

Nov. 18, 1924.

1,516,248

B. ROSS

ARCH SUPPORT

Filed June 19, 1922

Fig. 1,

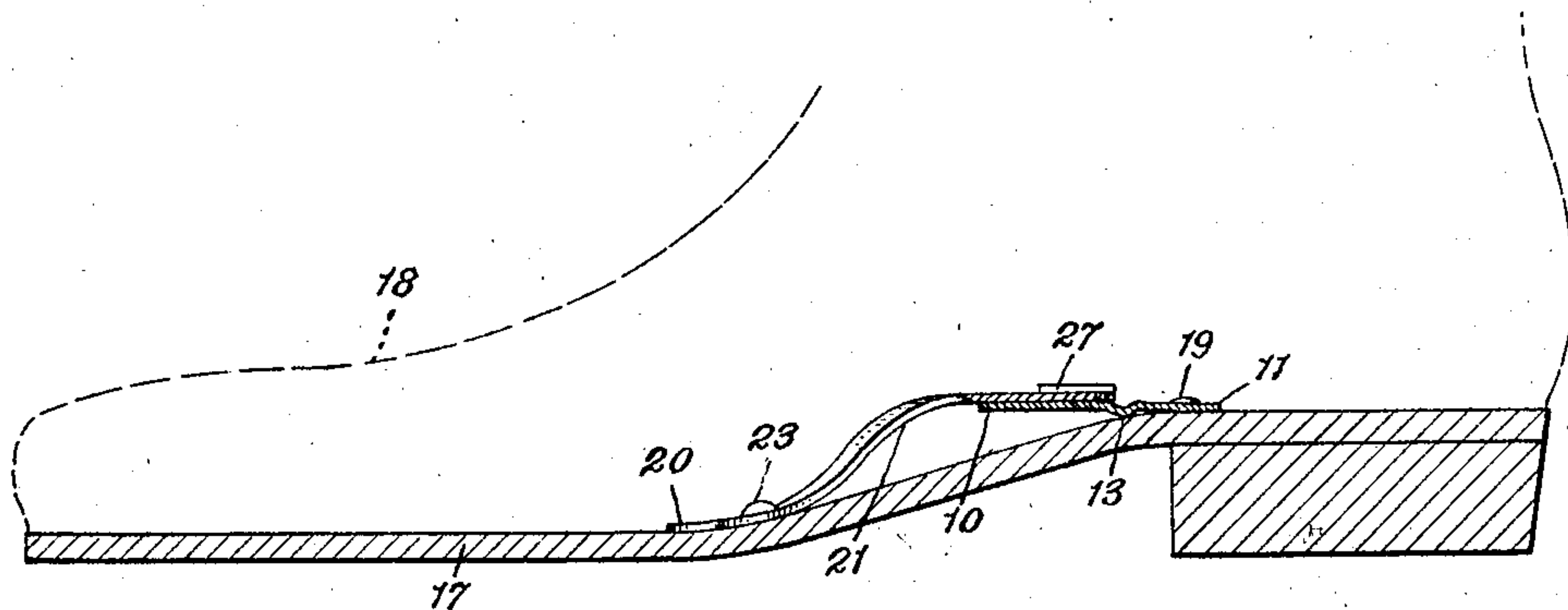
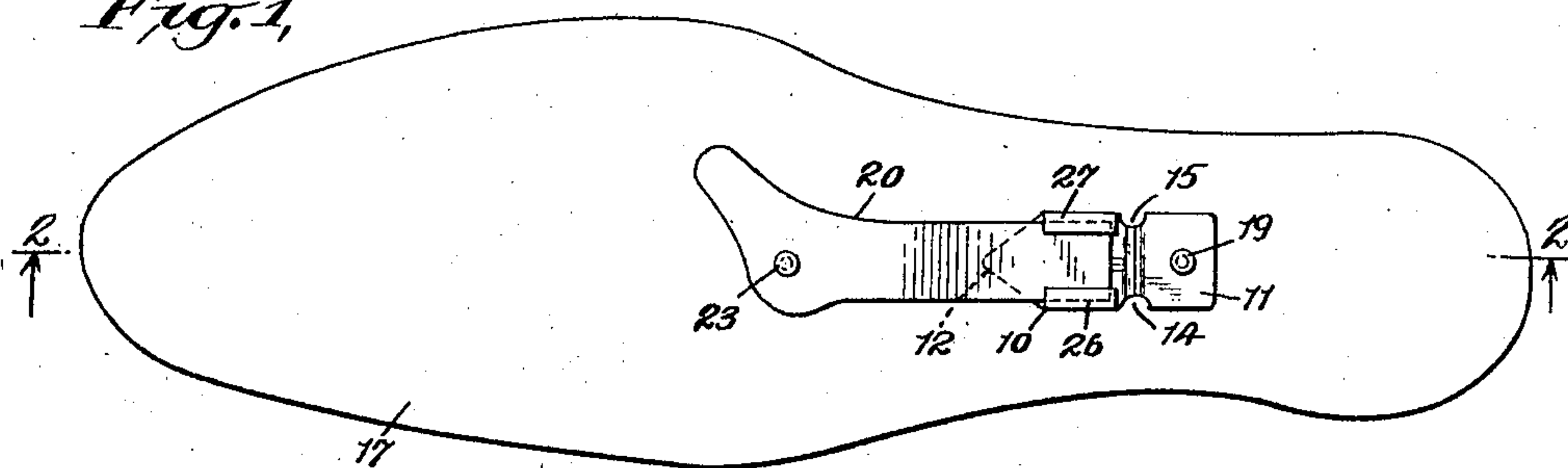


Fig. 2,

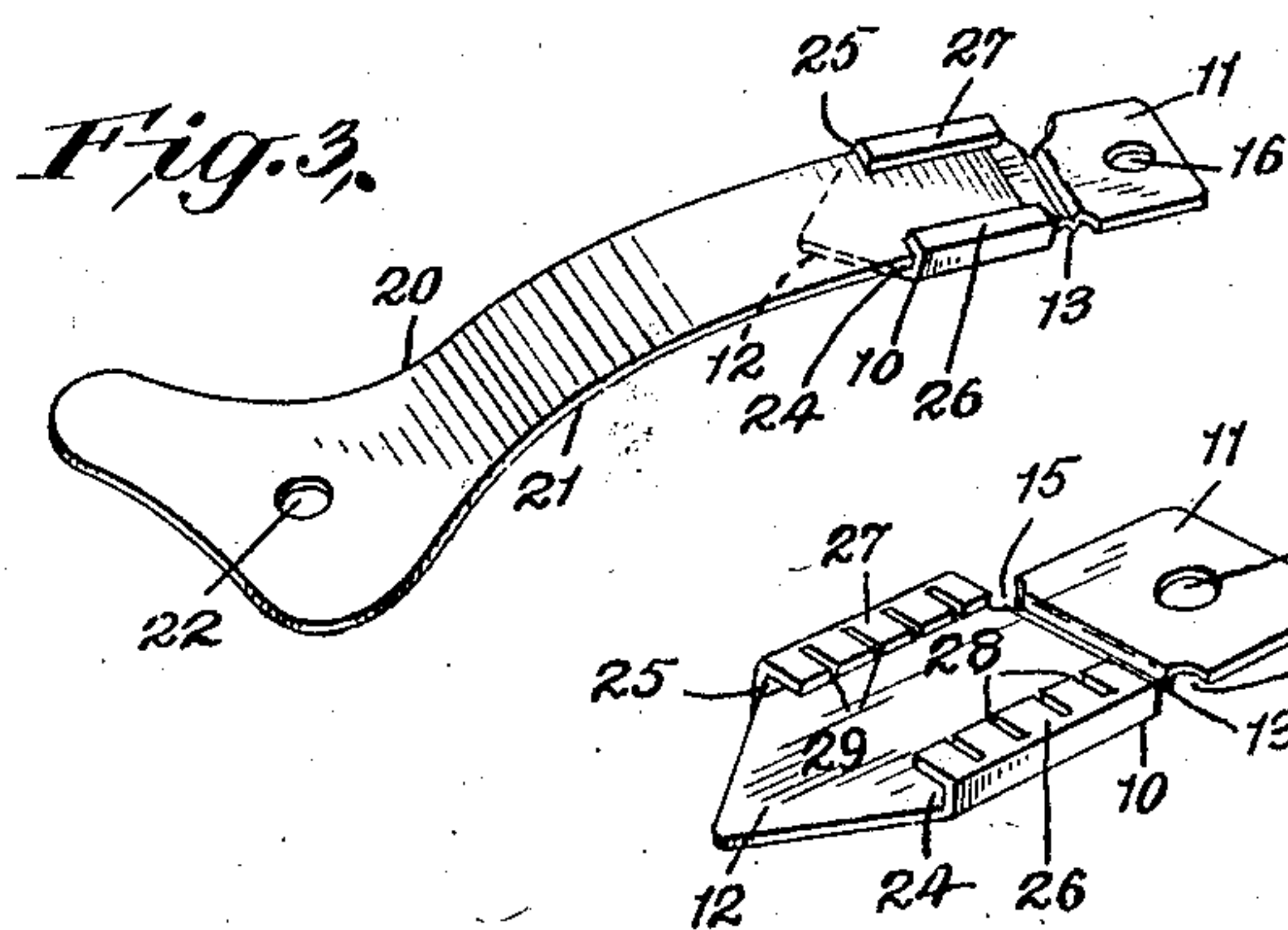


Fig. 3,

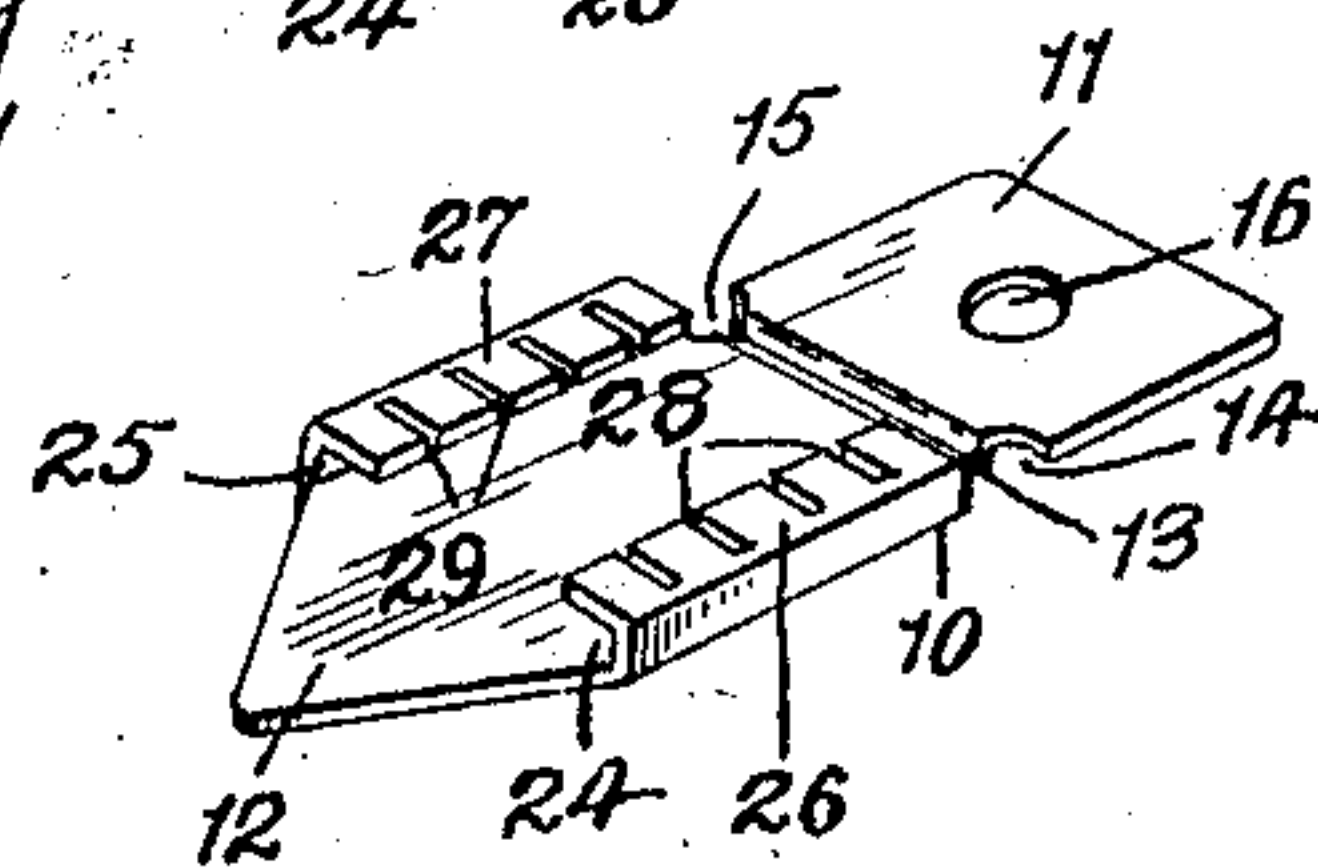


Fig. 4,

INVENTOR
Benjamin Ross
BY
W. T. Cisswell
ATTORNEY

UNITED STATES PATENT OFFICE.

BENJAMIN ROSS, OF BROOKLYN, NEW YORK.

ARCH SUPPORT.

Application filed June 19, 1922. Serial No. 569,274.

To all whom it may concern:

Be it known that I, BENJAMIN ROSS, a citizen of the United States, and a resident of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in an Arch Support, of which the following is a full, clear, and exact specification.

This invention relates to a class of devices adapted to be used in footwear.

My invention has for its object primarily to provide a shank piece adapted to be used interiorly of a shoe, boot or other footwear for affording ease and comfort to the wearer of the shoe by cushioning the arch of the foot of the person in a manner whereby the arch bone will be retained in its normal position. This is accomplished mainly by providing a surface element adapted to be secured on the heel portion of the sole of a shoe, and slidably bearing upon this element is one end of a curved yielding strip adapted to be disposed in spaced spanning relation above the shank part of the sole. The other end of the strip is adapted to be immovably fastened to the sole so that the strip when under pressure of the weight of the wearer of the shoe will yield upwardly and downwardly for cushioning the arch of the foot of the person for preventing the arch bone of the foot from tending to be displaced from its normal position.

Another object of the invention is to provide on the surface element spaced clips or grooved members for holding the strip to the surface element whereby the strip during its upward and downward movement may slide on the element longitudinally of the shoe without tending to shift laterally; and a further object of the invention is to provide a shank piece for shoes of a simple, efficient and durable construction which may be made in any appropriate size and shape.

With these and other objects in view, the invention will be hereinafter more fully described with reference to the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, and will then be pointed out in the claim at the end of the description.

In the drawing, Figure 1 is a plan view of the sole of a shoe with one form of shank

piece embodying my invention applied thereto.

Fig. 2 is a sectional view, partly in elevation, taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged perspective view of the device, and

Fig. 4 is an enlarged perspective view of the surface element used in the shank piece.

The device or shank piece has a surface element 10 which may be of any suitable shape and size, though this element is preferably in the form of a flat substantially rectangular plate having an approximately square flat extension or base member 11 on one of its ends, and projecting from the other end of the member may be a tapered part, as 12. The part of the surface element 10 at its intersection with the base member 11 may be struck downwardly in the fashion of a groove to provide on the underside of the element a transverse rib 13, and at the ends of this rib the side edges of the element may be notched, as at 14 and 15. The surface element is preferably made of stiff spring metal, and in the base member 11 may be one or more holes 16. When the device is applied on the upper face of the sole, as 17, interiorly of a shoe, as 18, the surface element 10 is arranged with the rib 13 resting upon the sole, and the base member 11 is secured to the heel portion of the sole of the shoe by a screw or nail, as 19, being driven through the hole 18 of the base member into the sole. The surface element is also arranged on the sole so that it is spaced above part of the shank portion of the sole with its tapered end 12 extending toward the toe of the shoe, and the element may then slightly spring upwardly and downwardly to and from the sole when under pressure.

A strip or plate, as 20, of spring sheet metal is provided so that one of its ends slidably bears upon the top face of the surface element 10 and upon its tapered end part 12, and this strip is downwardly curved, as at 21, as well as being of a size so that its second end is in contact with the foot part proper of the sole 17, while its curved portion 21 spans in spaced relation the shank of the sole. In the second end of the yielding strip 20 may be a hole 22, and this second end of the strip is immovably fastened by a screw or nail 23 being driven through the hole 22 into the sole. When under pres-

sure of the wearer of the shoe the strip will yieldingly spring upwardly and downwardly with the longitudinal slidable movement of the free end of the strip on the surface element 10 for serving to retain the arch bone of the foot of the wearer in its normal position.

10 In order to movably retain the yielding strip 20 against accidental displacement with the surface element 10, on this element are two spaced grooves 24 and 25 provided by forming on the side edges of the element two inverted substantially L-shaped flanges or clips 26 and 27 which overlap the
15 edges of the end portion of the surface element that slidably bears upon the element. These flanges or clips are of sizes as well as being relatively disposed so that the strip will move freely in the grooves 24 and 25,
20 and the portions of the flange which overlap the strip may be slitted transversely at spaced intervals, as at 28 and 29, Fig. 4 if desired for serving to prevent tendency of the strip during its spring action to being wedged in
25 the grooves 24 and 25.

30 In the foregoing description, I have embodied the preferred form of my invention, but I do not wish to be understood as limiting myself thereto as I am aware that modifications may be made therein without departing from the principle or sacrificing any of the advantages of this invention, there-

fore, I reserve to myself the right to make such changes as fairly fall within the scope thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

An arch support, comprising a substantially rectangular flat surface element with a base member protruding from one of its ends for being secured on the heel portion of the sole of the shoe so that the other end of the element will extend toward the shank part of the sole, a rib on the underside of the element at its juncture with the base member for contacting with the sole to space the element from the sole, a downwardly curved yielding strip having one of its ends slidably bearing upon the surface element so that the strip will span in spaced relation the shank part of the sole and the other end of the strip adapted to be immovably fastened to the sole, and inverted substantially L-shaped flanges protruding upward from the side edges of the surface element in overlapping arrangement on the strip.

This specification signed and witnessed this 17' day of June, A. D. 1922.

BENJAMIN ROSS.

Witnesses:

D. MAGUIRE,

FREDERICK CRYER.