

T. LUND.  
 ART OF MAKING SHOES.  
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1,122,139.

Patented Dec. 22, 1914.

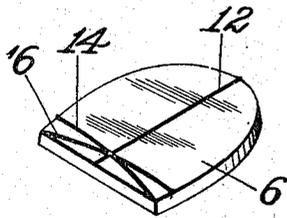


Fig. 1.

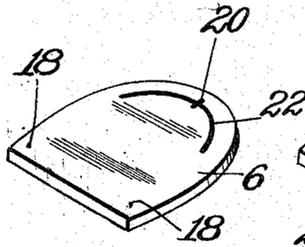


Fig. 2.

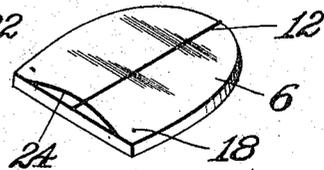


Fig. 3.

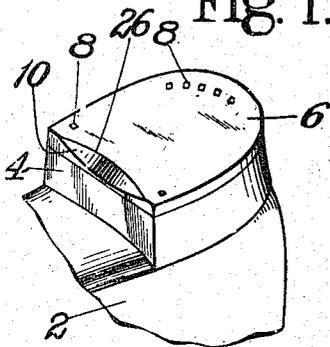


Fig. 4.

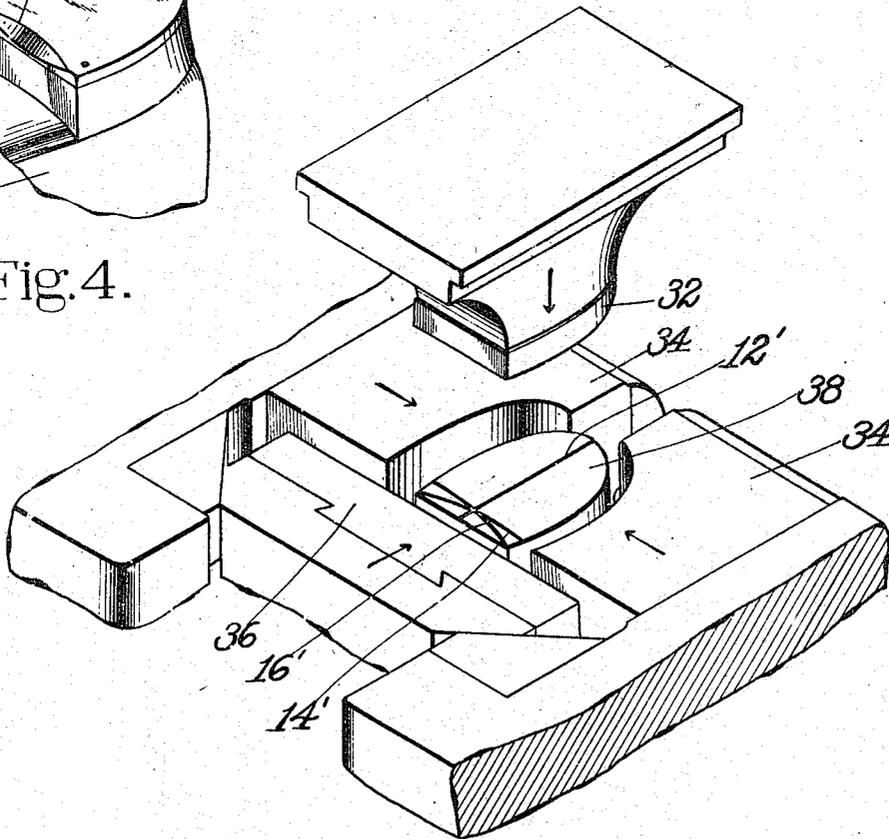


Fig. 5.

WITNESSES

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# UNITED STATES PATENT OFFICE.

THOMAS LUND, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## ART OF MAKING SHOES.

1,122,139.

Specification of Letters Patent.

Patented Dec. 22, 1914.

Application filed June 21, 1909. Serial No. 503,418.

*To all whom it may concern:*

Be it known that I, THOMAS LUND, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain Improvements in the Art of Making Shoes, 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 the manufacture of boots, shoes or other footwear, herein generically designated by the term "shoes".

More particularly the invention relates to the manufacture of the heels of shoes.

In certain operations performed in the manufacture of shoes and particularly operations upon or involving the heel, such, for example, as attaching the toplift to the body of the heel, breasting and concaving the heel, and inserting slugs into the heel, the exact points or places at which the particular operation is to be performed are determined solely or partly according to the skill and judgment of the workman who usually has no guiding or location indicating means to assist him in bringing the shoe into the exact relation desired with reference to the knife of the breasting or concaving machine, the delivery nose of the slugging machine or other operating means. The result is, therefore, that there is not only a lack of uniformity in successive shoes operated upon and more particularly a lack of symmetry between the right and left shoes of a pair but also a similar fault occurs in each individual shoe. For example, there is liable to be a lack of accuracy in the proper location or centering of the toplift as it is spanked upon the heel body, which has already been attached to the shoe, or in its position with relation to the knife in the breasting machine. Particularly, in the slugging operation, the slugs at the forward corners and in the center of the heel at the rear are likely to be located more or less incorrectly with reference to the breast or center lines.

Accordingly, the principal object of the present invention is to provide upon the toplift, and preferably upon its tread face, indicating means adapted to serve as a guide for a subsequent operation, performed usually after the toplift has been spanked on.

The invention is especially useful when employed in connection with a molded toplift, and in particular the well-known condensed toplift, by reason of the fact that such a toplift is given a predetermined contour, and also because the indicating means, preferably in the form of a mark or marks, may advantageously be provided during the condensing operation.

Therefore, a valuable feature of the invention comprises the providing of indicating means upon the tread face of a toplift at the time that it is molded or condensed. Thus the indicating means is located in the exact relation with the edge of the toplift desired and no additional operation is required to provide such means. Preferably such means will comprise one or more raised marks or lines. An advantage arising from the provision of marks which are raised is that they may be removed without additional work or expense in the finishing of the heel so that when the shoe is completed these indicating marks, having served their purpose, will no longer appear and, therefore, can not be regarded as a blemish upon the finished heel.

Other features of the invention will appear from the following detailed description and will be defined in the appended claims.

Referring to the accompanying drawings, Figures 1, 2 and 3 show in perspective three toplifts provided respectively with indicating marks differently arranged, the tread face of the toplift being uppermost in each view. Fig. 4 represents a part of a shoe in the making of which the present invention has been utilized, and Fig. 5 represents a set of molds which may be used for condensing the toplift and providing it with indicating marks.

As illustrated, particularly in Fig. 4, a shoe 2 made in accordance with this invention is in general of usual construction and comprises a heel 4, having a toplift 6 spanked on in a well-known manner. As shown in Fig. 4, the toplift is provided with several ornamental slugs 8 and is also concaved or scalloped at the breast, the scallop being designated 10.

For the purpose of locating the toplift accurately upon the body of the heel or in the device which holds it while it is being spanked thereupon, the center line 12, shown

in Figs. 1 and 3, will be useful as a guide for the workman. Such a line may likewise be useful in connection with various other operations. For example, where the cutting edge of the breasting knife is concave it is desirable to locate the center or highest point of the edge of the knife exactly central with reference to the toplift and such a line will assist in securing the desired relative position.

In some styles of shoes, the breast of the heel when finished is approximately in a plane which varies slightly from a direction at right angles to the longitudinal center line of the heel. In such case and for the reasons above indicated, it is found desirable, according to this invention, to provide an indicating line, such as 14, to guide the workman in locating the knife properly for the breasting operation. In order that any toplift may be used for either a right or a left shoe, another line 16 arranged symmetrically with respect to line 14 is provided also upon the tread face of the toplift, the line 14 being used for breasting when the toplift is applied to a right shoe and line 16 when applied to a left shoe.

The indicating marks shown in Fig. 2 are adapted for use as a guide for the workman in the slugging operation although the particular marks shown are to be regarded merely as typical and illustrative because slugs in the heel may be arranged in various ways according to individual taste. The two marks 18 adjacent the forward corners of the toplift may be used to indicate where the first and last slugs are to be inserted whether the slugs are arranged in a continuous row from breast to breast at equal distances apart, or whether they are to some extent unequally spaced, as is indicated in Fig. 4. It is usually desirable during this slugging operation for the workman to be able to locate the center line of the heel at the rear, since a greater uniformity in appearance is obtained if one of the slugs is inserted at this point which is indicated at 20 in Fig. 2. For the style of slugging indicated in Fig. 4, not only is it important to locate the center point 20 but also the point at which the slugging is to be interrupted between the rear of the heel and the forward or corner slug should be indicated and accordingly a line 22 is provided, as illustrated in Fig. 2, the extremities of which indicate for both right and left shoes where the slugging will be commenced or stopped.

The line 24 adjacent the breast of the toplift in Fig. 3 is provided to serve as a guide in the scalloping or concaving operation, the result of which is illustrated in Fig. 4, in which figure the line 26, which forms the boundary between the tread face of the toplift and the scalloped portion 10 corresponds exactly, or as closely as may be desired, to

the line 24 in Fig. 3. As has already been stated these indicating marks or lines are preferably formed upon the toplift during the usual condensing operation. The molds or dies illustrated in Fig. 5 indicate a part of a well-known apparatus which may be used for condensing and molding a toplift embodying this present invention. They comprise an upper die 32, side dies 34; a breast die or plate 36 and a lower die or pressure plate 38. These parts may be and preferably are actuated in substantially the manner described in Letters Patent of the United States No. 776,787, granted December 6, 1904 and when brought together include within them a molding chamber. As in said patent, the dies 32, 38, are moved toward each other and during such movement the side dies 34 and the breast die 36 are likewise moved toward each other so that a toplift blank resting upon the lower die will be molded and condensed under great pressure. The molds, as so far described, form no part of the present invention but, as also illustrated in Fig. 5, the lower die 38, which engages the tread face of the toplift is provided, according to this invention, with depressions or marks suited to produce in the molded toplift the particular indicating marks desired. In the embodiment of the invention shown in this figure, the die 38 is provided with a center line 12' corresponding to the raised line 12 shown in Figs. 1 and 3 and with lines 14' and 16' adapted to produce the raised lines 14 and 16 shown in Fig. 1. It will be noted that, by the use of molds constructed and arranged as shown in Fig. 5 and operated as described, the toplift produced will have a predetermined area and its edges will be perfectly regular. Moreover, the indicating lines formed during the molding operation will be in exact predetermined relation with the edge and corners of the toplift. After the heel has been breasted and the slugs have been inserted, it is customary to buff the tread face of the toplift and make the ends of the slugs flush with the face of the toplift. During this operation any part of the indicating lines remaining, as, for example, the center line 12, will be removed.

Having thus indicated the nature and scope of my invention and having fully described in detail one mode of carrying it out in practice with several variations, what I claim as new and desire to protect by Letters Patent of the United States is—

1. That improvement in the art of making shoes having blind-nailed heels which comprises compressing and condensing a toplift for the heel of a shoe under great pressure to give its tread face along its convex edge substantially the predetermined size and shape which it is to have in the finished shoe and simultaneously impressing upon said

tread face a temporary slightly raised mark in predetermined relation to the contour of the toplift, spanking the toplift on to the body of the heel, then while performing a further operation upon the toplift, utilizing said mark as a guide and finally buffing the tread face of the toplift to remove any raised portion of said mark which remains.

2. That improvement in the art of making shoes having blind-nailed heels which comprises molding a toplift for the heel of a shoe to give its tread face along its convex edge substantially the predetermined size and shape which it is to have in the finished shoe and simultaneously impressing upon said tread face a plurality of temporary slightly raised marks in predetermined relation to and adjacent to the contour of the toplift, spanking the toplift on to the body of the heel, then while performing a further operation upon the toplift, utilizing said marks as guides and finally buffing the tread face of the toplift to smooth said face, thus removing any raised portions of said marks which remain after they have served their purpose.

3. That improvement in the art of making shoes having blind-nailed heels which comprises compressing and condensing a toplift for the heel of a shoe under great pressure to give its tread face along its convex edge substantially the predetermined size and shape which it is to have in the finished shoe and simultaneously impressing upon said tread face a plurality of tempo-

rary slightly raised marks in predetermined relation to and adjacent to the contour of the toplift, including a breast line (24), slugging marks (18) and a center line (12), spanking the toplift on to the body of the heel, then utilizing said marks as guides while cutting into the toplift at an angle to its tread face and while inserting slugs through said tread face, and finally buffing said tread face to smooth the face, thus removing any raised portions of said marks which remain after they have served their purpose and making the ends of the slugs flush with said face, substantially as described.

4. That improvement in the art of making shoes which comprises molding a toplift for the heel of a shoe to give its tread face along its convex edge substantially the size and shape which it is to have in the finished shoe and during the molding operation providing indicating means upon the toplift in predetermined relation to the contour of the toplift, and thereafter while performing a subsequent operation upon the toplift utilizing said indicating means as a guide.

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

THOMAS LUND.

Witnesses:

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JAMES R. HODDER.