

L. H. SHAW.

HEEL.

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1,056,458.

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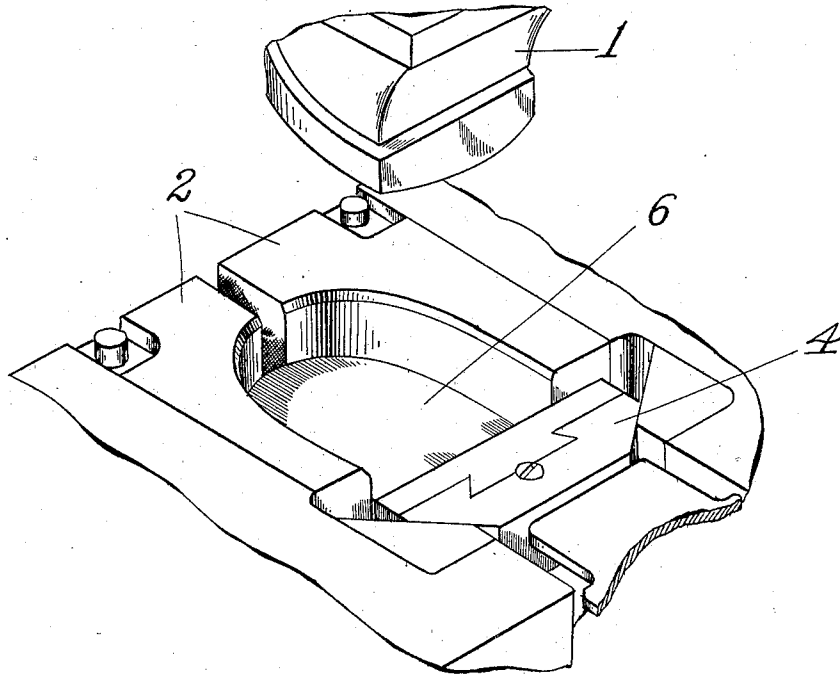


Fig. 1.

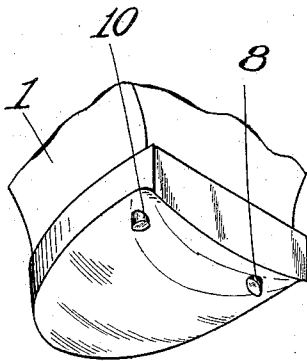


Fig. 2.

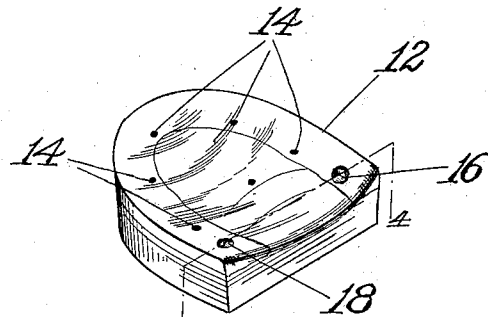


Fig. 3.

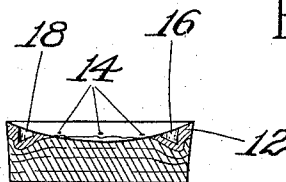


Fig. 4.

WITNESSES.

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HEEL.

1,056,458.

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To all whom it may concern:

Be it known that I, LINUS H. SHAW, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Heels, 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 heels.

In attaching rands to heels it is desirable that the ends of the rand be securely held from movement and particularly the end of the rand on that side of the heel at which the heel trimming operation is commenced. If this end is insecurely held the trimming cutter is liable to tear out the rand and spoil the heel. In the manufacture of shoes according to present practices, rands are frequently torn out in this way.

It is frequently impracticable to insert metallic fasteners sufficiently close to the ends of the rand to hold said ends securely to the heel. The fasteners should be far enough removed from the breast of the heel to preclude the possibility of contact of the breasting knife therewith, and it is at times desired to remove a considerable portion of the heel in breasting as where the heels are breasted for rights and lefts. On account of such considerations as the foregoing it is a common practice to require operators in securing rands to heels to insert the foremost fasteners a considerable distance from the breast of the heel. Furthermore as no provision is made for locating accurately the foremost fasteners, at times they are inserted considerably farther removed from the breast of the heel than is required to avoid the breasting knife.

It will be apparent that where the fasteners are some distance from the breast of the heel they may not be effective to hold the ends of the rand from lateral movement. Furthermore on account of the thinness of the rand at the points where the fasteners are usually inserted and the consequent ease with which the rand is torn from the fasteners, said fasteners, even if placed at the most effective points, may fail to hold the rand against the pull of the trimming cutter.

The primary object of the present inven-

tion is to provide means effective for holding an end of a rand from lateral movement upon a heel.

To this end a feature of the invention consists in a heel having an indentation or cavity in its heel seat face beneath an end of the rand and a rand secured to said heel and having a projection extending into said indentation. With this arrangement, after the heel has been attached to the shoe and the rand held between the heel seat face of the heel and the face of the outsole any outward movement of the end of the rand from between the heel and the sole is prevented by engagement of said projection with the walls of said indentation or cavity.

According to the preferred embodiment of the invention herein described, the heel and the end of the rand are given the relative formation referred to in the operation of molding the heel. To this end the follower of the heel compressor is provided with a spur arranged to engage an end of the rand which it is desired to hold from lateral movement. When the vertical pressure is applied to the heel through the follower, this spur forces the material of the rand into the face of the heel, forming a cavity in the heel and a corresponding projection on the lower surface of the rand.

Other features of the invention will be hereinafter described and referred to in the appended claims.

In the drawings,—Figure 1 is a view in perspective of parts of a well-known form of heel compressor which may be employed for producing a heel embodying the invention; Fig. 2 is a perspective view of the follower shown in Fig. 1; Fig. 3 is a perspective view of a heel compressed by the mechanism shown in the preceding figures; Fig. 4 is a vertical sectional view on the line 4—4 of Fig. 3.

Referring to the drawings the reference numeral 1 indicates the follower, 2 the side dies, 4 the breast die and 6 the top lift plate of a heel compressor of the type illustrated in United States Letters Patent to Tripp, No. 776,875, dated December 6, 1904, to which patent reference may be made for a full disclosure of said compressor. It will be understood that in the operation of a machine of this type the heel is subjected to heavy pressure, both laterally and vertically, and its heel seat face is molded to fit the

heel seat of a shoe to which the heel is to be attached. In this machine the lateral pressure applied by the side dies 2 and breast die 4 is produced before the follower 1 and top lift plate 6 subject the heel to vertical pressure. As shown in Fig. 2, the follower 1 is provided adjacent its breast corners with spurs 8, 10, preferably cylindrical though not necessarily so. These spurs are beveled off on their inner sides so that each spur is of greater height on the side adjacent the curved edge of the follower than upon the opposite side. The spurs are located a short distance from the breast edge of the follower and are also slightly removed from the curved edge of the follower. It will be understood, however, that the position of the indenting spurs may be changed from that shown without departing from the present invention.

While in the follower shown two spurs are provided, one upon each side of the follower, the main purpose of the invention would be secured by the use of one spur arranged to engage that side of the heel at which the trimming operation is commenced. This, according to ordinary practice, would be that side of the heel which is engaged by the spur 8 of Fig. 2. It may be preferred, however, to provide two spurs as shown in order to insure that both ends of the rand will remain in proper position at all times subsequent to the heel molding operation.

The feature of giving each indenting spur a greater height on the outside than on the inside is of advantage in that it causes the cavity formed in the heel to be more abrupt upon the outside than on the inside, the projection upon the rand entering said cavity being of corresponding shape. This form I have found in practice to be effective in preventing outward movement of the rand from between the heel and sole.

In the heel shown in Fig. 3 the rand 12 is secured to the heel seat face of the heel by fasteners 14, the foremost fasteners being a considerable distance removed from the breast of the heel. The indentations 16 and 18 are formed respectively by the indenting spurs 8 and 10 of Fig. 2. It will be seen from Fig. 4 that a cavity is formed in the heel seat surface by the spurs 8 and 10 and that a corresponding projection formed upon the lower surface of the rand is received in each cavity.

The indentations formed in the rand and heel are preferably located a sufficient distance from the sides of the heel to preclude their being brought into view by the trimming tool. At the same time they should be sufficiently far from the thin edge of the rand so that the projections formed upon the bottom of the rand shall have sufficient body to hold the rand securely from lateral movement.

The indentations in the rand may, if desired, be formed upon that part of the rand which is removed in the breasting operation, since this operation is commonly performed after the heels are trimmed. In the heel shown the indentations are placed at the rear of that part of the heel ordinarily removed in breasting. Where they are given this location they should be arranged sufficiently far from the breast to preclude their being brought into view by the breasting knife.

It will be seen that inasmuch as the position of the indentations in the heel shown is determined by the location of the spurs upon the follower the indentations may be uniformly arranged at the desired distances from the breast and sides of the heel. That position of the indentations which is most effective for the purpose referred to is thus at all times insured.

The feature of forming the indentations in the compressing operation is of advantage in that it enables them to be produced at no expense other than that of equipping the follower with the indenting projections. It will also be seen that inasmuch as the indentations are formed while the heel is subjected to pressure by the side dies 2 the ends of the rand are brought in flush with the side of the heel before being secured in place in case they should project somewhat beyond the side of the heel when presented to the compressor.

It will be understood that the attaching nails which secure the heel to the shoe are so located that they cannot serve to hold the rand from displacement. As ordinarily arranged, these nails do not pass through any part of the rand. With the use of the present invention, after the heel is secured to the shoe the projections formed upon the bottom of the rand as indicated in Fig. 4 hold the rand securely from lateral movement, the rand being clamped between the sole and the heel-seat surface of the heel.

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

1. A heel, having a rand secured upon its heel-seat face, the heel and rand having their adjacent surfaces formed to resist lateral outward movement upon the heel of one or both ends of the rand.

2. A heel, having a cavity in its heel-seat face beneath an end of a rand, and a rand secured to said heel and having a projection extending into said cavity.

3. A heel, having a cavity in its heel-seat face, said cavity having an outer wall extending substantially vertically, and a rand secured to said heel and having a portion shaped to extend into contact with the outer wall of said cavity.

4. A heel, having a rand secured to its

heel seat face, said rand being provided with a vertically projecting portion arranged to prevent outward lateral displacement of the rand.

5 5. As an article of manufacture, a molded heel having a rand secured to its heel-seat face, a small portion of the rand being forced into the face of the heel to resist lateral movement of the rand after the heel
10 is attached to the shoe.

6. A heel, having a rand secured to its heel-seat face, the heel and rand being formed, one with a cavity and the other

with a projection extending into said cavity.

7. A heel, having a rand secured to its heel-seat face, the heel and rand having interlocking portions near the ends of the rand only. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 20

LINUS H. SHAW.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."