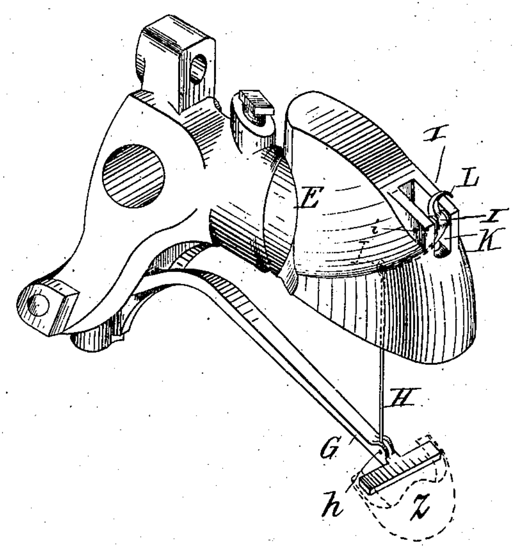
2 Sheets—Sheet 2.

M. HYNES.

DIE FOR SHAPING HEEL COUNTERS.

No. 260,205. Patented June 27, 1882.

Fig. 3.



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UNITED STATES PATENT OFFICE.

MICHAEL HYNES, OF MONTREAL, QUEBEC, CANADA.

DIE FOR SHAPING HEEL-COUNTERS.

SPECIFICATION forming part of Letters Patent No. 260,205, dated June 27, 1882.

Application filed March 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL HYNES, of the city of Montreal, in the district of Montreal and Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Dies and Forms for Shaping Heel-Counters; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to improvements in the devices used to mold or form heel-counters or stiffeners for boots and shoes, and is specially applicable to the machine patented by Etienne Salomon, October 2, 1877, No. 195,845.

I form my molds in two halves or sections and arrange them to separate at their front ends, or open as the male die or former enters and then automatically close around the same, the joint at the back of the molds being always kept close.

My invention also covers an improved attachment to the former in combination with the tongue or "cast-off" used by Salomon, whereby the blank will be held firmly to the front of the former as it enters and recedes from the dies or molds. The former has also attached to it a device for pressing the two halves of the molds closely together after the former enters and while the counter is being molded. For full comprehension, however, of my improvements reference must be had to the accompanying drawings, in which similar letters of reference indicate like parts, and where—

Figure 1 is a sectional elevation of male die or former with gripper attached, and Fig. 2 a sectional plan of female dies or molds embodying my invention and showing male die entering the same. Fig. 3 illustrates in perspective the male die or former and some of its attachments.

A represents the box or casing in which the female dies or molds are held. This casing A, it will be understood, may be of any special or ordinary construction, and the devices for feeding the blanks in front of the molds and all other mechanism connected with or necessary for the operation of the devices herein shown or described or for timing or speeding same may also be arranged and constructed in any usual or approved manner.

The molds are arranged, as will be seen, in two halves, B B, constructed to fit the casing A just tightly enough at their inner ends to allow the two sections to separate at their front ends as the former enters. To allow of this action I bevel or cut away the outsides of the mold-sections at *b b*, so that while their back ends or angles, *b' b'*, will always be close up to the inside of the casing A their width across the front ends will be lessened, the amount on either side being just half the opening necessary to admit the former and blank. The back ends of the molds B B are also beveled or cut away, as shown at b^2 b^2, to match, and the joint between the two sections is also formed, as shown in Fig. 2, by beveling the meeting surfaces b^3 b^3 from inside to outside, the angle-point b^4 thus forming the pivot-point upon which the molds will work, the joint being always kept close whether the molds be open or closed, and in this way obviating all chance of the counter being creased or ribbed.

To keep the molds firmly in position with relation to each other, I use a connecting-piece, C, dropped into a groove, *c*, formed in each of the molds B B; but I do not confine myself to this device, as any other convenient means may be used for the same purpose, or the casing A and adjacent parts may be so arranged as to do away with the necessity of such a device.

Between the sides of the molds B B and casing A, I arrange springs D D, preferably as shown, held in grooves formed in said molds, small rollers *d d* being preferably placed at their ends to insure easy working. These springs are for the purpose of giving a firmness to the action of the molds and to close same after the entrance of the former.

The former E (shown in Figs. 1 and 3) may be of any shape or general construction, and operated as may be found necessary or most convenient. I prefer to attach thereto, by bolts or other means, a collar, *e*, carrying two arms, F F, which project toward the front of the former E, one on each side of same, and slightly slanted. After the former has entered some distance into the molds these arms F F pass between the molds B B and the casing A, and their slant is so arranged that they will grip and press the mold-sections inward around the former, either aiding or replacing the springs

D D in closing the mold and giving a strong positive pressure, and insuring the proper front curve to the counter.

When it is desired to make pasteboard counters or stiffeners I preferably use only one pair of springs near the back of the mold-sections, as I have found that the action of the arms F F on the mold-section will give the desired result.

It will be understood that the "upturn" (shown in dotted lines at X in Fig. 1) will be made by the ordinary rollers, as in the present machines, and the action of the tongue or cast-off G will be similar to that of the Salomon machine; but, as will be seen in Fig. 1, I attach to the tongue G by means of a loose pin, *h*, a rod, H, which works in a vertical slot made through the former E. This rod H is pivoted at its upper end to one end of a short lever, I, fulcrumed at *i* in a groove, K, made in the former, the other end of this lever I being provided with a lip, L, (preferably serrated on its under side,) which serves to grip and hold each blank up against the former E as it falls into position in front of the mold, and, further, keeps the blank represented by Z steady during the whole process of molding, and only releases its hold after the former is withdrawn from the mold and the tongue G casts off the finished stiffener.

It will be seen that as the tongue G and lever I are connected by the rod H their operation will be simultaneous, so that when said tongue is depressed to cast off the formed counter the lip L of the lever I will at the same time be raised to release its hold on the upper edge of said counter.

The tongue G may be provided with any suitable known means for operating it—such, for instance, as a hand-lever or treadle.

By the means just described I do away with the necessity of using the expellers shown in the patents cited.

I do not claim any of the devices shown in Salomon's patent, No. 194,845, or in either of Kieffer's patents cited, nor yet do I wish to cover broadly a mold made in halves and opened and closed automatically, such as that shown in Patent No. 147,288, granted February 10, 1874, to Simonds and Emery, or that used by Louis Coté in Patent No. 212,132, February 11, 1879; but

What I claim, and desire to secure by Letters Patent, is as follows:

1. The herein-described dies or molds for heel-counters, consisting essentially of the two sections B B, the sides and backs of which form obtuse angles, and with meeting edges b^3 b^3 beveled, so that their angle-point b^4 will form the pivot-point for said sections, in combination with a male die or former, substantially as described.

2. In combination with the female dies or molds B B, provided with beveled edges, as described, the former E, having attached thereto arms F F, substantially as and for the purpose described.

3. In combination with the former E, provided with tongue or cast-off G, the lever I, connected to and operating simultaneously with said tongue or cast-off, said lever having lip L, arranged substantially as and for the purpose set forth.

M. HYNES.

Witnesses:
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