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Rubens

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[54] **SHOE WEAR ELEMENT**

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[52] **U.S. Cl.** **36/73**

[51] **Int. Cl.** **A43b 13/22**

[58] **Field of Search** 36/73, 74, 75

[56] **References Cited**

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Primary Examiner—Patrick D. Lawson

[57] **ABSTRACT**

A shoe wear element for use on the outer surface of a heel and sole, for positioning along one edge thereof consisting of a less than completely circular thin planar element having positioned about the peripheral edge thereof a plurality of curved heel conforming wear portions together with fastening means for detachably positioning the wear element to the edge of sole and heel to permit repositioning the same element in the same location with an unworn edge in position, when the original edge portion is worn.

9 Claims, 3 Drawing Figures

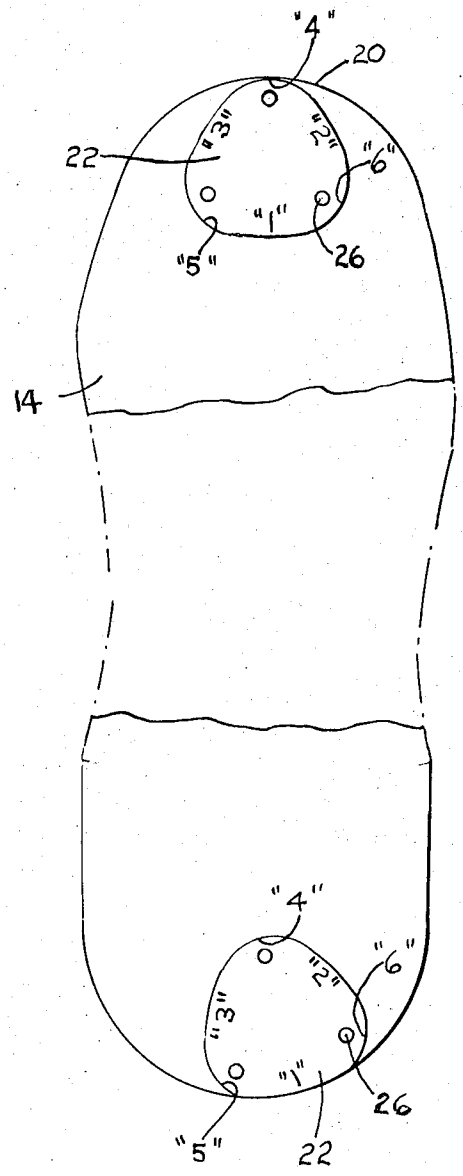


FIG. 1.

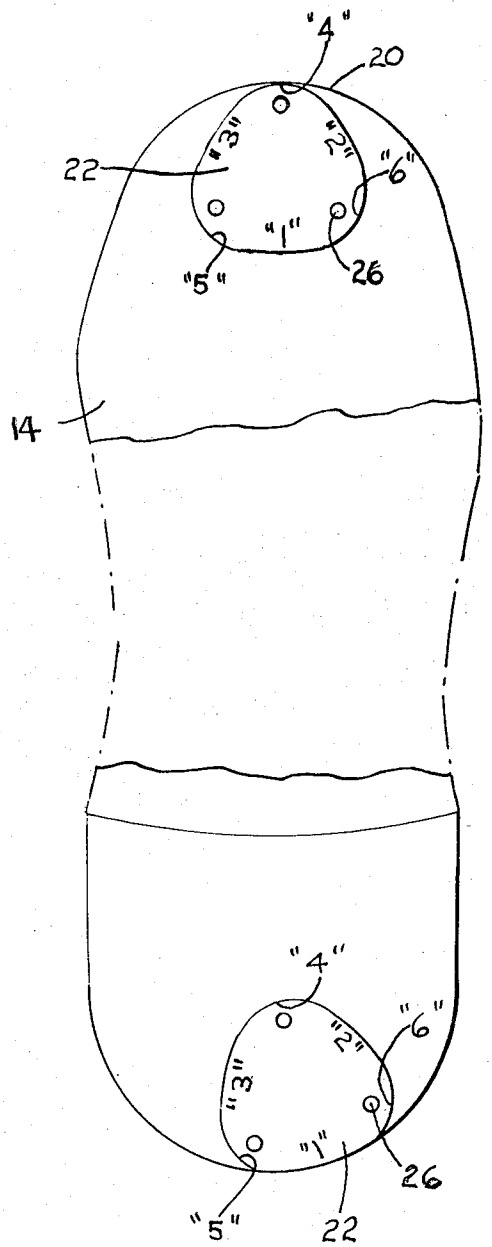
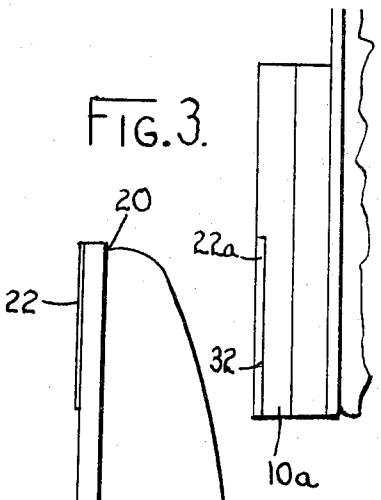


FIG. 3.



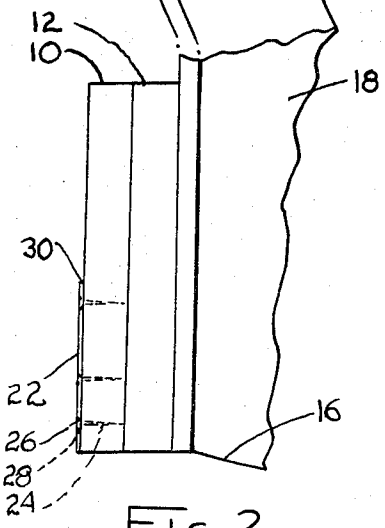


FIG. 2.

SHOE WEAR ELEMENT

This invention relates to a shoe wear element that may be added to a conventional shoe to avoid replacement of the entire heel or sole, when just one edge is worn along a small area.

The new result is accomplished by adding a novel thin planar element to the surface of a conventional heel or sole and changeably securing the same.

The object of the invention is to provide such an element with a multipositional periphery so that it can be repositioned over the wear area when the usefulness of the original position has ended. The worn area of the element may then be used as a support for maintaining the new wear absorbing area of the same element on the shoe surface.

A further object is to provide such a multipositional wear element with simple fastening means so that any shoe wearer with conventional tools present in most households can more or less instantly remove the element from a shoe and reposition the same or add an element to a shoe having a conventional heel and sole.

Still another object is to provide the wear element with a plurality of identical curves and contours corresponding substantially to the curves and contours of the heel or sole to which the element is intended to be affixed.

Other objects are to provide the multipositional wear element

a. with fasteners so arranged about the wear element so that the fasteners will fit into the existing fastener apertures each time the wear element is repositioned to avoid the necessity of providing new apertures each time element is repositioned;

b. to provide a multipositional element at the same price to the public as a single position element, thus reducing the ultimate cost per wear area to a small fraction of the single unit price;

c. to provide shock absorbing wear resisting elements that are relatively inexpensive;

d. that can be punched out from flat sheets thus reducing tooling costs;

e. that can be secured with nails or screws;

f. that can be trimmed to make the edges exactly conform if it should be desired;

g. that occupies only a small portion of the heel or sole area;

h. that will withstand wear for a reasonable period of time;

that is sufficiently thin so as to be comfortable when worn on the outer surface of the conventional heel or sole and;

j. to provide a shoe with a recessed area for the element so that it need not project above the normal surface of a conventional heel or sole.

These and other objects are achieved and new results accomplished as will be evident from a consideration of the shoe wear element described hereafter, outlined in the appended claims and illustrated in the accompanying drawing in which

FIG. 1 is a plan view of a proposed multipositional wear element mounted to a shoe;

FIG. 2 is a side view of the same and

FIG. 3 is a similar view of a modified form of wear element installation.

Referring more in detail to the drawing and especially to FIG. 2 thereof, reference numeral **10** designates a conventional heel attached to a supporting base **12,** which is mounted to a sole element **14** extending from the rear section **16** of the shoe **18,** to the front toe section **20.**

The heel has mounted along its rear edge a wear element **22** made of special material and having a special shape, both hereinafter described.

The wear element **22** may be fastened to the heel **10** by special metal fasteners **24,** the heads **26** of which are preferably located in recess **28** in the wear area of the element to avoid contact with any supporting surface when the shoes are worn.

The element illustrated in FIG. **1** is provided with multipositional wear areas designated as "**1**", "**2**", and "**3**". More or less areas may be provided as desired.

The exposed edge of position **1** of FIG. **1** has a contour which follows substantially the curved contours of the rear of the heel, to avoid either a projection of the element over the rear of the heel, or a recession behind it.

When the edge of position **1** wears to a point where the original heel surface is about to become exposed, the edge of a screw driver may be inserted between the element and the heel to separate the two members, or the screw driver may be inserted at the rear to perform the same task. The fasteners are designed to facilitate such removal.

The separated element is then repositioned so that position **2** or **3,** shown in FIG. **1,** may be located where position **1** was originally fastened, and the fasteners **24,** inserted into the same fastener openings in the heel, where it will be found that the fasteners will frictionally retain the wear element securely. In the illustrated heel element, the three wear positions may each be exhausted before the heel element is completely replaced.

The wear element can be formed with a plurality of differently shaped wear areas for protecting both the heel and toe of a conventional shoe. Thus, the wear element illustrated in FIG. **1** may in addition to positions **1, 2** and **3** be provided with inbetween positions **4, 5** and **6.** These latter positions are provided with contours which have smaller radii, sufficient for example to form a wear edge for the tip of the sole of the shoe. In FIG. **1,** the toe edge **20** is shown provided with a similar wear element as the heel position, but with say position **4** mounted to the front toe edge to protect the same. Since the wear elements are intended to possess only a small fraction of the heel or sole areas, the same shape may be used for each end of the shoe.

Thus, the heel and toe wear elements when their respective positions have worn to require replacement, may be interchanged with each other to extend the life of the wear element.

In FIG. **3** the heel **10***a* is shown provided with a recess **32** into which a wear element **22***a* may be positioned. The shape of the recess follows closely the contours of the wear element. Such a construction may have value for those who prefer a smooth wear surface for the heel. This construction may be provided in new shoes, or shoes that are worn sufficiently to replace the heel itself. A new heel may be mounted to the shoe itself, containing the recessed section into which the replaced heel element has been positioned.

The repositioning of the wear element in a heel provided with a recess is exactly the same as the reposi-

tioning of the heel element mounted to the original wear surface of the heel, as in FIG. 2.

The special shape of the wear element may be seen for example in FIG. 1. It consists of a plurality of individual wear edges, each curved to follow substantially the curved contour of the edge of the heel or sole, which it is desired to protect. The curve conformation should be sufficient to avoid any extension of the wear element beyong the edge of the heel, or to avoid any inward recession that might appear unsightly. As a practical matter, little interference with the satisfactory operation of a wear element is encountered with a small projection or recession, so long as it protects the edge of the heel sole surface from further wear. The exposed area of the wear element is thus a small fraction of the entire heel area, since the wear element of the heel or sole is designed to directly protect only the edge of the heel or sole, and only is incidentally useful for protecting other parts of the wear element.

The materials selected for use in the wear element are characterized by being abrasion and wear resistant and with some degree of resiliency. One such a material is a urethane plastic which has been found to be long wearing and noise free when used on heels and soles when walking. Another such material is known under the trademark, "Neolite". Numerous other materials having similar qualities may be found on the market. These materials may be formed into sheets and punched into the desired form or molded into the desired shapes. The materials may be formulated with fibers, or other reinforcing materials if desired.

The preferred fastener is a thin, sharp nail of length sufficient to retain the wear element in place, and thin enough to facilitate entry onto and removal from the heel or sole. Screws may also be used having the foregoing characteristics. It has been found that a length of ½ inch is adequate for the nails in use on heels. For toes a reduced length is desirable.

It should be noted that the fasteners should be arranged on the wear element in predesignated positions, to permit relocation of the fasteners in the same openings in the heel or sole, when the wear element is repositioned to obtain a fresh wearing edge. The minimum number of fasteners should be used consistent with adequate retention of the wear element.

The foregoing discloses and describes a replaceable, multipositional wear element for positioning along the wearing edge of a shoe heel or sole.

The wear element preferably has an edge contour consisting of a plurality of identical curves conforming substantially to the edge of the heel and sole it is desired to protect, to provide a trim view of the same.

The thickness of the wear element is desirably about 1/32 of an inch, although such dimensions may be varied to accommodate the needs of the wearer.

The wear element is made in planar form to fit comfortable to an existing shoe heel or sole.

The wear element, if made of a flat material, may be positioned on the wear surface of a heel or sole in upside down position, thus doubling the number of unworn edges on each wear element.

Since this invention is concerned only with protecting the vital edge of a heel or sole, the area of the wear element is only a small fraction of the existing wear area of the shoe. A large saving in the cost of material is thus insured over contentional types of wear elements.

It should be noted that by using fractions of curves, the area of the wear element can be sharply reduced over a circular form which would normally occupy a substantial area of the shoe heel requiring a large number of fasteners making more difficult the application of the wear element to the shoe and its repositioning. By position inbetween the heel curves, curves of sharply reduced radii for use on the edge of soles, the life expectancy can be doubled.

I have thus described the invention but it should be noted that the particular shape shown is only an example and that other multipositional shapes are possible and desirable and coming within the scope of the appended claims.

I claim:

1. A replaceable, multipositioned less than completely circular thin planar wear heel element for mounting to a wear position over the edge of the rear heel wear portion of a shoe, each element having a plurality of identical heel edge conforming contours about the periphery of the element so as not to project substantially over the edge of the wear portion of the shoe, and having a thickness to permit comfortable wear on the wear surface of an existing shoe, and fastening means for releasably securing said thin planar element to the wear surface of the shoe when one of said edge conforming contours are worn, whereby the thin planar element may be moved in the plane of said element and repositioned on the wear portion with another contour of said element conforming to the contour of the edge of the wear portion of the shoe for continued use.

2. A wear element as set forth in claim **1** wherein the various contours around the periphery thereof form convex curves.

3. A wear element as set forth in claim **1** wherein the various contours form distinct segments of curved surfaces.

4. A wear element as set forth in claim **1** having at least two different curved contours.

5. A wear element as set forth in claim **1** formed of sheet material.

6. A wear element as set forth in claim **1** having fastener apertures arranged to occupy identical positions when repositioned over an original position on the shoe.

7. A wear element as set forth in claim **1** having a plurality of different wear positions for accommodating either a heel or toe position on a shoe.

8. A wear element as set forth in claim **1** wherein a worn position of the wear element acts as a support for maintaining an unworn portion in the same position as the worn portion.

9. A wear element as set forth in claim **1** having edge conforming contours on both sides of said element.

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