July 10, 1928. 1,676,355

P. SAPERSTON

INSOLE

Filed Sept. 5, 1925

Fig. 1

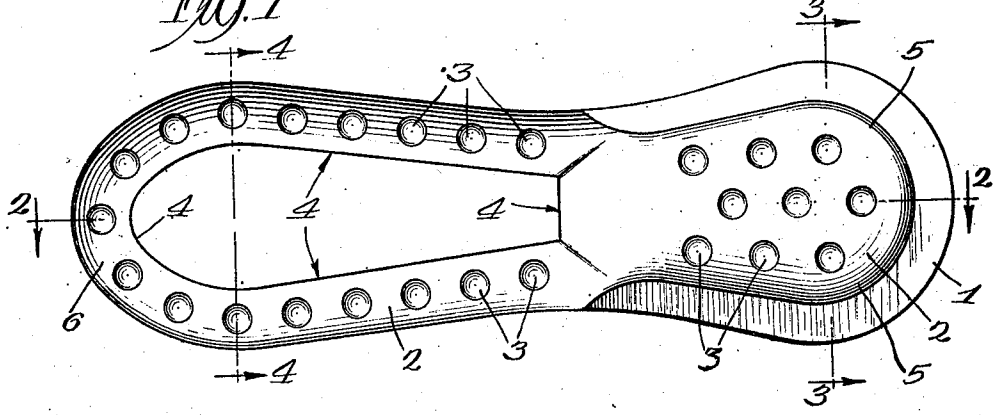


Fig. 2

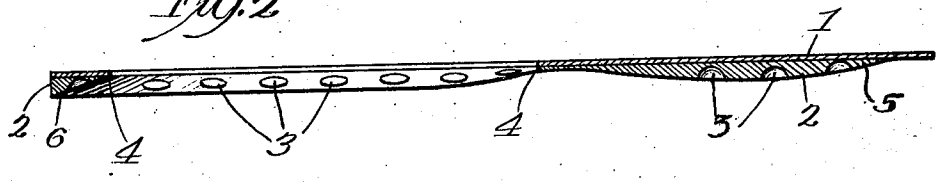


Fig. 3

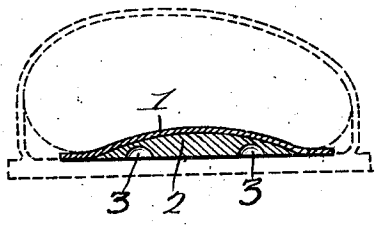
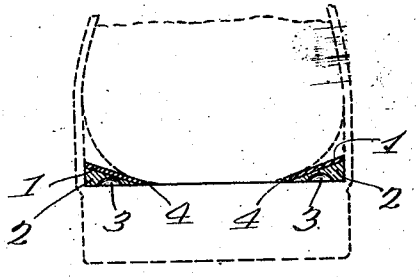


Fig. 4



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UNITED STATES PATENT OFFICE.

PERRY SAPERSTON, OF CHICAGO, ILLINOIS.

INSOLE.

Application filed September 5, 1925. Serial No. 54,598.

This invention relates to insoles, in general, and more particularly to those which are adapted to correct the position and support of the foot within the shoe.

Generally stated, the object of the invention is to provide a novel and improved insole which will raise the heel at each side thereof, so that the heel is prevented from rolling to either side.

Another object is to provide a novel and improved construction, whereby the forward portion of the foot, and the natural transverse arch formation thereof, is insured in a natural manner.

It is also an object to provide certain details and features of construction tending to increase the general efficiency and desirability of an insole of this particular character.

To the foregoing and other useful ends, the invention consists in the matters hereinafter set forth and claimed, and as shown in the accompanying drawings, in which

Figure 1 is a bottom plan of an insole embodying the principles of the invention;

Figure 2 is a longitudinal section on line 2—2 in Figure 1 showing the insole right side up;

Figure 3 is a transverse section on line 3—3 in Figure 1, showing the insole right side up, and showing the insole distorted by the weight of the forward portion of the foot, thereby causing the forward portion of the foot to have the transverse arch formation in a natural manner, so that the weight of the foot is thrown upon the metatarsal joints of the large and small toes, thus relieving the joints between from weight, or at least reducing the pressure thereon; and

Figure 4 is a transverse section on line 4—4 in Figure 1, showing the insole right side up, and showing the rear portion of the insole distorted by the weight of the heel, so that the heel is braced at each side and prevented from rolling over at either side.

As thus illustrated, the invention comprises a flat upper piece of cloth or leather 1, preferably of the shape or outline shown in Figure 1. The rubber or other resilient material 2 is suitably fastened upon the lower surface of said cloth or leather and shaped as shown, having, preferably, small dents or recesses 3 in the lower surface thereof. The rear portion of the rubber or other resilient material is cut away to provide an opening having edges 4, as shown, while the front portion of the rubber or material is beveled or rounded at 5 at its outer edge, as shown. The lower surface 6 of the rubber or other material surrounding the opening 4 is preferably beveled on its under side, as more clearly shown in Figure 2, and the cloth or leather 1 may be omitted above the opening between the edges 4, as may be desired.

When the insole is inserted in a shoe, with the cloth or leather 1 uppermost, the weight of the heel will distort the rear portions of the insole, as shown in Figure 4, so that the beveled surface 6 will be held flatwise against the inner surface of the heel of the shoe, and so that the cloth or leather 1 will assume an inclined position, as shown, at each side of the heel, thus bracing the heel at each side and preventing it from rolling over in either direction.

The front portion of the insole will be extended under the front portion of the foot, and under the metatarsal joints of the toes, and this front portion will be distorted as shown in Figure 3 of the drawings, whereby an arch will be formed between the two natural points of support of the front portion of the foot, transversely of the foot, the lower surface of the rubber or other resilient material being flattened down upon the inner surface of the sole of the shoe, while the upper surface of the insole will be rounded to insure the said transverse arch formation of the front portion of the foot.

Thus, in effect, the rear portion of the insole rolls up or rises, so to speak, at each side of the heel to prevent rolling over of the heel, while the front portion of the insole, in effect, rises at the transverse center thereof to lift the intermediate metatarsal joints, thereby to permit the weight of the foot to rest upon the metatarsal joints of the large and small toes of the foot and to relieve the pressure upon the intermediate portions of the arch, thus formed transversely, and naturally, for the front portion of the foot.

Thus, with the insole construction shown and described, the foot is insured a three-point bearing, so to speak, one point being at the heel, another point being at the base of the large toe, and the other point being at the base of the small toe, which is the natural condition of the foot when in action on the ground.

Without disclaiming anything, and with-

out prejudice to any novelty disclosed, what I claim as my invention is:

An insole for shoes, normally flat on its entire upper surface, so that the entire upper surface of the insole is in the same plane, composed of flexible and resilient material adapted under foot pressure to conform to the foot and the shoe, comprising a rear portion transversely relatively thick at the edge and thin toward the middle and thereby adapted to roll up or rise at each side of the heel, by distortion thereof, and having a front portion transversely relatively thick at the middle and thin at the edges and thereby adapted, in effect, when the side edges are depressed by the weight of the foot, to rise at the transverse middle portion thereof to insure the transverse arch formation for the foot.

Specification signed this 28th day of August, 1925.

PERRY SAPERSTON.