

S. G. HOLLANDER.  
CUTTING AND MARKING DIE.  
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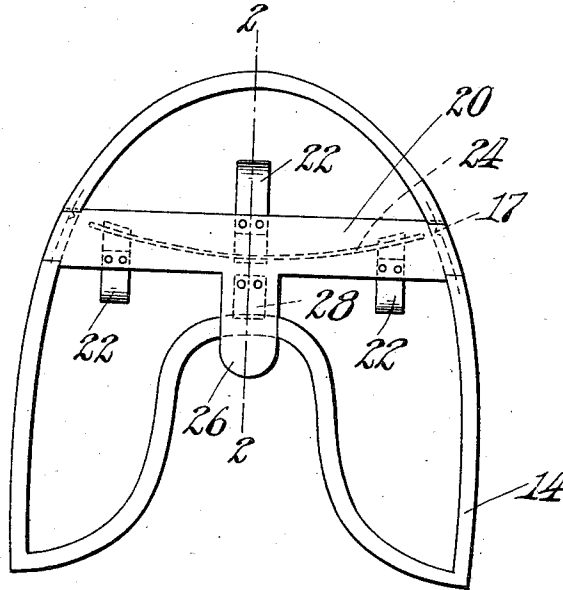


Fig. 1.

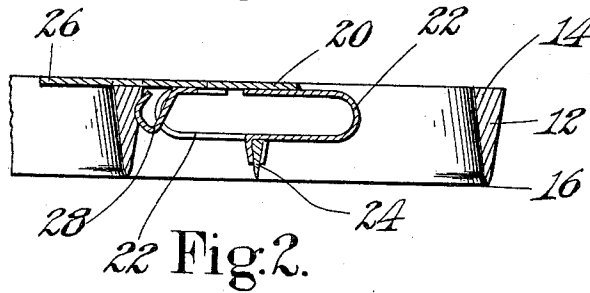


Fig. 2.

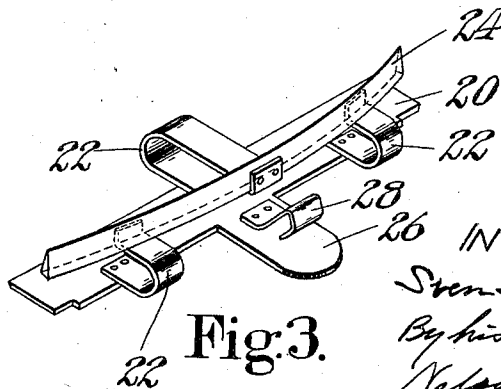


Fig. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## CUTTING AND MARKING DIE.

1,030,781.

Specification of Letters Patent. Patented June 25, 1912.

Application filed March 16, 1910. Serial No. 549,722.

*To all whom it may concern:*

Be it known that I, SVEN G. HOLLANDER, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain Improvements in Cutting and Marking Dies, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to dies which are used for dying out blanks of sheet material such as upper leather for boots and shoes. More particularly the invention relates to the class of dies used with clicking presses and contemplates the provision of a tracing device for use in combination with such dies whereby they may be efficiently and conveniently used for marking the blanks simultaneously with the dying out operation.

In the manufacture of boots and shoes it is customary to trace upon certain blanks suitable marks for indicating the location of lines of stitching, ornamental or otherwise, or for indicating the lap of one blank over the adjacent blank. Various tracing devices have been devised for use with the dies by which these blanks are cut out, in order that the operations of cutting and marking for stitching or lap might take place simultaneously, with the resulting economy of time and uniformity of product.

It is an object of the present invention to devise a novel form of tracing device for upper cutting dies used in this class of work.

In preparing blanks for the uppers of boots and shoes it is sometimes desirable to mark a certain number of the blanks for ornamental stitching or otherwise, while other blanks of the same size and style are to be used without such marking. In order that the same dies may be used for cutting marked and unmarked blanks it is necessary that the marking tracer should be detachable from the die.

With this end in view it is another object of the present invention to provide a tracing or marking device of such a character that it may be used conveniently with the ordinary type of clicking press die and shall have provision whereby it may be easily and quickly detached from the die

in case it is desired to cut out unmarked blanks. In a die of this character the tracing or marking device is preferably supported in such manner as to leave the outer edge of the die clear and unobstructed for cutting the blanks. It is also essential that the tracer shall be mounted yieldingly with respect to the cutting edges of the die in order that blanks varying in thickness may be uniformly marked.

Accordingly, another object of the present invention is to provide a mounting whereby the tracer may be maintained in a definite lateral relation with the cutting portions of a die and independent thereof while at the same time permitting the tracer to yield vertically during the cutting operation.

It has been found that a tracer comprising a die-engaging bar carrying yieldingly mounted upon its under surface a marking member shaped to conform to the outline desired in the line of stitching or marking and having a yielding catch for locking the tracer to the die is well adapted for the intended use. Such a tracer has the further advantage that it leaves the center of the die practically unobstructed and so permits imperfections and defects in the skin to be detected and avoided by the cutter.

Wherever the contour of the die permits it, it is desirable to connect the die-engaging bar with the die by notches formed at three points in its contour as this arrangement positively prevents shifting of the tracer in any lateral direction. The marking member may be mounted on the under side of the die engaging bar by means of U-shaped springs connected with the bar and disposed alternately upon opposite sides of the marking member. This arrangement insures a yielding movement of the marking member in a vertical direction without tendency to lateral displacement during the cutting operation. Preferably a yielding catch may be mounted upon the tracer and arranged to cooperate with a socket formed on the inner face of one side of the die. A finger piece may be provided upon the tracer in suitable relation with said catch whereby the latter may be disengaged when it is desired to detach the tracer from the die. Preferably the finger piece and die-engaging bar may be arranged to form a broad

pressure receiving surface for the tracer in order that no additional strain may be imposed on the die by reason of the tracer attached thereto.

5 Other features and advantages of the invention will be best understood and appreciated from the following description of a preferred embodiment of my invention selected for purposes of illustration and  
10 shown in the accompanying drawings in which;

Figure 1 is a plan view of a die for cutting Blucher vamps provided with a tracer constructed in accordance with my invention; Fig. 2 is a sectional view on the line 2—2 of Fig. 1, and Fig. 3 is a view in perspective of the tracer in an inverted position.

The die shown in Fig. 1 is of a commercial type of clicking press die, such for example as is disclosed in Letters Patent of the United States No. 922,926, granted May 25, 1909 on an application of John M. Lynch. The die comprises a continuous  
25 frame 12 shaped to conform to the outline of a Blucher vamp and having a flattened pressure receiving edge 14 and a cutting edge 16. The die is formed of bar steel tapering from the pressure receiving edge  
30 to the cutting edge as shown in Fig. 2. The tracer herein illustrated is arranged to indicate the line which the rear edge of the tip blank should follow when stitched to the vamp. The tracer comprises a flat plate  
35 or bar 20 notched at both ends and shaped to fit in recesses formed in the pressure receiving edge of the die on opposite sides thereof. The forward corners of the bar 20 are beveled and the corresponding recesses in the die are undercut to receive the bar. U-shaped springs 22 are mounted on the under side of the bar 20 and connected with an elongated marking member 24 on alternately opposite sides. The member 24  
45 is tapered toward its marking edge and preferably comprises a blunt blade, although in certain classes of work it may be preferable to serrate the edge of the marking member. A projection 26 is formed integral with the bar 20 or otherwise rigidly  
50 secured thereto and this projection is arranged to fit in a third notch extending at right angles to the other notches and formed preferably in the pressure receiving edge of the throat-cutting portion of the die. It will be seen that this projection effectually prevents displacement of the bar 20 in the direction of its length while the other notches prevent transverse displacement thereof.  
60

Preferably a yielding device is provided for normally preventing disengagement of the tracer from the die. As illustrated herein this device may comprise a U-shaped  
65 spring 28 having a projection shaped to

engage in a socket formed in the inner face of the throat cutting portion of the die. This device constitutes a spring catch and preferably may be mounted under the finger piece 26, as shown in Fig. 3, by which  
70 it may be forced out of engagement with the socket when it is desired to detach the tracer.

In attaching the above described tracer to a die the forward beveled edges of the  
75 bar 20 are projected slightly into the undercut portions of the recesses formed in the side portions of the die and then by pressing upon the projection 26, which serves as a finger piece, the tracer is swung about  
80 the edge of the bar 20 as a fulcrum and the catch 28 displaced allowing the tracer to assume the position shown in Fig. 2 in which position it is normally maintained by the engagement of the catch 28 in the  
85 socket above mentioned. For some purposes it may be convenient to use blanks with notches in their edges at the ends of a line formed by a marker and to this end the die herein illustrated is shown with  
90 indentations 17 in its cutting edge which will cut out such notches at the desired points.

It will be noted by reference to Fig. 2 that the bar 20 and projection 26 lie flush  
95 with the pressure receiving edge of the die and form a broad pressure receiving surface for the tracer. This construction relieves the die of any additional strain due to the tracer, the pressure of the clicking  
100 press being imposed directly on the bar 20 and transmitted through the springs to the marker 24 substantially independently of the die.

Having described my invention, what I  
105 claim as new and desire to secure by Letters Patent of the United States is:—

1. A die for cutting sheet material having a detachable tracing device and a yielding catch for locking said device and said  
110 die together.

2. A die for cutting sheet material having a detachable tracer and a spring catch mounted on said tracer for locking it to  
115 said die.

3. A die for cutting sheet material having a detachable tracer comprising a supporting member, a marking member mounted thereon and a catch for automatically  
120 locking said supporting member to said die.

4. A die for cutting sheet material having a detachable tracer comprising a supporting member, a marking member yieldingly mounted thereon, means for holding said supporting member rigidly against  
125 movement transversely of the die and a spring catch normally preventing detaching movement in a direction perpendicular to the plane of said die.

5. A tracer for an upper cutting die, 130

comprising a flat bar having a transverse projection for engaging one side of a die, die-engaging means mounted on said projection and a marking member mounted on said bar.

6. A tracer for an upper cutting die, comprising a flat bar having notched die-engaging ends and a transverse die-engaging projection, a marking member and springs interposed between said bar and member.

7. A tracer for an upper cutting die, comprising a die-engaging member, a marking member and springs mounted on one side of said die-engaging member and connected with said marking member on opposite sides thereof.

8. In a device of the class described, the combination with an upper cutting die having notches formed in its pressure receiving edge, of a tracer comprising a bar constructed to fit in said notches and having a marking member yieldingly mounted thereon.

9. In a device of the class described, the combination with an upper cutting die having notches formed in its pressure receiving edge, of a tracer comprising a bar constructed to fit in said notches, means for engaging the die at a point below its pressure receiving edge and normally preventing disengagement of the bar and a marking member carried by said bar.

10. In a device of the class described, the combination with an upper cutting die having notches at three points in its pressure receiving edge, of a tracer comprising a member having a portion arranged to fit in each of the three notches, separate means normally preventing disengagement therefrom and a marking device.

11. In a device of the class described, the combination with an upper cutting die having notches in its pressure receiving edge, a tracer comprising a flat bar constructed to fit in said notches and lie flush with said edge and a marking member mounted on said bar.

12. In a device of the class described, the combination with an upper cutting die, of a tracer comprising a marking member, a carrying member therefor, a laterally yielding catch and a projection on said carrying member located above said catch whereby the catch may be drawn out of locking engagement with the die.

13. In a device of the class described, the combination with an upper cutting die having a socket in the face of one side, of a tracer and a yielding catch mounted thereon and arranged to cooperate with the socket in the die normally to prevent disengagement of the tracer from the die.

14. In a device of the class described, the combination with an upper cutting die having oppositely disposed indentations formed in its cutting edge, of an elongated tracer mounted within said die and extending into proximity to said indentations, whereby a line may be formed on the blank extending between the notches in the contour of the blank cut by the indentations.

15. A die for cutting vamps having a throat-cutting portion forming a reëntrant curve, said portion having a notch formed therein, a tracer extending transversely of the die and means fitting in the notch in said throat-cutting portion for connecting said tracer with the die.

16. A die for cutting vamps having a throat-cutting portion forming a reëntrant curve, a tracer, and means for connecting said tracer to the die at points on opposite sides of the toe portion thereof and to said throat-cutting portion.

17. A die for cutting upper blanks having undercut notches formed in its pressure receiving edge, in combination with a tracer having a beveled die-engaging member arranged for engagement with said notches.

18. A die for cutting upper blanks having a flattened bar received in recesses formed in opposite sides thereof, said bar being arranged to receive pressure independently of the die and a marking device mounted upon said bar independently of said die.

19. A die for cutting upper leather comprising an open frame with a sharpened cutting edge of the contour desired in the blanks to be cut, in combination with a detachable tracer, a laterally yielding catch and cooperating socket, one on said die and the other on said tracer, said catch and socket being so arranged that when the tracer is pressed into a predetermined position relatively to the die it becomes automatically locked thereto.

20. A die for cutting upper leather comprising an open frame with a sharpened cutting edge of the contour desired in the blanks to be cut, in combination with a detachable tracer, a yielding catch on one element cooperating with the other to lock the die and tracer together, said catch being so constructed and arranged that it will yield and release the tracer from the die when the tracer is forcibly moved in a direction approximately at right angles to the plane of the cutting edge of said die.

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

SVEN G. HOLLANDER.

Witnesses:

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CHESTER E. ROGERS.