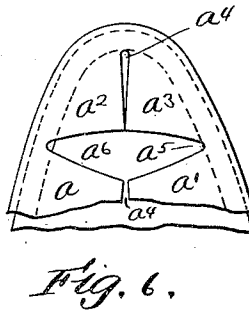
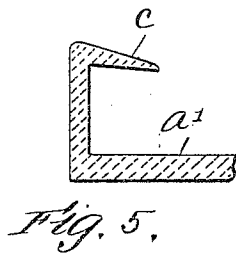
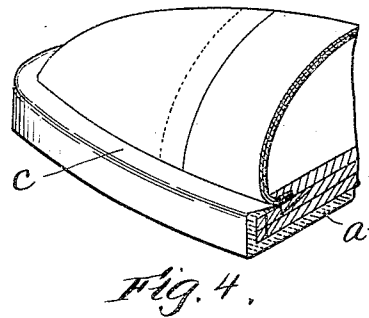
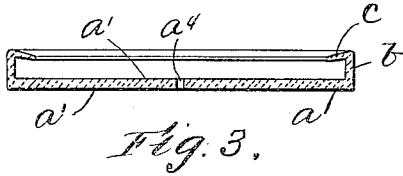
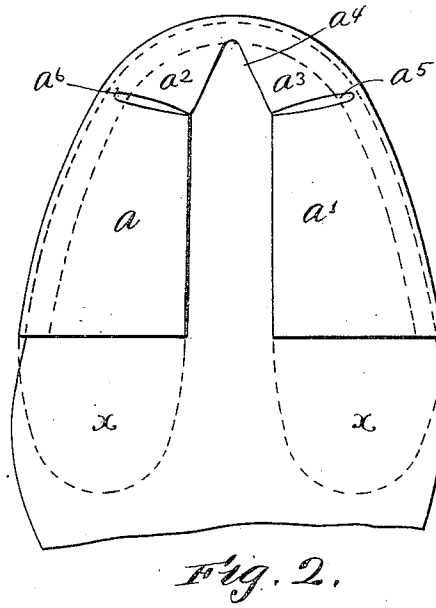
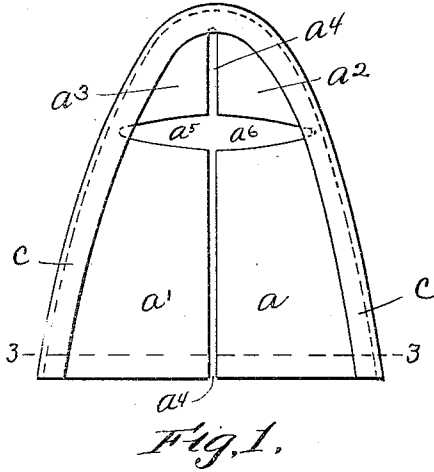


E. C. & E. MARSHALL.
EDGE AND BOTTOM PROTECTOR FOR SHOES.
APPLICATION FILED APR. 22, 1910.

1,041,830.

Patented Oct. 22, 1912.



Witnesses:
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R. J. Bronson.

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Attys

UNITED STATES PATENT OFFICE.

EDWARD C. MARSHALL AND ERNEST MARSHALL, OF LYNN, MASSACHUSETTS, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO NOVELTY SELLING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

EDGE AND BOTTOM PROTECTOR FOR SHOES.

1,041,830.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed April 22, 1910. Serial No. 556,943.

To all whom it may concern:

Be it known that we, EDWARD C. MARSHALL and ERNEST MARSHALL, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Edge and Bottom Protectors for Shoes, of which the following is a specification.

In the manufacture of enameled or patent leather shoes, the enamel is frequently cracked, or otherwise damaged, especially on the tips, so that it is necessary to repair the enamel after the shoe is practically finished, this process being generally known as "tip repairing." In performing this operation it is customary to remove the portion of the enamel which is cracked or chipped off and then to apply successive coats of a form of liquid enamel to the surface with a cloth, or other means, so that the damaged portion is reenameled. This damage usually occurs close to the edge of the shoe, and it is extremely difficult, and almost impossible to perform this work without applying the liquid enamel to the projecting edge of the sole or the fair, or outer-sole-connecting stitches. As, in many instances, it is desired that these stitches be kept white and that the surface of the extension edge, or the welt be finished in a light color, much difficulty has arisen in preventing discoloration of these parts of the shoe when the tip-repairing operation is performed.

In performing the work of tip-repairing, the fingers usually become soiled with the enamel, and, as the shoe must be held in one hand while the enamel is applied with the other, it frequently happens that the sole is stained by the fingers. It is also difficult to keep the bench at which the work is performed, free from the enamel, and, as it is often convenient to place the shoe on the bench, the bottoms frequently become soiled in this way. As a light colored finish is required for the soles of many shoes, means for preventing these bottoms from being soiled is desirable.

In the manufacture of white canvas shoes, or shoes having light-colored uppers, it is frequently necessary to clean the uppers after the shoe is otherwise finished. This cleaning operation is frequently performed by the application of a liquid preparation,

and much difficulty has been occasioned, in performing this operation, by reason of the fact that the liquid frequently runs down on the edge and bottom of the sole, necessitating the refinishing thereof, and thus entailing additional expense.

The shoes which must be repaired or cleaned as above described are delivered to the repairer in widely varying sizes and shapes so that it is practically essential that any protecting means which is employed should be adapted for application to a wide-variety of shapes and sizes, both for reasons of convenience and expense, and it is further desirable that such protecting means be adapted for ready application and removal.

The object of our invention is to provide a protecting device which will enable the tip-repairing operation to be readily accomplished and which, at the same time, will effectively prevent damage either to the edge or the bottom of the sole by the application of the tip-repairing enamel, from handling.

A further object of our invention is to provide a simple device which may be manufactured at small expense and is adapted to be readily applied to, and removed from a shoe, and which is also adapted to hold itself in place when applied, and to be readily conformed to a wide variety of sizes and shapes of soles, and thicknesses of edges.

We accomplish these objects by the means shown in the accompanying drawing, in which—

Figure 1 is a top plan view and Fig. 2 a bottom plan view of a protecting device made according to our invention, and showing it as applied to a certain form of sole, Fig. 3 is a section on the line 3—3 of Fig. 1, Fig. 4 is a perspective view showing the application of our device, Fig. 5 is an enlarged detail sectional view of an edge portion of the device and Fig. 6 is a bottom plan view showing the application of the device to a different form of sole from that shown in Fig. 2.

According to our invention, we provide a sole-protecting plate of suitable thickness, the contour of which corresponds to the contour of a sole of medium size and shape, of the shoe soles to which the device is de-

signed to be applied, said protecting plate being divided into two rear sections, a and a' , and two tip sections a^2 and a^3 , by a medial slot a^4 which extends from the rear end of the plate to a point at a short distance from the front or tip end thereof, and two transverse oppositely disposed slots a^5 and a^6 , which lead perpendicularly from each side of said slot a^4 and terminate at a short distance from the sides of the plate at points which may be considered as adjacent the front ends of the corresponding side portions of a shoe sole, or a short distance in front of the middle portion of the tip. The transverse slots a^5 and a^6 are preferably formed to taper to an extent from their inner to their outer ends, as shown in Fig. 1.

An edge-engaging flange b is provided, which is formed integrally with said sole plate and extends continuously about the outer edge thereof, the height of said flange corresponding approximately to the greatest thickness of the edges of the shoes to which the protector is to be applied. The upper edge of said flange is provided with an inwardly extending lip c , the under side of which preferably extends obliquely downward with relation to the surface of the sole plate, the upper side of said lip being tapered with relation to the under side, so that it is provided with a relatively sharp edge, or is wedge shaped in cross-section (see Fig. 5.)

The plate, flange and lip, that is the entire device, are integrally molded of elastic rubber in a shape which approximately corresponds to the shape of a sole of medium size of the series of soles to which the device is adapted to be applied, while the width of said lip at its under side is at least as great as the width of the edge extension, or distance from the sole edge to the point of connection of the upper of any shoe, to which the device is likely to be applied.

In practice, the projecting edge of the shoe is passed beneath the lip c and the flange b is pressed closely against the sole edge, so that the lip is tightly wedged between the edge and the upper, as shown in Fig. 4.

As the protector is made of readily flexible and elastic rubber, the flange b is adapted to be bent to conform to any configuration of sole, while the lip c , and the portions of the sole plate opposite the ends of the slots therein, are adapted to be stretched or compressed, so that they in no way interfere with the ready bending of the flange b at the ends of said slots. For example, in placing the protector on a shoe having a wide, rounding toe, the flange will be bent opposite the end of the middle slot a^4 , so as to swing the two toe sections apart, while it will be bent opposite the ends of the

transverse slots, a^5 and a^6 , so that the rear sections will be swung toward their adjacent tip sections, as shown in Fig. 2.

It may be here noted that the slots a^5 and a^6 are made of sufficient width at their adjacent ends to enable the flange b to be conformed to a toe of as wide shape as would be required without having one bottom section over-lap another.

In placing the protector on a narrow toed shoe the tip sections will be held close together, while the flange b will be bent opposite the ends of the slots a^5 and a^6 , so as to swing the rear sections away from the tip sections, as shown in Fig. 6.

Generally the toe-portions of the right and left shoes of a pair vary quite materially in shape, and it is desirable to have the protector conform equally well to either a right or a left shoe. For example, the inner edge of the toe-portion of many shoes is practically straight, while the outer edge is formed on a wide curve. In applying a protector to a shoe of this sort, assuming, for example, that the section a' is placed against the inner edge of the sole, the section a will be drawn toward the tip of the shoe, while the section a' will be drawn toward the shank, with the result that the sides of the slot a^6 will be drawn close together, or into engagement, as in Fig. 2, while the sides of the slot a^5 will be swung far apart, as in Fig. 6. Under these conditions the extent to which the slot a^4 will be opened will be about half as much as the extent which the slot a^6 is opened.

The lip c is either stretched or pressed together in thus conforming to the different shapes into which the flange b is bent, and is also caused to yield transversely to conform to the varying thicknesses of the sole edge. By having the lip c extend obliquely toward the bottom plate, as above described and shown in Fig. 5, the device is adapted to be conformed more perfectly to soles of different thickness. That is, in practice the lip c is extended toward the bottom plate to an extent sufficient to engage the upper side of the edge of a relatively thin sole, while the height of the flange b , between the bottom plate and the inner side of the lip c , is made approximately equal to the thickness of the edge of a relatively thick sole, the lip c being adapted to yield according to intermediate variations in thickness. This arrangement also enables the lip to engage the edge of the sole with some force, and thus hold the device more securely in place on the shoe.

It will be apparent that the protector may thus be made to conform to any intermediate or different shape, within reasonable limits, which is likely to be required.

The user, in holding the shoe most conveniently to perform the tip repairing

operation, presses the fingers and thumb against opposite side portions of the edge flange *b*, while the plate or sole-engaging-portion rests on the palm of the hand, the protector thus being firmly held in position as an incident to the holding of the shoe. Moreover, by reason of the fact that the device is made of soft rubber the workman is enabled to secure a much firmer grip on the shoe, and to hold it much more easily, than when the device is not used, as the edges and bottom of the shoe are very slippery when finished, and as the device also protects the fingers from the sharp corners of the sole.

When the sections are swung apart, the elasticity of the lip *c* and the sole portion at the ends of the slots *a*⁵ and *a*⁶ will tend to draw the flange *b* against the edge of the sole, although, while there is practically no liability of displacement of the protector while the shoe is being held in the hand and operated on as above described, it is frequently necessary to place the shoe on the bench for a time to permit the enamel to harden, the protector being left on the shoe. In such instances the frictional engagement of the downwardly inclined lip with the surface of the projecting sole edge is sufficient to retain the protector in position on the sole. The wedge-shaped form of the lip *c* enables the lip to be forced so tightly in between the sole and upper as to prevent the liquid which may be applied to the upper from passing about the edge of the lip onto the sole, and it also affords ready access to the upper close to the point at which it is stitched, so that the enamel thereon may be repaired and in case the device is used when the upper of a shoe is being cleaned, access may be had to the entire upper for this purpose, without danger of damage to the sole.

With the above described device, it will be apparent that, not only will the projecting sole edge be effectively protected, but the bottom plate will prevent the fingers from coming in contact with the sole.

If it is desired to have the bottom plate extended over a greater portion of the sole, said plate may be provided with rearward extensions, as *a*, indicated in dotted lines in Fig. 2. It will also be obvious that the size of the device may be increased to extend, for example, to the shank, if desired, but for the particular purpose for which the device is especially designed the particular form shown is believed to be the most desirable.

It will be apparent that each device is adapted to be used for a wide range of sizes, it being necessary, in practice, to provide only three sizes of the devices for children's, women's and men's shoes.

The ends of the slots *a*⁴ *a*⁵ and *a*⁶ are

made rounding, as shown, to prevent tearing or breaking of the bottom plate at the points at which it is bent.

We claim:

1. A protector for the tip portion of a shoe-sole comprising a sole-bottom-protecting plate composed of a plurality of partly separated sections, and a flexible, edge-engaging flange connecting said sections and extending continuously about the outer edges thereof and having a correspondingly extending elastic, inturned, protecting and retaining lip for the exposed upper side of the sole arranged to leave free the adjacent portion of the upper, substantially as described.

2. A protector for the tip-portion of a shoe-sole comprising a sole-bottom protecting plate composed of a plurality of partly separated sections having a sole-edge engaging flange extending continuously about the outer edges thereof, said flange having a correspondingly extending, inturned, edge protecting and retaining lip, and said parts being formed of integrally connected elastic rubber permitting the connecting portions of said sections and said flange and lip to be bent to conform to soles of different shape, substantially as described.

3. A bottom and edge protector for the toe portion of a shoe-sole comprising a sole-shaped bottom protecting portion composed of two pairs of partly separated sections, one pair formed to cover portions adjacent the tip end of the sole and the other formed to cover portions in the rear thereof, a perpendicularly disposed, sole-edge-engaging portion integrally connected with said sections, and an inwardly extending lip on the said edge-engaging portion adapted to engage and cover the upper side of the sole between its edge and the upper and to leave free the adjacent portion of the upper, said parts being formed of elastic rubber, integrally connected to permit relative swinging movement of said sections, substantially as described.

4. A bottom and edge protector for the tip portion of a shoe-sole, integrally formed of elastic rubber, and comprising an edge-engaging flange, molded in sole shape and having at its upper edge a protecting and retaining lip arranged to extend adjacent the upper without bearing against an appreciable portion of the surface thereof, and a plurality of sole-bottom protecting sections connected to the lower edge of said flange inclosed thereby and constructed for movement to different relative positions as the flange is bent into different shapes, substantially as described.

5. A protector for the tip portion of a shoe-sole comprising an expansible sole bottom protecting portion, having a flexible sole-edge-engaging flange provided with a

flexible wedge-shaped lip disposed to be pressed between the upper and projecting edge of the sole and out of engagement with an appreciable portion of the surface of the upper, substantially as described.

6. A protector for the tip portion of a shoe sole comprising an expansible sole-bottom protecting plate having a flexible, upright, sole-edge-engaging flange extending about the edge thereof, said flange having an elastic, edge-protecting and retaining lip extending inwardly therefrom and obliquely toward said plate and being yieldable to engage the projecting edge of the sole, substantially as described.

7. A protector for the tip portion of a shoe sole comprising a tip-shaped, sole-bottom-protecting plate having a separating slot extending from the rear end toward the front end thereof and terminating adjacent the edge, a sole-edge-engaging flange extending continuously about the outer edge of said plate and provided with a corresponding, inwardly extending, protecting lip for the projecting portion of the sole arranged to leave free the adjacent portions of the upper, said flange and lip and the portion of said plate opposite the front end of said slot being flexible to permit the separated portions of said plate to be swung into different relative positions, substantially as described.

8. A protector for the tip portion of a shoe sole comprising a tip-shaped sole-bottom protecting plate having a longitudinal slot extending from the rear end to a point adjacent the tip end thereof and two transverse slots leading from said longitudinal slot to points at each side of the plate, a sole-edge-engaging flange extending about the edges of said sections and having an inwardly extending protecting lip for the projecting portion of the sole, said flange and lip and the portions of said plate opposite the ends of said slots being flexible to permit the protector to be conformed to soles of different shapes, substantially as described.

9. A protector for the tip portion of a shoe sole comprising a tip-shaped sole-bottom protecting plate molded of flexible rubber and having a longitudinal slot extending from the rear end to a point adjacent the tip end thereof and two transverse slots leading from said longitudinal slot to points at each side of the plate, a sole-edge-engag-

ing flange extending about the edges of said sections and having an inwardly extending protecting lip for the projecting portion of the sole, said flange and lip and the portions of said plate opposite the ends of said slots being flexible, and the sides of said transverse slots being formed to converge toward their outer ends to permit the sections into which said plate is divided thereby to be swung in opposite directions from the normal relative positions in which they are molded, substantially as described.

10. A protector for the tip-portion of a shoe sole comprising a tip-shaped sole-bottom protecting plate having a longitudinal slot extending from the rear end to a point adjacent the tip end thereof and two transverse slots leading from said longitudinal slot to points at each side of the plate, a sole-edge-engaging flange extending about the edges of said sections and having an inwardly extending protecting lip for the projecting portion of the sole, said slots being terminated adjacent said flange and lip and the portions of said plate opposite the ends of said slots being flexible to permit the protector to be conformed to soles of different shapes, substantially as described.

11. A protector for the tip-portion of a shoe sole comprising an expansible sole-bottom-protecting plate having a flexible sole-edge-engaging flange provided with a transversely and longitudinally flexible, inwardly projecting, edge-protecting and retaining lip arranged to leave free the adjacent portions of the upper, substantially as described.

12. A protector for the tip-portion of a shoe sole comprising an expansible sole-bottom-protecting portion having a flexible sole-edge-engaging flange provided with a transversely and longitudinally flexible lip tapering transversely from said flange and disposed yieldingly to engage and protect the projecting edge-portion of the sole adjacent the upper, substantially as described.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD C. MARSHALL.
ERNEST MARSHALL.

Witnesses:

L. H. HARRIMAN,
H. B. DAVIS.