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PLATFORM SOLE

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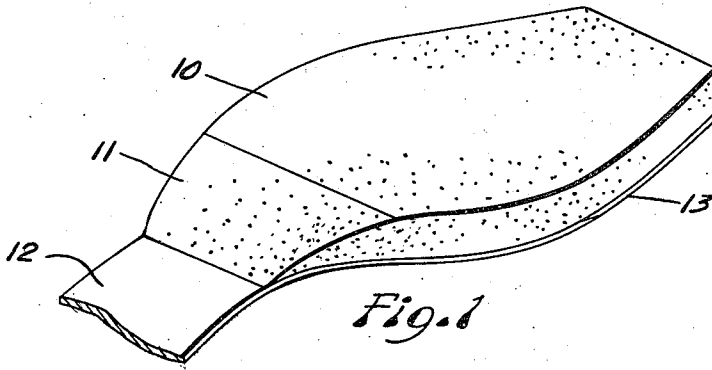


Fig. 1

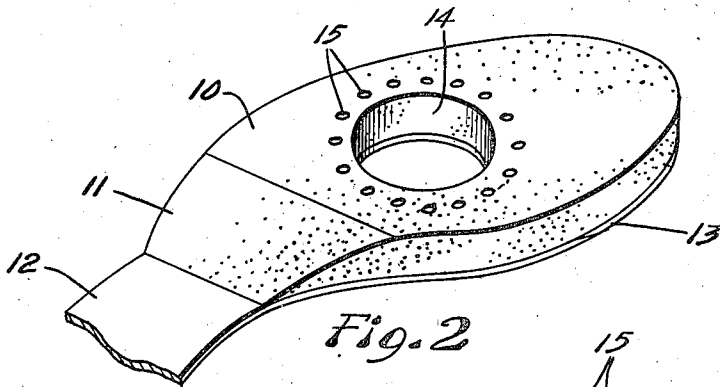


Fig. 2

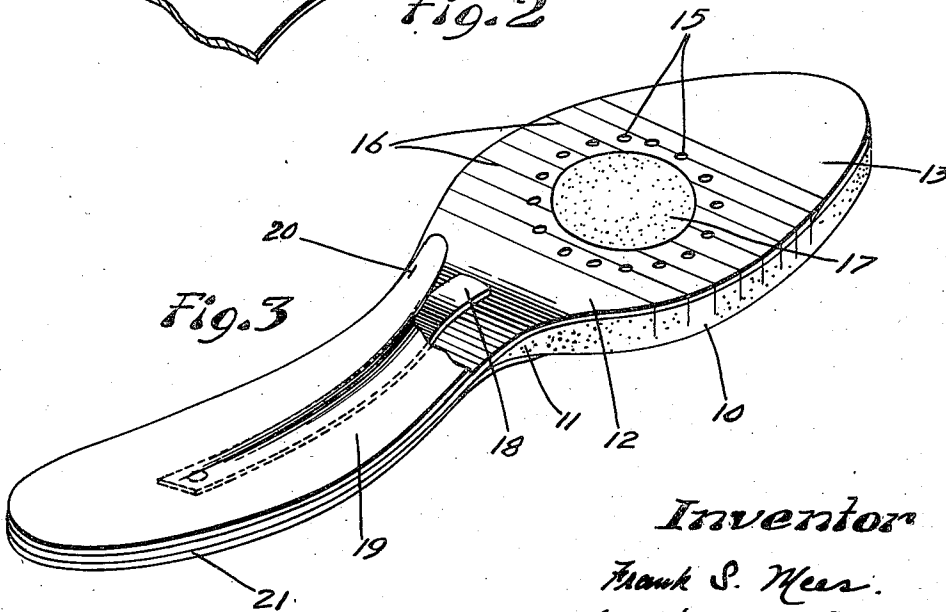


Fig. 3

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# UNITED STATES PATENT OFFICE

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## PLATFORM SOLE

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5 Claims. (Cl. 36—30)

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This invention consists in a new and improved platform sole, or rather a combined platform and insole since it fulfills the function of both of these soles in the manufacture of shoes of the platform type.

The object of the invention is to provide a platform sole unit that may be constructed in the stock fitting room and brought to the making room complete and ready to be incorporated in the shoe with no loss of time. Furthermore, the sole of my invention is flexible in the forepart where it should be flexible for the comfort of the wearer and stiff in the shank where stiffness is required for maintaining the fine lines of the shoe. Many platform shoes have had a bulky cumbersome appearance heretofore. The sole unit herein disclosed has a composite shank of slim, smooth curvature although including a steel shank stiffener which gives it adequate rigidity. By employing the platform sole unit of my invention, therefore, it is possible to construct a platform shoe having the characteristic platform appearance in its forepart but still retaining the more graceful lines imparted to a shoe by a close fitting shank.

With these ends in view, the insole unit of my invention is characterized by a full length ply of thin fibrous material having a thick resilient platform ply co-extensive with its forepart and tapering rearwardly to a feather edge located in the shank of the unit. Both plies are apertured and contain a resilient plug which is exposed in both surfaces of the forepart of the unit, and at least the platform ply of the unit is transversely slashed so that it is rendered extremely flexible although of substantial thickness. In general it is desirable to slash the forepart of the innersole through its face which is lowermost or outermost in the finished shoe, and in some instances the slashes will therefore be found to extend through the fibrous ply and substantially half way into the thick resilient ply of the platform. However, the location and arrangement of the slashes is of secondary importance so long as they impart the desired flexibility to the forepart of the unit.

As herein shown, the shank portion of the unit is built up by locating a steel shank stiffener upon the thin fibrous layer with the forward end of the stiffener extending beneath or overlapping the feather edge of the platform ply and then enclosing both the thin fibrous ply and the shank stiffener between fibre shank pieces. In this way I supply a stiff, well-shaped shank and heel seat portion in the unit and make a smooth and secure union between the thin stiff shank portion

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and the thick flexible forepart portion of the unit.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawing, in which:

Fig. 1 is a view in perspective showing the forepart of the unit in a preliminary stage of its construction,

Fig. 2 is a similar view showing the forepart of the unit as completed, and

Fig. 3 is a view in perspective of a complete unit shown in inverted position.

In preparing the platform sole unit herein illustrated I first select a full length block insole 12 of thin fibrous material such as that, for example, known to the industry as "Darex," and when this material is used I prefer to employ a hard fibre section 13 for the tip of the sole. The composite Darex sheet may be 2 to 4 irons in thickness or the insole may be of split leather or of any convenient fibrous material. To one face of the block insole I secure a thick resilient platform ply 10 which may be of cork and rubber composition, felt or other suitable flexible material available in the market. The ply 10 is beveled at its rear end in a section 11 to a feather edge which is located in the shank portion of the unit as shown in Fig. 1.

The two plies 10 and 12 may now be died out in the contour desired for the shoes to be manufactured and this may be done conveniently by means of dies available for that purpose. At the same time or as a separate operation, a large aperture, for example, a circular perforation 14, may be cut out in the center of the forepart and this may be supplemented by a series of smaller circumferentially arranged perforations 15. It will be understood that these perforations extend completely through both plies of the forepart. In the same or in a subsequent operation transverse slashes are formed in the platform ply 10. As suggested in Fig. 3, these slashes extend from side to side, passing through the fibrous ply 13 and substantially into the platform ply 10. Certain of the slashes intersect the aperture 14 and the combined effect of the aperture and slashes is to render the forepart of the unit extremely flexible so that the platform does not feel stiff under the foot of the wearer. If it is not desired to slash the fibrous ply 12, the platform ply 10 may be slashed before it is assembled with the fibrous ply 12.

The shank portion of the unit may be constructed by placing a curved steel shank stiffener

18 upon the shank portion of the fibrous ply 12, anchoring it in position by a rivet at its rear end, and then covering the shank stiffener by a fibre shank piece 19 which may be secured in place by staples 20 at its forward end and by being cemented in face-to-face contact with the fibrous ply 12. Finally a second fibre shank piece 21 is cemented to the opposite face of the fibrous ply 12 being extended to overlap the skived or beveled section 11 of the platform ply 10. The shank piece 19 similarly extends forwardly to a position underlying the section 11 of the platform ply and the staples 20 constitute positive connection supplementing the cemented union formed between the shank and forepart of the unit through the medium of the full length fibrous ply 12.

It will be seen that the completely formed platform sole unit as illustrated in Fig. 3 may be placed directly on the last bottom and employed as a combined insole and platform sole in making a shoe upon a last, or it may be stitched directly to the upper and binding strip of a shoe made off the last by the so-called "California process." In either case the sole is a complete unit which may be incorporated in its finished condition into the shoe structure by the usual shoemaking steps generally carried out in commercial manufacture.

The circular perforation 14 which extends through both the plies 10 and 12 is filled with a circular plug 17 of resilient material such, for example, as sponge rubber. This may be cemented about its circumferential wall and inserted at any convenient time in the manufacture of the platform unit. It increases the cushion effect of the sole and the comfort of the shoe in wear.

The platform sole unit above described may be employed with particular advantage in manufacturing a shoe lasted on the last. When so used the unit is tacked to the last bottom and the upper lasted over the fibrous ply 12. The platform ply is finished about its edges by a suitable binding strip and will appear through the upper of an open toe shoe or sandal. Ordinarily a somewhat thinner platform ply will be used in making shoes in which the platform is to be located within the upper. In employing the sole unit of my invention in shoes made by the so-called "California process," a thicker platform ply may be used and the upper lasted by stitching to the margin of the platform ply. In shoes made by this process it will be understood that the platform lies wholly outside the upper.

While I have shown the fibrous ply 12 as located beneath the platform ply 10, when the composite sole is incorporated in a shoe under certain conditions it may be desirable to reverse the position of these two plies and such modification of the illustrated construction is within the scope of the present invention.

Having thus disclosed my invention and described in detail an illustrative embodiment

thereof, I claim as new and desire to secure by Letters Patent:

1. A platform sole unit comprising a full-length ply of thin fibrous material, a thick platform ply of resilient composition co-extensive with the forepart of the fibrous ply and beveled to a feather edge in the shank of the sole, a curved steel shank stiffener located adjacent to the fibrous ply and extending forwardly beneath the feather edge of the platform ply, and stiff fibre shank pieces enclosing the shank and heel-seat portions of the fibrous ply and the said steel shank stiffener.

2. A platform sole unit comprising a thin fibrous ply having a stiff tip section and being otherwise flexible throughout its length, a thick resilient platform ply co-extensive with the forepart of the fibrous ply and tapering rearwardly to a feather edge located in the shank of the unit, the said plies being apertured and containing a resilient plug which is exposed in both surfaces of the forepart of the unit, and both of said plies being transversely slashed in the forepart by slashes intersecting the aperture therein.

3. A platform sole unit comprising an integral ply extending continuously from the tip to the heel-seat, a thick platform ply of resilient composition co-extensive with the forepart of the fibrous ply, beveled at its rear edge and transversely slashed in a plurality of slashes in advance of the ball line, a curved steel shank stiffener secured in face-to-face contact with the fibrous ply throughout its shank portion and on the face opposite to the platform ply, and stiff fibre shank pieces enclosing the shank stiffener on one side and overlapping the beveled portion of the platform ply on the other side of the unit.

4. A platform sole unit comprising a continuous fibrous ply extending from the tip to the heel-seat, a thick platform ply of resilient composition cemented to the forepart of the fibrous ply and tapering rearwardly into the shank portion thereof, a cushion insert filling a predetermined area in the forepart of both plies, the platform ply being transversely slashed by slashes terminating at the periphery of said insert, and a stiff fibre shank piece cemented to the heel-seat and shank portions of the fibrous ply and overlapping the rear end of the platform ply.

5. An insole unit of the platform type, comprising a full length ply of tough insole material approximately 2 to 4 irons in thickness, a flexible platform ply of substantially greater thickness cemented in face-to-face contact to the forepart of the full length ply and having a rearwardly tapering section which terminates at the forward end of its shank, both of said plies having aligned apertures in their foreparts and slashes which extend into both plies, and a cushion plug retained in said apertures, the insole unit thus presenting a cushion forepart of substantial thickness and a thin shank and heel-seat portion.

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