Oct. 30, 1928. 1,689,633

H. B. LUPIEN

APPARATUS FOR MANUFACTURING ORNAMENTED SHOE UPPERS

Filed Aug. 26, 1925 2 Sheets-Sheet 1

Fig. 1

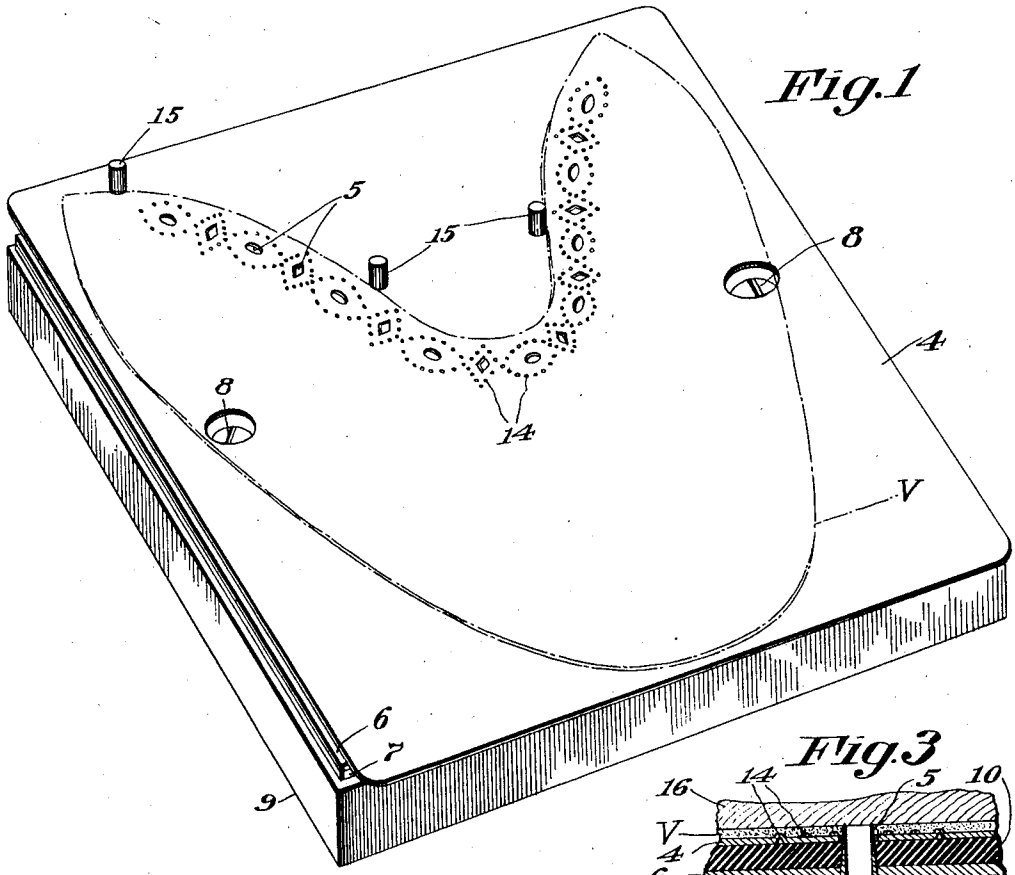
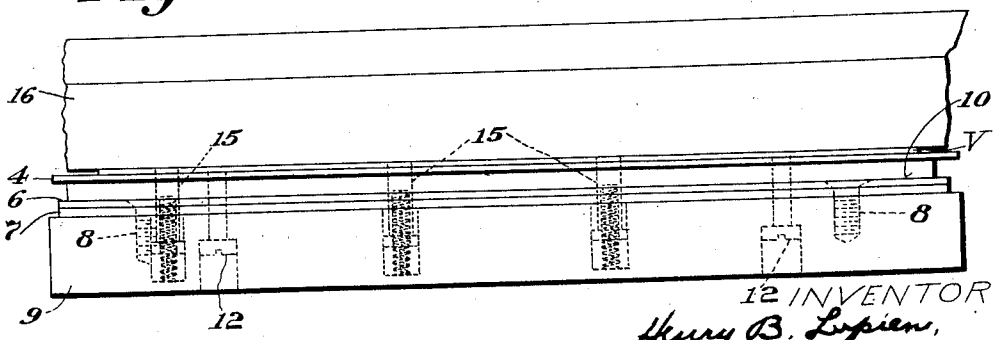


Fig. 3

Fig. 2



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Fig. 4

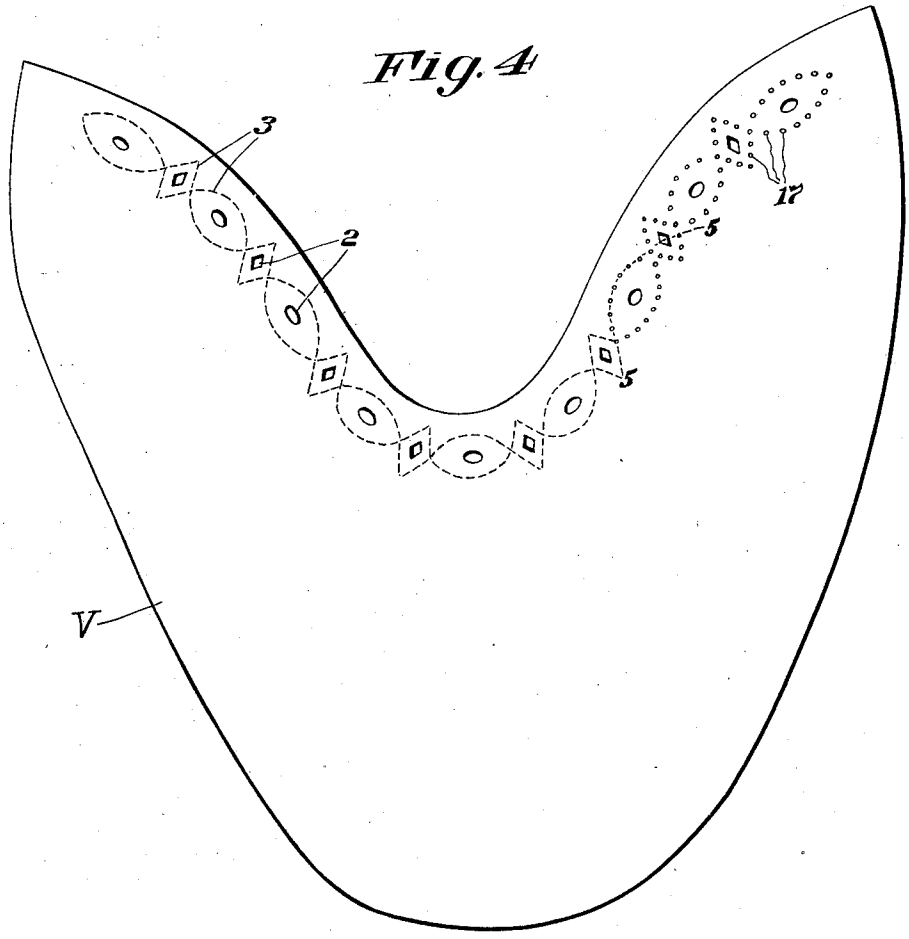
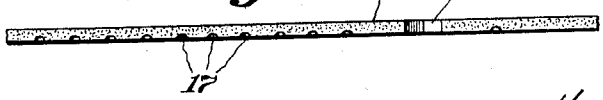


Fig. 5



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR MANUFACTURING ORNAMENTED SHOE UPPERS.

Application filed August 26, 1925. Serial No. 52,530.

This invention relates to the manufacture of shoes, pocketbooks, and other articles made of leather, and which include a certain amount of ornamental work. For convenience the invention will be herein disclosed as embodied in an apparatus designed especially for use in manufacturing certain parts of the uppers of women's shoes.

At the present time women's shoes having so-called "cut out" designs in the uppers are very popular. Usually lines of stitching are associated with or form a part of the design, some of this stitching serving a useful purpose in securing the lining and upper together, while a great deal of it is purely ornamental. The usual manufacturing practice is to die out the vamp or quarters of the upper in the customary manner, subsequently make the cut out design in the part or parts so died out, then to mark on the upper the lines to be followed in making the stitched portion of the design, and subsequently to stitch along the lines so marked to complete the design. The marking is done by hand, usually with a pencil and pressboard pattern.

The present invention aims to simplify and expedite this process, to produce more uniform results and to reduce manufacturing costs.

In the accompanying drawings,

Figure 1 is a perspective view of an apparatus constructed in accordance with this invention;

Fig. 2 is an edge view of the apparatus shown in Fig. 1, associated with the head or "beam" of a cutting machine;

Fig. 3 is a vertical cross sectional view through a portion of the apparatus shown in Fig. 2;

Fig. 4 is a plan view of a shoe vamp illustrating certain steps in the process provided by this invention; and

Fig. 5 is a cross sectional view substantially on the line 5—5, Fig. 4.

The apparatus shown is intended especially for use in making the ornamental design along the upper edge of a vamp V, Fig. 4. this vamp being suitable for a woman's slipper or pump. Referring to Fig. 4 it will be seen that the design includes a series of holes 2 associated with ornamental lines of stitching 3.

The apparatus shown in Figs. 1, 2 and 3 comprises a plate 4 having a series of apertures to receive tubular perforating dies 5, these dies being shaped and arranged to form the holes 2 shown in Fig. 4. The dies 5 fit snugly in holes formed in a metal die plate 6, and they rest on another metal plate 7 upon which the plate 6 is superposed. Both of these plates are secured by screws 8—8 to a relatively thick base plate 9.

The vamp V or other article of work is supported on the plate 4 and the upper surface of the plate normally lies substantially flush with the cutting edges of the dies 5. It is yieldingly held in this position by a rubber pad or cushion 10, which permits it to be depressed below the plane of the cutting edges of the dies. During this movement the plate is guided by a series of headed pins 12, the upper ends of which are fixed in the plate. The pins themselves are guided in holes formed in the plates 6, 7 and 9, as clearly shown in Fig. 2, and the heads of the pins engage counter sunk portions of the holes formed through the base plate and limit the upward movement of the plate 4. The latter plate also is provided with a series of relatively sharp projections 14, arranged in lines corresponding to the lines of ornamental stitching 3 which are to be made on the vamp.

It will be observed that the plate 4, while mounted to move up and down slightly relatively to the dies 5, is held against lateral displacement with reference to the dies. The projections 14, therefore, bear a fixed lateral relationship to the dies 5. These projections are made by punching the metal of the plate 4 upwardly from the lower side thereof and they form in the leather lines of indentation which guide the operator in running in the ornamental lines of stitching.

In order to position the vamp V properly for the operation of the dies 5 and projections 14, a plurality of pins 15 (in this instance three) are located in the base plate 9 and project through the work supporting plate 4, these pins being spring pressed so that they can be pushed down flush with the upper surface of the plate 4.

In using the apparatus shown the vamps V are cut out in the usual manner, usually in a clicking press. A died out vamp is next placed on the plate 4 in a position such as that indicated in dotted lines in Fig. 1, this position being determined by the pins 15. Assuming that the apparatus previously has been placed in a suitable machine, such as a Brock or Knight cut out press, the beam 16, Figs. 2 and 3, of this press next comes down, and a fibre block on the lower side of the beam

strikes the vamp V and forces it down far enough to cause the dies 5 to cut through the leather. The fibre block may also be covered with paper to protect the cutting edges of the dies, as is usual in machines of this general type. Simultaneously with this cutting operation the projections 14 indent the leather, forming the rows of indentation shown at 17 in Fig. 4. During this operation the plate 4 is depressed against the rubber cushion or pad 10 to permit the cutting edges of the dies 5 to pass through the leather. As soon as the beam 16 is raised the plate 4 is lifted by the cushion 10, the vamp V is removed and another is substituted for it. The sections of leather cut out by the dies pass down through the device and through holes 18, Fig. 2, formed in the base plate 9.

The cut out design having been formed in the vamp, it next goes to the stitching room where an operator stitches along the lines 17 of indentations, thus completing the design. As shown, the lines 17 resemble lines of stitching and in some cases the indentations may form the design or a part of it, either with or without the stitching. Usually, however, the stitching is preferable and the indentations are used simply as guide marks for the stitcher.

It will be observed that the cutting of the design and the marking of the leather are performed simultaneously and that hand marking is eliminated. A substantial saving in labor thus is effected and more uniform results are produced.

It will be evident that the invention may be embodied in many forms without departing from the spirit or scope thereof and that the particular design referred to is shown simply by way of illustration.

Having thus described my invention, what I desire to claim as new is:

1. An apparatus of the character described comprising a die for cutting leather to produce a desired pattern, a plate having projections thereon for making lines of indentation in the leather in a definite relationship to the pattern cut by said die, supporting means for holding said die and plate in operative relationship to each other with said die projecting through said plate, cushioning means between said support and plate permitting the plate to yield relatively to the die, and yieldingly supported pins projecting through said plate for gaging the position of the work relatively to said die and said projections.

2. An apparatus of the character described, comprising a plate having projections thereon for marking leather work, a support for holding said plate, and yieldingly supported pins extending through said plate for gaging the position of said work relative to said projections.

3. An apparatus of the character described comprising a plate having projections thereon for making lines of indentation in leather work, a support for holding said plate, cushioning means between said support and plate permitting the plate to yield upon the application of pressure thereto, and yieldingly supported pins extending through said plate for gaging the position of said work relative to said projections.

4. An apparatus of the character described comprising a die member having perforating dies for cutting leather to produce a desired pattern, a plate having apertures to receive said dies and having projections extending from the face thereof for indenting the leather, means for holding said die member and said plate in cooperative relationship to each other to cause them to operate substantially simultaneously upon a piece of leather, cushioning means supporting said plate for yielding movement to permit said dies to project through and beyond the plate in operating on the leather, and means for gaging the position of a piece of leather for the operation thereon of said dies and said projections.

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