Sept. 25, 1928. 1,685,155

H. D. EMEOTT

ARCH SUPPORT

Filed Aug. 28, 1922

Fig. 3

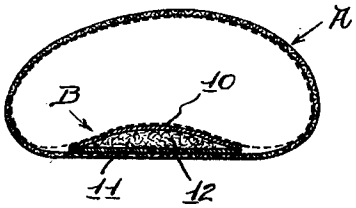


Fig. 1

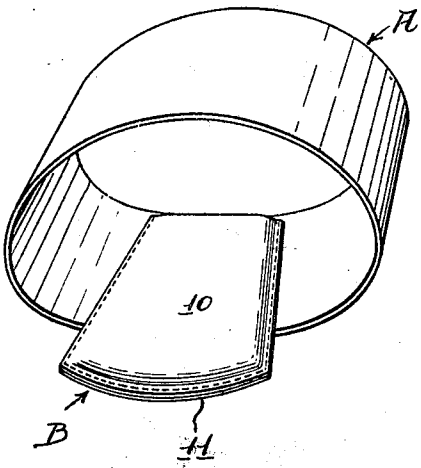


Fig. 2

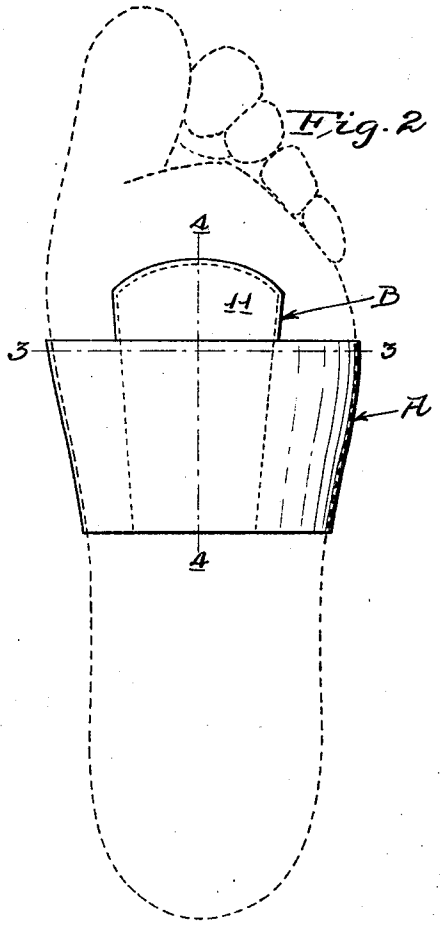
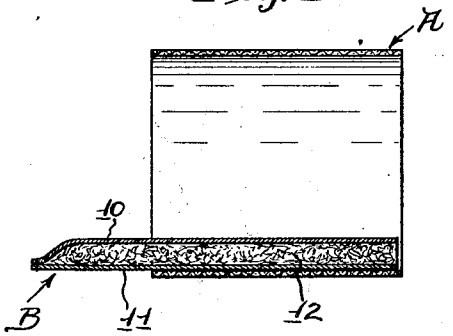


Fig. 4



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Patented Sept. 25, 1928. 1,685,155

UNITED STATES PATENT OFFICE.

HARRY DENNIS EMEOTT, OF ST. PAUL, MINNESOTA.

ARCH SUPPORT.

Application filed August 28, 1922. Serial No. 584,650.

My invention relates to improvements in supports for anterior metatarsal arches.

One object is to provide an arch support of this nature, which is simple, durable, efficient, light in weight, pleasing in appearance and comfortable upon the foot of the wearer.

Another object is to supply an article as above, the same being capable of ready adjustment and designed to remain in adjusted positions without discomfort to the wearer.

A further object is to supply an article adapted to support a weakened anterior metatarsal arch, and, further, through elasticity, to exercise the foot, whereby natural correction is effectively aided.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the drawings, Fig. 1 is a perspective view of an arch support embodying my invention; Fig. 2 is a plan view thereof illustrated as applied to a wearer's foot; Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2 and Fig. 4 is a similar view taken on the line 4—4 of Fig. 2.

Referring to the drawings, it will be observed that my improved support comprises an endless band A and a pad B within the band. Said band consists of elastic webbing of rubber and fabric. The pad B is an elongated fan-shaped structure and includes a case consisting of upper and lower pieces 10 and 11 of soft leather. These pieces 10 and 11 are cemented or stitched together at their longitudinal margins and at their curved wide ends, but have no connection at their narrow ends. The narrow end of the pad case is left open to permit of initially filling the same or of readily increasing or reducing the quantity of padding 12, of cotton, wool or the like, between the pieces 10 and 11. While the opening at the rear of the pad case permits of intentional withdrawal of padding therefrom, it is sufficiently restricted by the tapering of the sides of said case that accidental dislodgment of the padding material is avoided. The pad B is arranged transversely of the band A and within the same, the former being stitched at its longitudinal margins to the latter. Said pad B reaches from the rear margin of the band A across the forward margin thereof, the wide curved end or head of the pad projecting forwardly of the band. Said band A is flexed in encircling relation on the foot of a wearer, as shown in Fig. 2, the wide end of the pad being fixed just behind the heads and beneath the metatarsal bones of the foot, thus locating the pad in arch supporting position. The tension of the band A on the foot holds the pad B in the exact position desired. The length of the pad B approximates the length of the normal, adult metatarsal bones. The width of the band being less than the length of the pad, locates said band rearwardly of the heads of the metatarsal bones, when the head of said pad is properly positioned. This relatively fixed encircling relation of said band most effectively arches the metatarsal bones, thus requiring a band of minimum width and of minimum elastic strength.

In bringing weight upon his foot, the anterior arch, formed by the metatarsal bones of the wearer, is supported by the pad B, the elasticity of the band A allowing for the usual slight flattening effect of the arch, without discomfort. In relieving the weight from the foot, the band A in co-operation with the pad B returns the metatarsal bones to normally, fully arched positions. Thus it will be understood that the shape of the anterior arch is constantly maintained and that the foot is beneficially exercised in walking. This exercise, attended with the proper placement of the anterior metatarsal arch results in effective foot correction, aside from affording relief to wearers, whose anterior arches are weakened.

Changes in the specific form of my invention, as herein disclosed may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. An article of the class described, comprising an elastic foot encircling band, an elongated, flexible case greater in length than the width of said band, said case being secured to the band inside and transversely thereof with one end within the confines of said band, said case having an opening at said end, and padding material applicable in desired quantities to the case through said opening, said padding being kept against accidental removal from the case by the action of the band in holding said case against the foot.

2. An article of the class described, com-

prising a band adapted to encircle and to be bound upon a foot, an elongated fan shaped case of flexible material, greater in length than the width of said band, said case being secured to the band inside and transversely thereof, with its narrow end within the confines of said band, said case having an opening at said narrow end, and padding material applicable in desired quantities to the case through said opening, said padding being kept against accidental removal from the case by the binding action of the band in holding said case against the foot.

In testimony whereof, I have signed my name to this specification.

HARRY DENNIS EMEOTT.