

Dec. 8, 1936.

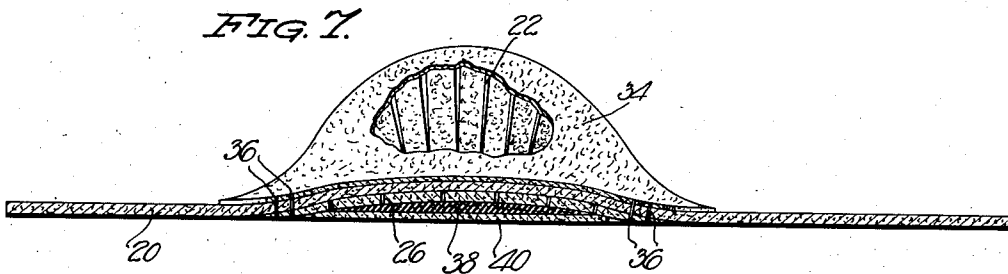
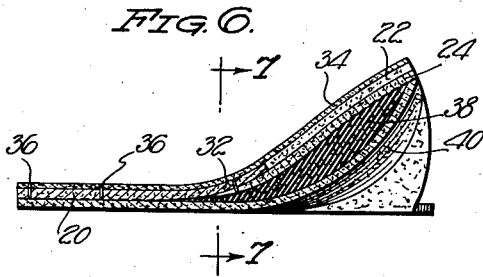
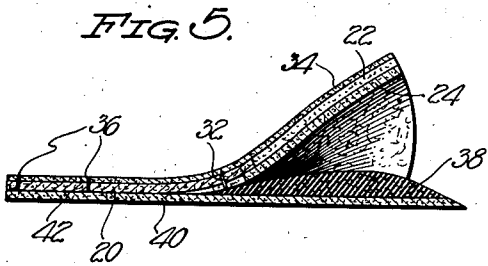
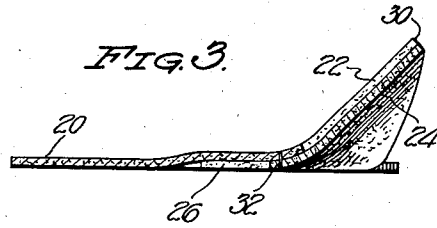
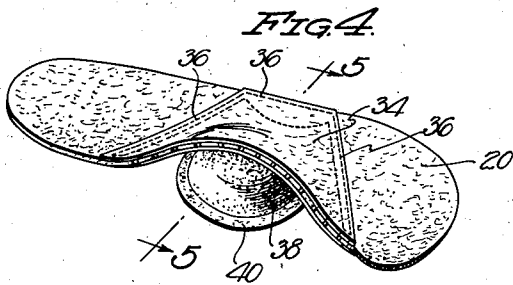
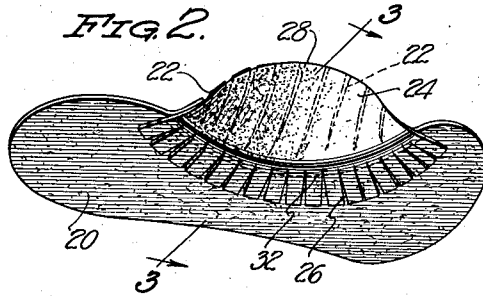
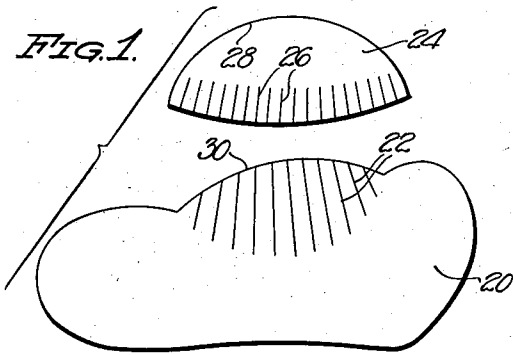
J. R. RIGANDI

2,063,625

ARCH SUPPORTER

Filed Dec. 11, 1935

2 Sheets-Sheet 1



JOSEPH R. RIGANDI.  
INVENTOR.

WITNESS:

*E. Newton Lewis*

BY *Ely Patterson*  
ATTORNEYS

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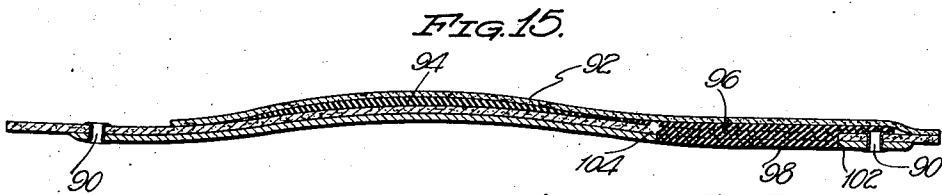
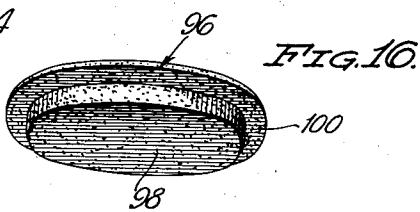
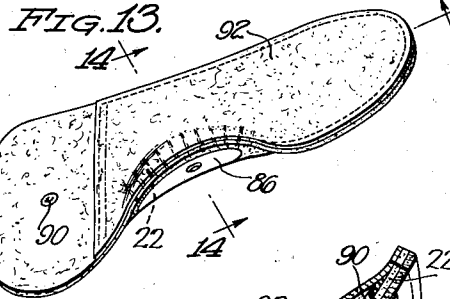
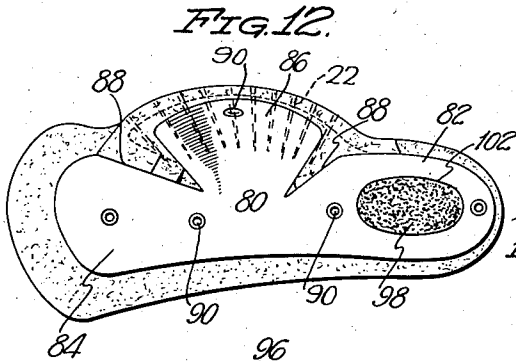
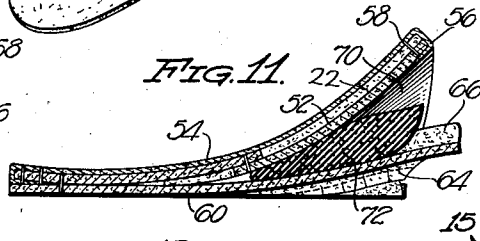
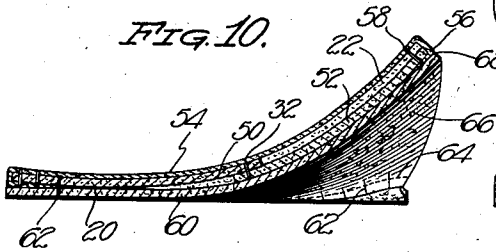
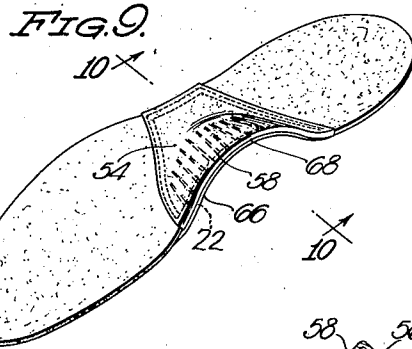
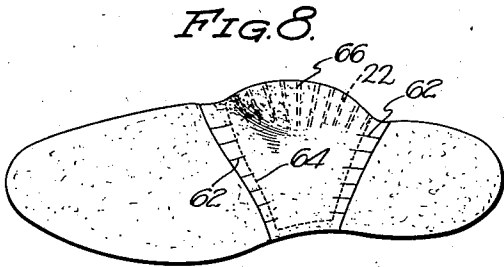
J. R. RIGANDI

2,063,625

ARCH SUPPORTER

Filed Dec. 11, 1935

2 Sheets-Sheet 2



JOSEPH R. RIGANDI.  
INVENTOR.

BY *Ely Patterson.*  
ATTORNEYS

WITNESS:

*E. H. Lusk*

# UNITED STATES PATENT OFFICE

2,063,625

## ARCH SUPPORTER

Joseph Ruig Rigandi, Westerleigh, N. Y.

Application December 11, 1935, Serial No. 53,862

17 Claims. (Cl. 36—71)

This invention relates to new and useful improvements in arch supporters for shoes.

It is the primary object of the present invention to provide a new and novel construction of arch supporter which may be constructed as a separate element adapted for placement in a finished shoe, or which may be built directly in the shoe at its time of manufacture.

With the above and other objects in view which will appear as the nature of the invention is better understood, reference will be had to the accompanying drawings, in which:

Figure 1 is a distended perspective view of a portion of the arch supporter,

Figure 2 is a bottom perspective view showing the arch supporter in a partially assembled state,

Figure 3 is a transverse sectional view taken substantially on the line 3—3 of Figure 2,

Figure 4 is a perspective view illustrating the arch supporter in a further state of completion,

Figure 5 is a transverse sectional view taken substantially on the line 5—5 of Figure 4,

Figure 6 is a transverse sectional view illustrating the arch supporter in a still further advanced stage of completion,

Figure 7 is a longitudinal sectional view taken substantially on the line 7—7 of Figure 6,

Figure 8 is a bottom plan view of the arch supporter,

Figure 9 is a top perspective plan view of the arch supporter,

Figure 10 is a transverse sectional view taken substantially on the line 10—10 of Figure 9,

Figure 11 is a transverse sectional view illustrating the construction in its finished form,

Figure 12 is a bottom plan view illustrating a modified form of the invention,

Figure 13 is a top perspective view of that form of the invention illustrated in Figure 12,

Figure 14 is a transverse sectional view taken substantially on the line 14—14 of Figure 13,

Figure 15 is a longitudinal sectional view taken substantially on the line 15—15 of Figure 13, and;

Figure 16 is a detail perspective view.

Referring specifically to the drawings, and more particularly to Figures 8 to 11, thereof, inclusive, the arch supporter consists of a main body portion 20 formed preferably from a relatively stiff or semi-flexible leather. The main body portion is of the general shape illustrated in Figure 1, and extending inwardly from one of its side edges it has a plurality of slits or cuts 22. The reference numeral 24 designates a reinforcing member which is of the general shape shown and has projecting inwardly of its body portion a plu-

rality of slits or cuts 26. The cuts or slits 22 of the main body portion 20 and the cuts or slits 26 of the reinforcing member 24 permit of distortion of these elements to provide an upstanding area. The reinforcing member 24 is secured to the main body portion 20 with its curved edge 28 substantially conforming to the curved edge 30 of the main body portion and is preferably secured thereto by cement or otherwise throughout the entire area of the reinforcing member 24. The parts in this position maintain their distorted or upstanding position by reason of the setting of the cement. The two elements may also be secured together if desired by lines of stitching 32. After the device has been thus far assembled, a finishing element 34, preferably in the form of a relatively thin piece of leather, is secured over the upper surface of the distorted portion of the main body portion 20, as best illustrated in Figures 4 and 5. This finishing element is secured to the main portion 20 by lines of stitching 36.

The reference numeral 38 designates a resilient pad which may be formed of any suitable material but which is preferably sponge rubber. This pad 38 is carried by a member 40 of leather and this member 40 is preferably cemented as at 42 in Figure 5 to the under portion of the reinforcing element 24 in such a manner that the pad itself will be received in the upwardly distorted portion of the main body portion 20, to which it may be secured by cementing, as illustrated in Figure 6. This construction provides a resilient pad directly beneath the upwardly distorted portion of the arch supporter. In Figures 8 to 11, inclusive, this construction is slightly modified. In this form of the invention the main body portion is designated 50, the reinforcing element 52 and the finishing element is designated 54. In this form the finishing element is turned around the edge of the reinforcing elements at 56 and secured in such position by a line of stitching 58. In this form, however, there is a separate element 60 which is of relatively light material and has projected inwardly from opposite side edges a plurality of slits or cuts 62 which permit of its being shaped to conform in shape to that of the upwardly distorted area of the main body portion of the reinforcing element. This member is also secured to the structure by a line of stitching 64 which, however, does not extend around the upper curved edge 66 thereof. This construction leaves an opening at 68 which provides a pocket 70 into which may be placed a resilient pad 72 if desired. In that form of the invention illustrated in

Figures 12 to 15, inclusive, the construction is substantially the same as in Figures 1 to 7, inclusive. However, in the form illustrated in Figure 12 I employ a rigid member 80 having end wings 82 and 84 and a center wing 86, these wings being separated from each other by cut out portions 88. This member is preferably formed from metal and is secured to the main body portion of the reinforcing element preferably by rivets 90. Interposed between the finishing element 92 and the main body portion there may be a pad 94 preferably of sponge rubber and in this form I also employ a pad such as 96 comprising a main body portion 98 having a flange 100, the main body portion being adapted to project through an opening 102 formed in the wing 82. The main body portion will also be cut out as at 104 to permit the body of the pad passing therethrough, as illustrated in Figure 15. These elements, as will be noted from Figure 15, are mounted immediately beneath the finishing element 92 which covers the major portion of the arch supporter, the metal reinforcing element 80, however, being preferably left exposed on the underneath face thereof.

From the foregoing it will be readily apparent that the present invention provides a new and improved arch supporter which is not only arched or curved to conform to the longitudinal arch of the foot, but which provides a pad for resiliently supporting the lower protuberance of the os calcis. Furthermore, the invention provides an arch supporter which will stand up under long periods of use and which may be embodied as an element separate from a shoe or as a permanent built in portion of a shoe when it is manufactured.

While the invention has been disclosed in its preferred forms it is to be understood that it is not to be limited to the specific construction illustrated and that it may be practiced in other forms without departing from the spirit thereof.

Having thus described the invention, what is claimed as new, is:

1. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, and a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit it to conform to the distorted area of the body portion.

2. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, and a slitted reinforcing member adapted to be received beneath said upstanding portion, said reinforcing member being positioned with its slitted edge disposed oppositely to the slitted edge of the main body portion.

3. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, and a slitted reinforcing member adapted to be received beneath said upstanding portion, said reinforcing member being positioned with its slotted edge disposed inward of the main body portion and secured to said body portion throughout its entire area.

4. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, and a slitted reinforcing member adapted to be received beneath said upstanding portion, said reinforcing member being cemented to the main body portion throughout its entire area.

5. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member adapted to be received beneath said upstanding portion, said reinforcing member being cemented to the main body portion throughout its entire area, and a finishing element extending over the entire area of the distorted area of the main body portion.

6. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, and a pad secured to the main body portion on the under side thereof.

7. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, a pad adapted to be positioned beneath the upwardly distorted area of the body portion, and means for attaching said pad in position.

8. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, a pad adapted to be positioned beneath the upwardly distorted area of the body portion, and means for attaching said pad in position, said last mentioned means comprising a separate element secured to the under face of the body portion.

9. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, a pad adapted to be positioned beneath the upwardly distorted area of the body portion, and means for attaching said pad in position, said means comprising a separate element to which the pad is attached, said element and pad being attached to the main body portion by cementing throughout the entire area of said element and said pad.

10. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, and a separate element attached to the main body portion on the under side thereof, said separate element having a portion of its edge unattached to provide a pad receiving pocket immediately beneath the upwardly distorted area of the main body portion.

11. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the body portion, a separate element attached to the main body portion on the under side thereof, said separate element having a portion of its edge unattached to provide a pad receiving pocket immediately beneath the upwardly distorted area of the main body portion, and a finishing element on the upper surface of the main body portion and secured thereto by stitching, said finishing element having its edge adjacent said pocket in-turned with relation thereto.

12. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the main body portion, a finishing element secured to the upper face of the main body portion, and a resilient supporting pad mounted between the finishing element and the main body portion.

13. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the main body portion, a finishing element secured to the upper face of the main body portion, a resilient supporting pad mounted between the finishing element and the main body portion, and a rigid member conforming in shape to the under face of the arch supporter and secured thereto upon the under face thereof.

14. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the main body portion, a finishing element secured to the upper face of the main body portion, a resilient supporting pad mounted between the finishing element and the main body portion, and a rigid member conforming in shape to the under face of the arch supporter and secured thereto upon the under face thereof, said rigid member being formed from sheet metal and comprising a main body portion having winged portions extending therefrom.

15. An arch supporter for shoes comprising a main body portion, said body portion having a plurality of slits extending inwardly from one edge thereof to permit of distortion of the main body portion to provide therein an upstanding area, a slitted reinforcing member secured to said body portion and arranged with its slits opposed to the slits of the main body portion to permit of its conformation to the distorted area of the main body portion, a finishing element secured to the upper face of the main body portion, a resilient supporting pad mounted between the finishing element and the main body portion, and a rigid member conforming in shape to the under face of the arch supporter and secured thereto upon the under face thereof, said rigid member being formed from sheet metal and comprising a main body portion having winged portions extending therefrom, one of the wings of which is provided with an opening and a resilient pad mounted between the rigid member and the arch supporter and having a portion extending through the opening in the wing.

16. An arch supporter for shoes comprising a main body portion having an arched portion intermediate of its ends, a finishing element secured to the upper face of the main body portion, a rigid member conforming in shape to the under face of the arch supporter and secured thereto upon the under face thereof, said rigid member being formed from sheet metal and comprising a main body portion having wing portions extending therefrom, one of the wings of which is provided with an opening, and a resilient pad mounted between the rigid member and the arch supporter and having a portion extending through the opening in the wing.

17. An arch supporter for shoes comprising a rigid member having a main body portion, wing members extending from the body portion, an opening formed in one of the wings, and a resilient pad mounted in the said opening in one of the wings.

JOSEPH RUIG RIGANDI.