

Dec. 22, 1931.

F. ROMERO

1,837,488

CUSHION SUPPORT FOR THE FOOT

Filed May 20, 1930

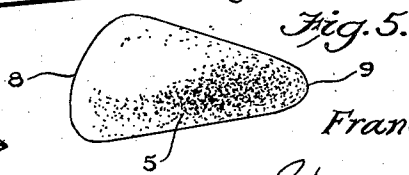
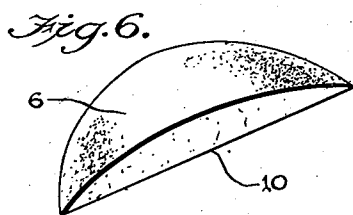
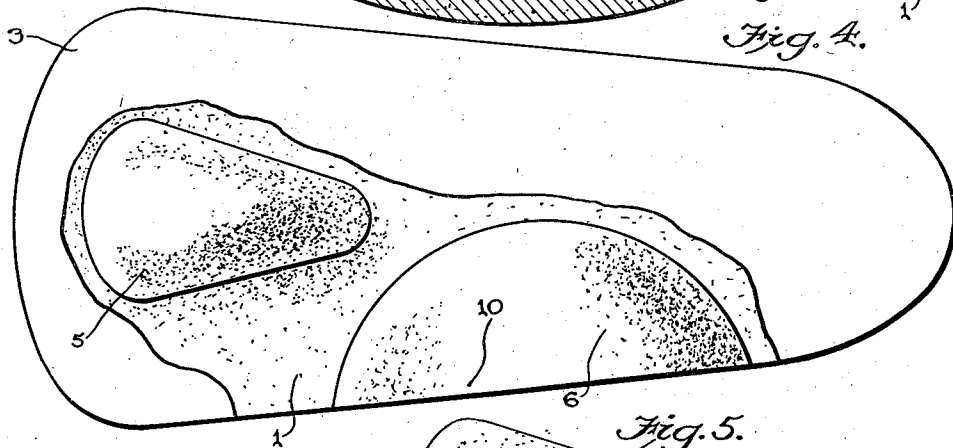
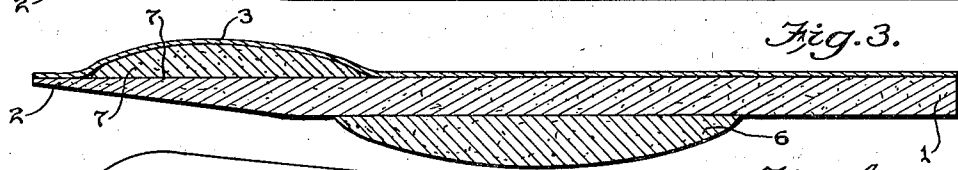
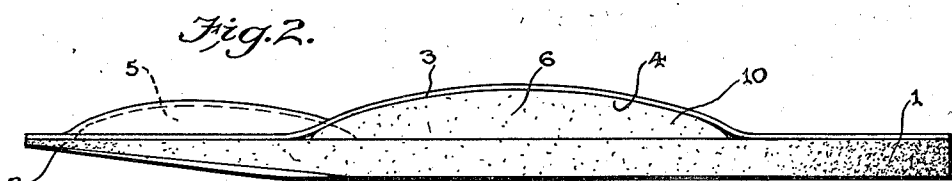
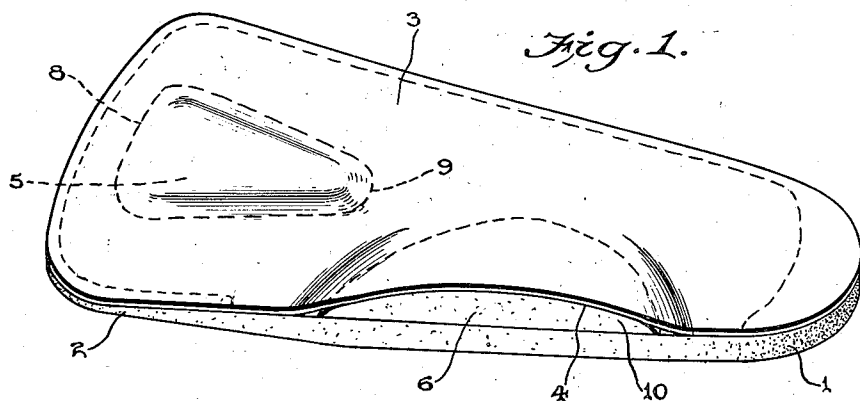
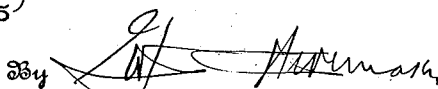


Fig. 5.

Inventor
Francis Romero,

By 

Attorney

UNITED STATES PATENT OFFICE

FRANCIS ROMERO, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO THE
VELVETAIRE CO., OF BALTIMORE, MARYLAND

CUSHION SUPPORT FOR THE FOOT

Application filed May 20, 1930. Serial No. 454,024.

The invention relates to a cushion support for the foot.

The object of the present invention is to provide a simple, practical and efficient cushion support for the foot, of comparatively inexpensive construction designed to be arranged in a shoe and adapted to provide a combined heel cushion, longitudinal arch support, and a metatarsal support, and capable of operating as a shock absorber for the entire nervous system and of acting as an insulator against heat, cold and dampness.

A further object of the invention is to provide a cushion support for the foot in which the metatarsal support and the longitudinal arch support may be readily placed in position within the cushion support and removed therefrom when desired, and in which also the longitudinal arch support may be readily transferred from the upper to the lower face of the soft sponge rubber insole member to render the bulge of the arch support and the valley between the same and the metatarsal support less pronounced, and the bulge more yieldable and softer when desired.

Another object of the invention is to provide a metatarsal support adapted to be arranged directly behind the ball of the foot and capable of supporting the metatarsal bones and of exercising the muscles of the fore part of the foot and at the same time relieving the pressure upon the ball of the foot.

A further object of the invention is to provide a longitudinal arch support adapted to be arranged at the inner side of the foot and capable of supporting the inner longitudinal arch thereof and of exercising and strengthening the muscles.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and set forth in the claim hereto appended, it being understood that various changes in the form, proportion, and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

In the drawings:

Figure 1 is a perspective view of a cushion support constructed in accordance with this invention, looking at the inner side edge of the support.

Fig. 2 is a side elevation of the support.

Fig. 3 is a central longitudinal sectional view taken substantially centrally of the cushion support, the longitudinal arch support being shown in section.

Fig. 4 is a plan view, the covering being broken away to illustrate the arrangement of the metatarsal support and the longitudinal arch support.

Fig. 5 is a detail perspective view of the metatarsal support.

Fig. 6 is a similar view of the longitudinal arch support.

In the accompanying drawings, in which is illustrated the preferred embodiment of the invention, the cushion support, which is designed to be arranged within a shoe and to fit snugly against the same at the heel thereof, conforms generally to the configuration of the shoe, as clearly illustrated in Figs. 1 and 4 of the drawings, and comprises in its construction a bottom pad 1 of soft sponge rubber constituting a cushioning inner sole and adapted to cushion the heel of the wearer. The front portion 2 of the bottom cushioning pad gradually increases in width towards the front end to follow the outline of the side walls or upper of the shoe, and it tapers in thickness as clearly shown in Figs. 1 and 2, and is designed to extend to approximately the ball of the foot, but may extend entirely beneath the same and to the toe of the shoe if desired.

The bottom pad is provided at the upper face with a covering 3 of thin soft leather or other suitable flexible material which is secured by an adhesive or other suitable means at its front, rear and outer side edges to the upper face of the bottom pad, the inner side edge 4 of the covering 3 being unattached to afford an entrance opening to the space between the covering and the bottom pad to permit a front metatarsal support 5 and a longitudinal arch support 6 to be readily inserted between the covering

and the bottom pad and to be removed therefrom when desired. The metatarsal support, which is constructed of soft rubber, is approximately triangular in plan view and tapers rearwardly. It is provided with a flat lower face 7 to fit upon the flat upper surface of the bottom pad, and it has a convex upper face formed by tapering the metatarsal support both longitudinally and transversely. The front and rear edges 8 and 9 at the ends of the metatarsal support are curved, and the side edges are straight, as clearly illustrated in Fig. 3 of the drawings.

The metatarsal support is inserted between the covering and the bottom pad at the front end of the space between the pad and the said covering in a central position, and it is arranged immediately behind the ball of the foot. The metatarsal pad is composed of soft sponge rubber, and will operate to exercise the muscles of the front part of the foot, and will relieve the pressure upon the ball of the foot and when desired it may be readily removed from the bottom pad.

The longitudinal arch support, which is arranged between the bottom pad and the covering, is constructed of soft sponge rubber and is substantially segmental in plan view, and has a rounded or convex upper face, and is tapered at the ends as shown. The outer side edge 10 is straight and the inner side edge and the end edges are defined by a curve which is in the form of an arc connecting the straight outer side edge. The flat face of the longitudinal arch support is adapted to fit against the flat face of the bottom pad and the longitudinal arch support may be arranged at either the upper or lower face of the bottom pad. When the longitudinal arch support is placed beneath the bottom pad with its flat face against the flat face of the bottom pad, a longitudinal arch supporting surface of a more yielding or softer character is provided for the reason that the bulge incident to the provision of the arch support is less pronounced than when the arch support is arranged at the upper face of the bottom pad. Also the valley or space between the arch support insert and the metatarsal support insert is less pronounced. The two inserts may be made of the same material as the bottom pad with the same degree of softness, but the degree of hardness or softness of the inserts may, of course, be varied, as will be readily understood.

In order to prevent the cushion support from slipping forward in a shoe when putting the same on the foot, the cushion support may be conveniently held in position by a shoe horn, but an adhesive may be employed if desired for attaching the rear portion of the cushion support to the heel tread of the shoe. The bottom pad is of sufficient

thickness in rear of the front tapered portion to afford an efficient cushion for the heel and rear portion of the foot so as to completely relieve the entire nervous system of jar and shock.

When the metatarsal insert and the longitudinal arch support insert are placed in position on the bottom pad beneath the flexible covering, they will be retained securely in position and will not require any additional fastening means, as the flexible covering and the frictional contact between the inserts and the bottom pad will prevent any slipping of the inserts. When the longitudinal arch support insert is placed beneath the bottom pad an adhesive should be used between the lower face of the bottom pad and the flat surface of the insert to prevent any displacement of the latter. The pressure of the foot upon the bottom pad and the longitudinal insert when the latter is arranged below the bottom pad, will cause the bottom pad and the insert to form a modified soft cushion support for the arch of the foot at the inner side thereof.

The longitudinal arch support insert may be arranged with either its flat face or its convex face in contact with the flat lower face of the bottom pad, and the metatarsal support and the longitudinal arch support may be varied in size to suit the form of the foot of the wearer. Both of these supports may be adjusted to fit the deformity of any foot, and to furnish the required support for the same and at the same time provide a comfortable cushion for the foot.

When the proper position of the longitudinal arch supporting insert has been ascertained, either at the time when the device is delivered to the wearer or after the device has been worn by the wearer, and the proper position determined by actual use, the said arch supporting insert may be secured in position upon the bottom pad by an adhesive or other suitable means, which will prevent any displacement of the arch supporting insert. This attaching of the flat lower face of the insert 6 to the bottom pad will not interfere with the raising of the covering 3 for the purpose of adjusting, removing or replacing the metatarsal support, as the covering is unattached to the longitudinal arch support and is secured to the bottom pad only at the marginal edges at the end portions and outer side, as indicated by the dotted line in Fig. 1 of the drawings. Of course, the area of the attached marginal portions of the covering may be varied, as will be readily understood.

What is claimed is:

A cushion support for the foot designed to be arranged interiorly of a shoe and comprising a piece of relatively thick, soft material and a covering of the same dimensions as the aforesaid piece of soft material and secured

to the same at the margin thereof and having a portion of its marginal edge unattached to the soft piece of material so as to provide an opening to permit access to the interior of the cushion support, a longitudinal arch support disposed within said cushion support and insertible therein and removable therefrom through said opening, and a metatarsal supporting insert disposed within the cushion support at the toe portion of the same and insertible therein and removable therefrom through said opening upon temporary removal of said longitudinal arch support.

10 In testimony whereof I have hereunto set
15 my hand this 20th day of May, 1930.

FRANCIS ROMERO.