April 9, 1935. L. A. REARDON 1,997,118

ARCH SUPPORT

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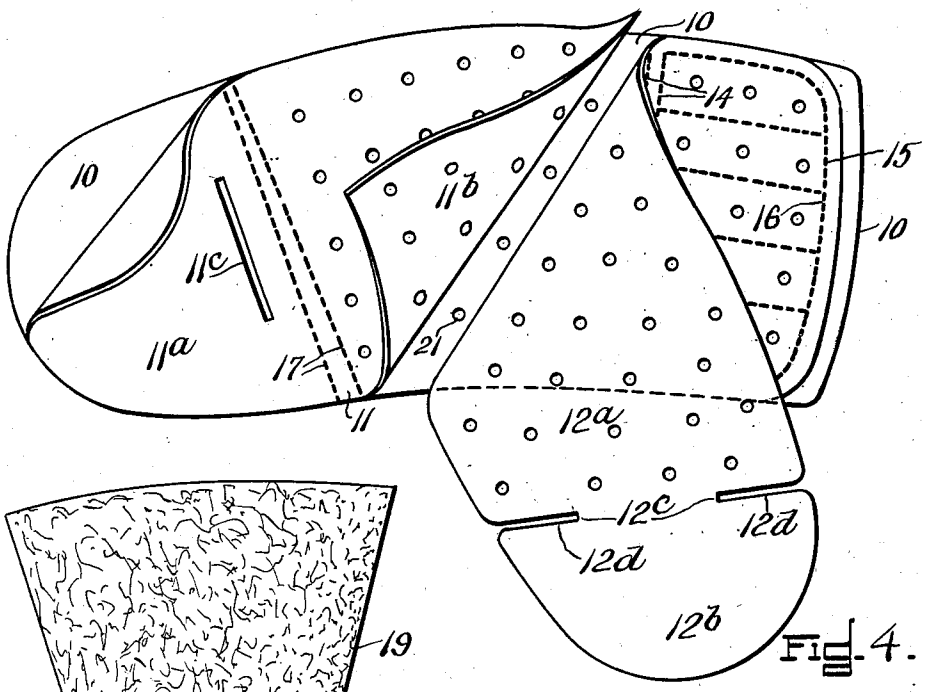


Fig. 4.

Fig. 3.

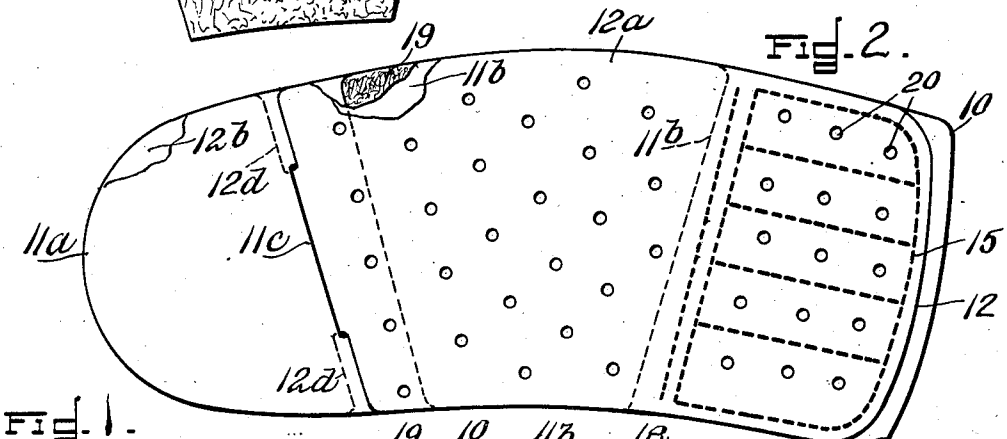


Fig. 2.

Fig. 1.

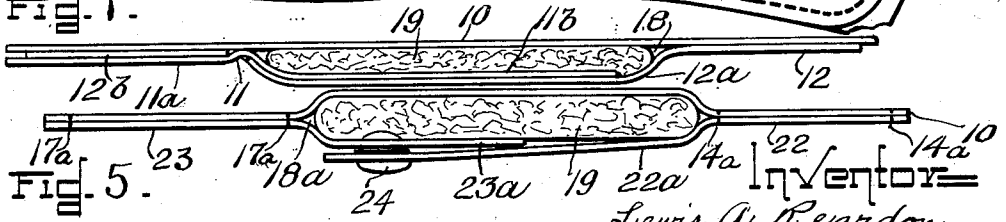


Fig. 5.

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ARCH SUPPORT

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6 Claims. (Cl. 36—71)

This invention relates to arch-supporting insoles and has particular reference to insoles of the type commonly called "slip soles" which are used in conjunction with or as a supplement to the usual insole but are not permanently incorporated in the shoe structure.

It is an object of the invention to provide an improved arch-supporting slip sole which will be flexible, comfortable, sanitary and readily adjustable so as to provide proper support for various kinds of abnormal foot conditions. To these ends I have provided an arch-supporting slip sole having the peculiar features of construction set forth in the following description, the several novel features of the invention being separately pointed out and defined in the claims at the close thereof.

In the accompanying drawing:

Figure 1 is a side elevation of an arch-supporting slip sole constructed in accordance with my invention.

Figure 2 is a bottom plan view of the slip sole shown in Figure 1.

Figure 3 is a view of the felt filler pad hereinafter described.

Figure 4 is a bottom plan view showing the flaps of the slip sole partly opened.

Figure 5 illustrates a modification.

The embodiment of my invention illustrated in Figures 1 to 4, inclusive, comprises a top member 10 consisting of a piece of thin flexible sheet material such as leather, two bottom flap members 11 and 12 also made from thin flexible sheet material such as leather, and a filler pad 13 which may be a piece of felt or other suitable resilient sheet material. The top member 10 is made of a size and shape to fit within the rear portion of a shoe and to extend from the back of the heel forwardly through or partly through the shank portion thereof.

The bottom flap member 12 is of approximately the same size and shape as the top member 10 and is fastened in position against the bottom side of the latter by transverse lines of stitches 14 and 15 and longitudinally disposed stitches 16, the stitches 14 being placed rearwardly away from the forward ends of members 10 and 12 a short distance so as to leave the rear portion of member 12 to provide a free flap 12a.

The flap member 11 is of a length to extend from the back of the heel portion of member 10 forwardly nearly to the lines of stitches 14 and is fastened directly to the member 10 by transverse lines of stitches 17 disposed between the opposite end portions of member 11 so as to provide a loose rear flap 11a and a loose front flap 11b.

The rear flap 11a of member 11 is formed with a transverse slot 11c which is near the middle thereof and in the neighborhood of the lines of stitches 17, while the loose flap 12a of member 12 is provided at its free end with a tongue 12b. This tongue is formed by slotting the opposite side portions of flap 12a as at 12c, said slots 12c being disposed transversely so as to provide the tongue 12b with shoulders 12d.

When the slip sole is prepared for use the flap 12a is laid in position on top of the flap 11b and its tongue 12b is passed through the slot 11c of the flap 11a and pulled upon until its shoulders 12d pass the slot 11c. When the tongue 12b is fully in position within the slot 11c it occupies a position between the heel portion of the top member 10 and the flap 11a of the member 11, the shoulders 12d on tongue 12b serving by engagement with the flap 11a, to lock said tongue in that position.

When the two members 11 and 12 are laid flat, one upon the other, and interlocked as described they provide a transverse pocket 18 between the opposite ends of the structure which is adapted to receive a resilient filler pad 19, Fig. 3, which may be made from felt or other suitable material. The lines of stitches 14 and 17 are, as shown in Fig. 4, disposed relatively oblique so that the pocket 18 tapers from one side of the structure to the opposite side thereof and as shown in Fig. 3 the filler pad 19 tapers correspondingly. This shape facilitates the insertion and withdrawal of the filler pad while the flaps are closed and interlocked.

When the above described support is in use within a shoe the arch of the foot is supported in an elevated position by the relatively thick intermediate portion of the structure which includes the filler pad 19, the thin rear laminated end portion being under the heel of the foot while the thin laminated front end portion being under the rear portion of the ball of the foot. It will be understood of course that the top member 10, and the bottom flap member also if desired, may extend into and fit the forepart of the shoe but this is not essential.

The portion of the structure forwardly from the stitches 14 is formed with through-and-through perforations 20, while the portion of the top member 10 between the lines of stitches 14 and 17 is also formed with a multiplicity of perforations 21, the latter serving to ventilate the interior of the pocket 18 and to provide pas-

sages through which air is forced into and out of said pocket while the device is in use. The perforations **21** are desirable from a sanitary point of view, while the perforations **20** assist in holding the device against displacement while in use. If desired the flap **11***b* may also be perforated as shown in Fig. 4.

In Fig. 5 the top sole shaped member **10** has fastened to its bottom side, as by transverse lines of stitches **14***a* and **17***a*, two flap members **22** and **23** which provide overlapping flaps **22***a* and **23***a* which may be fastened together by means of a snap fastener **24** of ordinary construction whereof one member is carried by the flap **23***a* and the other member by the flap **22***a*. When the two flaps of this structure are fastened together they provide a pocket **18***a* within which is mounted a filler pad **19**.

It will be observed that in each form of my invention the filler pad extends from one side of the slip sole to the opposite side thereof so that it is held against lateral displacement by the side walls of the shoe within which the device is used, but when the device is removed from the shoe, the pad **19** may be removed from its pocket as will be clear, without unfastening the flaps.

It is intended that one, two or more filler elements may be inserted in the pocket as may be necessary to meet the requirements of the user.

What I claim is:

1. An arch support comprising a sole-shaped top layer of flexible sheet material; two longitudinal overlapping flap layers of flexible sheet material one of which is permanently fastened transversely adjacent to its rear end to the bottom side of said top layer near one end of the latter only and the other of which is permanently fastened transversely adjacent to its forward end to the bottom side of said top layer near the opposite end of the latter only, and a filler pad removably mounted between the two overlapping portions of said flaps and said top layer.

2. An arch support comprising a sole-shaped top layer of flexible sheet material and two overlapping flap layers of flexible sheet material one of which is fastened transversely to the bottom side of said top layer near one end of the latter and the other fastened transversely to the bottom side of said top layer near the opposite end of the latter; a filler pad removably mounted between said overlapping flaps and said top layer, and means for fastening the free end of the lowermost flap in its closed position.

3. An arch support comprising a sole-shaped top layer of flexible sheet material; two overlapping flap layers of flexible sheet material one of which is fastened at its one end transversely to the bottom side of said top layer near one end of the latter and the other of which is fastened transversely to the bottom side of said top layer between the opposite end of the latter and the attached end of said first-mentioned flap member thereby to provide a third flap adjacent to the heel end of the structure, said third flap being formed transversely with a slot and said first-mentioned flap being formed at its free end with a shouldered tongue adapted to be threaded through said slot into a position between said third flap and said top layer thereby to fasten said first-mentioned flap in its closed position, and a filler pad of resilient material removably mounted within the pocket provided by said two first-mentioned flaps.

4. An arch support constructed in accordance with claim 3 wherein the pocket provided by the two flaps is open at the opposite sides of the structure so that the resilient pad is held against lateral displacement while the slip sole is in use by the shoe of the wearer.

5. An arch support comprising a sole-shaped top layer of flexible sheet material; two overlapping flap layers of flexible sheet material one of which is fastened transversely to the bottom side of said top layer near one end of the latter and the other fastened transversely to the bottom side of said top layer near the opposite end of the latter; a filler pad of resilient material removably mounted within the pocket provided between said overlapping flaps and said top layer, and a snap fastener for separably fastening the lowermost of said two flaps in its closed position.

6. An arch support comprising a sole-shaped top layer of flexible sheet material; a flap of flexible sheet material fastened at its one end to the bottom of said top layer adjacent to one end of the latter and a second flap of flexible sheet material fastened at its one end to the bottom of said top layer rearwardly of said first-mentioned flap, said two flaps being adapted to be overlapped to provide a pocket between the same and said top layer; a filler pad of resilient material removably mounted within said pocket, and means for fastening the free end of the lowermost flap in its closed position, the portion of said top layer which constitutes one side wall of said pocket being formed with a multiplicity of small ventilating apertures.

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