Nov. 12, 1946. W. WOOD, JR 2,410,853

SHOE PROTECTOR

Filed Sept. 4, 1945

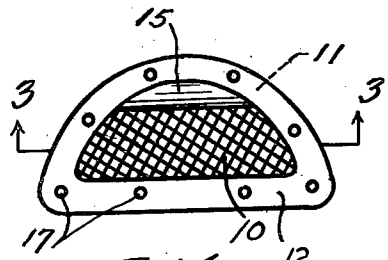


FIG. 1

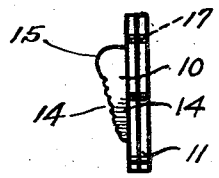


FIG. 2

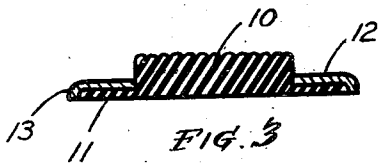


FIG. 3

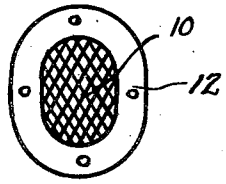


FIG. 5

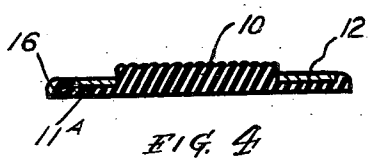


FIG. 4

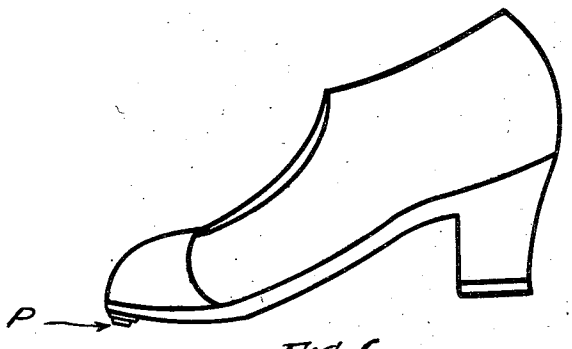


FIG. 6

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SHOE PROTECTOR

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7 Claims. (Cl. 36—73)

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My invention relates to a shoe protector.

The protector of the present invention is adapted to be applied to the underside of a shoe or boot and is intended primarily as a toe protector, that is, intended to absorb wear which otherwise would be absorbed by the sole at the toe end.

As is well known, the extreme forward end of the sole is apt to wear down before the rest of the sole, especially when one walks on unpaved roads or sidewalks, with the result that the upper becomes scuffed at the toe and the shoe prematurely looks old and shabby. This can be avoided, at least to an appreciable extent, by applying a protector to the sole at or close to the forward end of the sole, and the practice has been to apply a metal plate. While a metal plate serves the purpose of relieving the end of the sole from wear, it is noisy, slippery, hard, often noticeable, and injurious to floors, rugs and carpets.

Another expedient is to nail a piece of hard compressed composition rubber to the sole by means of large headed nails, and preferably cementing the rubber to the sole after the sole has been dried and both the sole and rubber suitably roughened. This expedient is unsatisfactory for many reasons, as shoe repair men know.

Still another expedient is to cement a thin piece of rubber, such as thin or medium weight golosh soling or other piece of more or less soft rubber. As nails cannot be used, both sole and rubber are roughened before cementing. Again this expedient is not satisfactory.

An ideal sole protector should resist wear as much as possible, but should not possess the well-known disadvantages of a metal protector and should be securely held in place. The preferred substance of which a protector, properly speaking, that is, that part of the protector which actually does useful work and may be conveniently termed tread, seems to be rubber, whether commercial rubber or synthetic rubber. Such rubber substance is yielding and springy and resists wear; it usually is not slippery, does not scratch floors and normally is inexpensive. Therefore, as the preferred substance for the tread of my toe protector, I propose using a rubber substance, and according to my invention, I provide effective and novel means of securing the tread to the sole, the whole forming a novel and entirely satisfactory sole protector. While, as just stated, I propose using a rubber substance for the tread member, other substances may be found to be satisfactory, and it is to be understood, therefore,

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that I am not limiting myself to the use of a rubber substance.

The objects of the invention are to provide an inexpensive, efficient and satisfactory sole protector, and more particularly what is termed in the trade, as a toe protector or toe plate.

Other advantages or features of my toe protector are that it is noiseless, will not damage floors, rugs or carpets, is yielding or springy, is not usually slippery, is small as a whole, is shallow or thin, is easily and securely applied, does not require skill in its application, and is readily flexible to conform to the shape or curvature of a worn or new sole to which it is applied.

In the drawing, wherein like numerals of reference indicate corresponding parts in the various figures,

Figure 1 is a plan view of the preferred form of protector;

Figure 2 is a side elevation of Figure 1;

Figure 3 is a section on line 3—3 in Figure 1;

Figure 4 is a section of a modified form;

Figure 5 shows the form which the protector may assume when intended to cover a worn or worn out part of the sole;

Figure 6 illustrates application of the sole protector shown as P, when serving as a toe protector.

Referring now to Figures 1 to 3 of the drawing, which show the preferred form of my toe protector, 10 is the tread member. Preferably, the tread is made of some rubber substance, which may be similar to the rubber substance usually used in rubber heels, or of a softer, more springy nature. The tread may assume, in plan, the shape or form shown in Figure 1. Extending around the tread 10 is a skirt or marginal portion 11 which is considerably thinner than the tread. Where the tread is molded, the skirt may conveniently be made integral with the tread, that is both tread and skirt molded as a unit. Preferably, as shown in Figure 2, the tread has its exposed or effective face slanted as at 14, from rear to front, and rounded as at 15.

Adapted to bear on the skirt 11, and preferably secured thereto, as by vulcanizing or cementing for example, is a thin nailing member 12, this member preferably generally assuming the shape or form of the skirt but preferably extending slightly beyond and bending over the edge as at 13.

A very satisfactory and efficient nailing member may be made of what is sold on the market as vulcanized fibre board, which is a substance made of multiplies of paper sheets vulcanized to-

gether. The best results are obtained by splitting such a fibre board and vulcanizing or cementing the flesh or raw face of the so split board to the rubber skirt 11.

As a second choice to fibre board, a suitable plastic may be used. Experiments have shown that a plastic such as vinyl acetate may be used satisfactorily, this plastic being capable of being adhered to rubber of the kind commonly used in heel material.

Other substances may also be found suitable. The important consideration is that the nailing strip or member must be non-metallic, and relatively stiff though readily flexible to conform to the surface of the sole, and must be capable of substantially resisting shear by the shanks of the nails when the device is in use.

The protector, as a unit as described above, is applied to the sole by means of suitable nails (not shown) driven into the sole through the nailing member 12. As the nailing member, if made of fibre board or of the plastic described above, is relatively stiff, though readily flexible, if thin, the skirt will be well applied against the sole and the protector will not shift on the sole, and the nailing member will not be easily sheared by the nail shanks, while it permits of the nails being easily hammered through. At the same time, the whole protector will adapt itself to the shape or curvature of the sole.

It is possible that the tread member and skirt might be satisfactorily made of rubber-impregnated fabric, that is, built up of superposed rubber-impregnated layers of fabric, vulcanized or otherwise adhered together.

Instead of molding the tread and skirt as a unit, it may be found possible and satisfactory to mold the same separately and cement or vulcanize the same together.

It will be obvious that the protector may assume a shape as seen in plan in Figure 5. This form would be suitable to cover a worn-out portion of the sole, pending more permanent and usual repairs. The ability of the sole protector to serve as a temporary means of covering up a badly worn part of a sole is particularly valuable at the present time, when shortage of labor in the shoe repair trade—as in any other trade—causes repair jobs to accumulate. The protector in this form, as well as the other, can be applied easily and quickly, even by persons not of the trade.

As a modified form, Figure 4 shows a sole protector having the edge of the skirt 11A molded with an upturned flange 16. The nailing member 12 fits between the tread proper and the flange.

Obviously, the sole protector so far described, or slightly modified, might serve as a heel protector, although, as previously stated, it is primarily meant to serve as a toe protector.

Other modifications are susceptible of being devised and the forms shown herein are merely illustrative of the preferred form or forms thus far attempted. Therefore, I claim all such modifications as fall within the spirit and scope of the invention as defined in the claims to follow:

What I claim is:

1. A device to be applied to the underside of a shoe to afford protection against wear, comprising a resilient wear-absorbing tread member including a relatively thin marginal portion, and a non-metallic, relatively stiff though readily flexible nailing member adapted to conform itself to the surface of the shoe, adhered to the upper face of said marginal portion, the upper face of said nailing member lying in a plane spaced from that of the wear absorbing face of said tread member whereby said nailing member clears the ground, and being of a material capable of substantially resisting shear by the shanks of the nails when the device is in use.

2. A device to be applied to the underside of a shoe to afford protection against wear, comprising a wear absorbing tread member including a relatively thin resilient marginal portion, and a non-metallic, relatively stiff though readily flexible nailing member adapted to conform itself to the surface of the shoe, apertured to receive said tread portion and adhered to said marginal portion, the upper face of said nailing member lying in a plane spaced from the wear absorbing face of said tread member whereby said nailing member clears the ground, and being of a material capable of substantially resisting shear by the shanks of the nails when the device is in use.

3. A device to be applied to the underside of a shoe to afford protection against wear, comprising a wear-absorbing member including a marginal portion, and a nailing member of fibre board bearing upon and adhered to said portion for fastening the device to the shoe, said nailing member lying in a plane spaced from the plane of the wear-absorbing face of said first-named member.

4. A device to be applied to the underside of a shoe to afford protection against wear, comprising a member of resilient material having a central portion forming a tread adapted to engage the ground and a marginal portion, and a nailing member of fibre board apertured to receive said central portion and bearing upon said marginal portion, said nailing member lying in a plane spaced from the plane of the wear-absorbing face of said central portion.

5. A device to be fastened to the underside of a shoe to afford protection against wear, comprising a member of resilient material having a central portion forming a tread adapted to engage the ground and a marginal portion, and a readily flexible, relatively stiff nailing member apertured to receive said central portion and bearing upon said marginal portion, said nailing member having its outer edge turned down to extend toward the shoe immediately beyond the outer edge of said marginal portion, said nailing member being of a material capable of substantially resisting shear by the fastening means used for securing the device to the shoe.

6. A device to be fastened to the underside of a shoe to afford protection against wear, comprising a member of resilient material having a central portion forming a tread adapted to engage the ground and a marginal portion terminating in a raised portion defining an annular recess between said central portion and said raised portion, and a nailing member adapted to engage in said recess, said nailing member being of a material capable of substantially resisting shear by the fastening means used for securing the device to the shoe.

7. A device to be fastened to the underside of a shoe to afford protection against wear, comprising a resilient member forming a tread adapted to engage the ground, said member being formed to provide a marginal portion of lesser thickness, and a readily flexible, relatively stiff, non-metallic annular nailing member having a face adapted to overlie at least a portion of said marginal portion.

WILLIAM WOOD, JR.