

Nov. 13, 1962

W. M. SCHOLL

3,063,458

FOOT CUSHIONING AND SUPPORTING SANDAL

Filed Oct. 4, 1960

FIG. 1

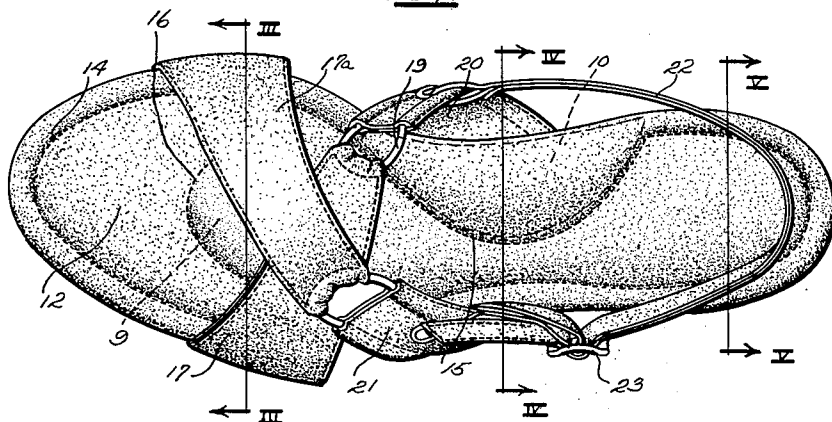


FIG. 2

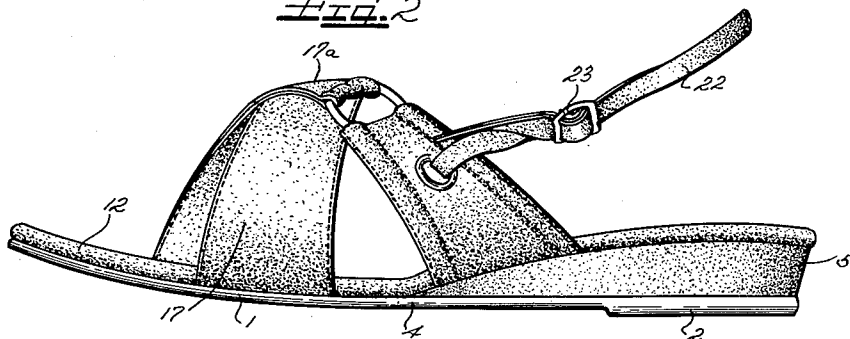


FIG. 3

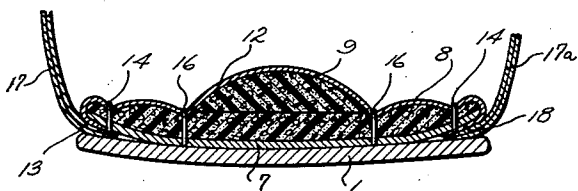


FIG. 4

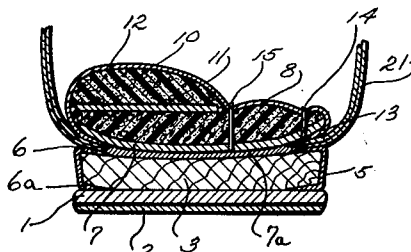
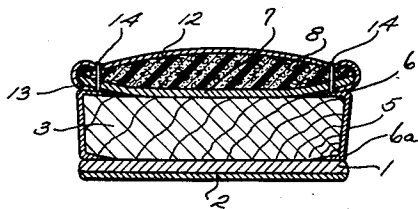


FIG. 5



INVENTOR.
WILLIAM M. SCHOLL

BY
Hell, Sherman, Munn, Goad & Simpson
ATTORNEYS

1

3,063,458

FOOT CUSHIONING AND SUPPORTING SANDAL

William M. Scholl, 211-213 W. Schiller St., Chicago, Ill.

Filed Oct. 4, 1960, Ser. No. 60,504

4 Claims. (Cl. 128-615)

This invention relates to improvements in a foot cushioning and supporting sandal, and more particularly to an article of footwear of the type of a sandal, an open-toed open-heeled type of shoe, and equivalent structures wherein the upper of the article of footwear is strap-like in character leaving portions of the foot or hosiery of the wearer exposed, although the invention might be utilized for other purposes, as will be apparent to one skilled in the art.

In the past, many and various types of sandals and other articles of footwear open at the toe, the heel, or some other region in the upper have been developed, but in most instances such articles have been designed, particularly in the low heel variety, for walking, sportswear, lounging, etc., and so were made more with economy in mind than actual cushioning and support of the foot along with a dressy and pleasing appearance. In articles of footwear of this general type as heretofore made, where soft and yielding cushioning material was utilized both for cushioning purposes as well as supporting purposes, the construction was such that the cushioning material could migrate or spread laterally under pressure thereby materially reducing its effectiveness.

Articles of this type heretofore made also failed in providing wieldable yet sufficient support to the metatarsal and longitudinal arches of the foot while at the same time cushioning the plantar surface of the foot, and retaining the effectiveness of the cushioning and supporting action throughout the life of the article.

With the foregoing in mind, it is an important object of the instant invention to provide an article of footwear of the type of a sandal which presents continuously a soft and comfortable feel to the foot of the user, which cushions the plantar surface of the foot and effectively supports the metatarsal and longitudinal arches of the foot while presenting only a soft and yielding pressure against the foot.

It is another object of the invention to provide an article of footwear of the type of a sandal that is extremely dressy and pleasing in appearance and which effectively cushions and supports the foot in a positive manner while presenting only a yielding contact against the foot.

Also an important feature of this invention is the provision of an article of footwear of the type of a sandal embodying a layer of cushioning means to underlie the plantar surface of the foot, with means provided to prevent lateral spreading of such cushioning means under pressure of the foot.

It is also a feature of this invention to provide an article of footwear of the type of a sandal having an insole portion made up of relatively soft cushioning material with added layers or pieces of cushioning material to underlie the arches of the foot, all of the cushioning material being covered by a flexible sheet of material, and stitching being employed to orient the supporting means and prevent lateral spreading of the added layers.

While some of the more salient features, characteristics and advantages of the instant invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a top plan view of an article of footwear embodying principles of the instant invention;

FIGURE 2 is a side elevational view of the structure of FIGURE 1;

FIGURE 3 is a fragmentary enlarged transverse verti-

2

cal sectional view taken substantially as indicated by the line III-III of FIGURE 1, looking in the direction of the arrows;

FIGURE 4 is also a fragmentary transverse vertical sectional view, enlarged, taken substantially as indicated by line IV-IV of FIGURE 1; and

FIGURE 5 is a further enlarged transverse vertical sectional view taken substantially as indicated by the line V-V of FIGURE 1.

As shown on the drawings:

The illustrated embodiment of the instant invention is shown in the form of a sandal having strap means for retaining the sandal on the foot of a user. This showing is by way of example, and not by way of limitation, since it should be understood that the instant invention is applicable to an article of footwear having an open toe, an open heel, or open portions of the upper in various locations, or a combination of one or more of them. It will also be understood that the instant invention may be constructed in many cases of materials commonly known in the shoe making art, and where specific materials are hereinafter mentioned they are mentioned by way of preference.

The illustrated embodiment of this invention includes an outer sole and heel assembly comprising an outer sole 1 extending the full length of the sandal and which is preferably made of sole leather or equivalent material. To this sole piece 1 an additional heel tap 2 may be added if desired. Seated upon the rear portion of the sole piece 1 and secured thereto, as by cementing, is a heel piece 3, preferably made of wood. This heel piece forwardly of the heel seat thereof tapers downwardly to a fine line edge termination at 4, preferably adjacent the forward termination of the longitudinal arch of the foot. The heel piece 3 is preferably covered by a decorative cover 5 which may satisfactorily be soft leather, and this covering has inwardly turned marginal portions 6 and 6a respectively overlying and underlying the marginal portion of the heel piece and secured thereto, adhesively or in an equivalent manner.

Secured adhesively or in an equivalent manner to the upper surface of the outer sole and heel assembly is what may best be termed a middle sole 7, and this comprises a uniformly thick strip of leather, imitation leather or equivalent material. In the event, as will later appear there are several thicknesses tucked under this middle sole at any point, a filler 7a, FIGURE 4, may be utilized if desired, this being accomplished in a well known manner in the shoe making art.

The insole construction of the sandal includes a layer of cushioning material 8 which underlies the entire plantar surface of the foot and this layer may be cementitious secured to the middle sole 7 if desired, although actual securement of the layer to the middle sole is not necessary. The layer 8 is preferably of foam material, polyvinyl chloride or polyurethane foam being preferable because of the insulating qualities, the excellent recovery properties, the shock absorbing properties, the resistance to mildew and fungus, and the extreme long life thereof. Disposed on the layer 8 and adhesively secured thereto if desired is a much smaller ovate layer 9 of cushioning material positioned to underlie the metatarsal arch of the foot. A smaller and crescent shaped layer 10 of cushioning material is positioned over the cushioning layer 8 to underlie the inner longitudinal arch of the foot. Preferably the smaller layers 9 and 10 are of the same material as the cushioning layer 8. With reference to FIGURE 4 it will be seen that between the longitudinal arch supporting layer 10 and the cushioning layer 8 a thin crescent shaped stiffener 11 is disposed, and this stiffener may be freely disposed between the layers at this point. The stiffener may be a small piece of leather or

equivalent material, and preferably is of the same material as the middle sole 7. The stiffener adds some rigidity and strength to the longitudinal arch supporting part of the insole without causing any rigid unyielding contact with the foot of the user. A foot contacting cover 12, which is preferably of soft leather, along with the middle sole 7 encloses the cushioning layers 8, 9 and 10. The cover 12 has a marginal portion entirely therearound turned underneath the middle sole 7 and cemented to the outer sole and heel assembly along with the middle sole, as indicated at 13. With this construction it will be seen that cushion layer 8 is entirely confined between the cover and middle sole and the cover extending over the outer side edge of the layer 8 gives a very pleasing appearance to the sandal.

Now in order to prevent the cushion layers 8, 9 and 10 from spreading laterally under foot pressure and to make them more effective in operation, stitching is provided through the cover 12, the layer 8, and the middle sole 7 to cause a pillowing of the cushion layers and a confining of them giving them more supporting effect than would otherwise be the case. This stitching includes a line 14 spaced slightly inwardly from the bounding edge of the insole portion and a part of this line as shown at 15 curves inwardly around the inside edge of the crescent shaped cushion layer 10 and the stiffener 11, to pocket these elements in position. Another line of stitching 16 circumscribes the metatarsal arch lift 9 and maintains that lift positively in position. It will be noted that the compression provided by the stitching in effect pillows the cushioning layers rendering them more effective and positive in their cushioning and supporting functions. Under foot pressure the cushioning layers cannot spread laterally but are subject most to vertical compression whereby the foot is positively cushioned and supported at all times during use.

The upper of the sandal, or the means by which the sandal is retained on the foot of a user, may have many and various configurations. In the illustrated instance this upper comprises a pair of overlapping forward straps 17 and 17a each of which has its lower end turned under the margin of the cover 12 and middle sole 7 as seen at 18 in FIGURE 3 and held in position cementitiously or in an equivalent manner. The upper ends of these straps are joined by loops 19, which may be of rope or any other suitable material to the upper ends of a pair of rear straps 20 and 21 which also have lower ends turned under the middle sole 7 and secured in the same manner as the forward straps. The foot may be slid beneath the connected portions of the straps and beneath the overlapping parts of the straps 16 and 17. The sandal may be retained firmly in position, as compared with a scuff-type slipper, by a rearwardly extending heel engaging strap 22 connected to the straps 20 and 21 and adjusted by means of a suitable buckle 23 or equivalent means.

In use, the instant sandal is extremely comfortable and effective. It is not necessary at all times to open the buckle 23 to put the device on the foot, but it may be more convenient to do so. After this heel engaging strap has been tightened to the desired extent, the user may walk upon the sandal and the entire plantar surface of the foot is effectively cushioned while positive yet soft and yielding supporting pressure is provided for both the inner longitudinal arch and the metatarsal arch. The cushion-

ing and supporting effectiveness are retained by virtue of the stitching throughout the lifetime of the sandal. Moreover, the sandal may be economically manufactured and yet be provided with a very pleasing appearance so that its use is not necessarily limited to lounging or for sportswear.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. In a sandal, an outer sole, a wooden heel block tapering downwardly and forwardly on said outer sole, a middle sole secured to said heel block and to said outer sole forwardly of the heel block, an insole of cushioning material overlying said middle sole, extra thicknesses of said cushioning material to support the longitudinal and metatarsal arches of the foot, a flexible cover over said cushion insole having marginal portions turned under and secured to said middle sole, a marginal line of stitching joining said cover and insole and middle sole, said stitching carrying in and around the extra thickness for the longitudinal arch, a separate line of stitching around the extra thickness for the metatarsal arch, and straps to hold the sandal on the foot of a user with the ends thereof turned under and secured beneath said middle sole.

2. In a sandal, an outer sole and heel assembly, a flexible middle sole secured to said assembly, foam cushioning means on said middle sole, a thin flexible covering over said cushioning means having a marginal portion secured beneath said middle sole, a circumscribing line of stitching through said cover and cushioning means and middle sole spaced inwardly from the bounding edge thereof, and means to retain the sandal on the foot of the user.

3. In a sandal, an outer sole and heel assembly, a layer of cushioning material overlying said assembly, a smaller crescent shaped layer of cushioning material over the first layer in position to underlie the longitudinal arch of a foot, a stiffener between said layers, a flexible cover over said layers and having an underturned margin secured to said assembly, a line of stitching through said cover first layer and underturned margin, said line of stitching curving inwardly around the inside edge of said crescent layer and said stiffener, and means to retain the sandal on the foot of a user.

4. In a sandal, an outer sole and heel assembly, a foot contacting assembly comprising a middle sole, a layer of cushioning material overlying said middle sole, a smooth cover overlying said cushioning material and having a peripheral marginal portion thereof turned under said middle sole, and a line of stitching joining said cover, cushioning material, middle sole and underturned marginal portion and substantially following the contour of the foot contacting assembly to provide a rounded margin and prevent migration of said cushioning material under pressure, said assemblies being superposed and cemented together.

References Cited in the file of this patent

UNITED STATES PATENTS

2,404,083	Murray	July 16, 1946
2,600,864	Fuller	June 17, 1952
2,732,634	Lipton	Jan. 31, 1956
2,979,835	Scholl	Apr. 18, 1961