

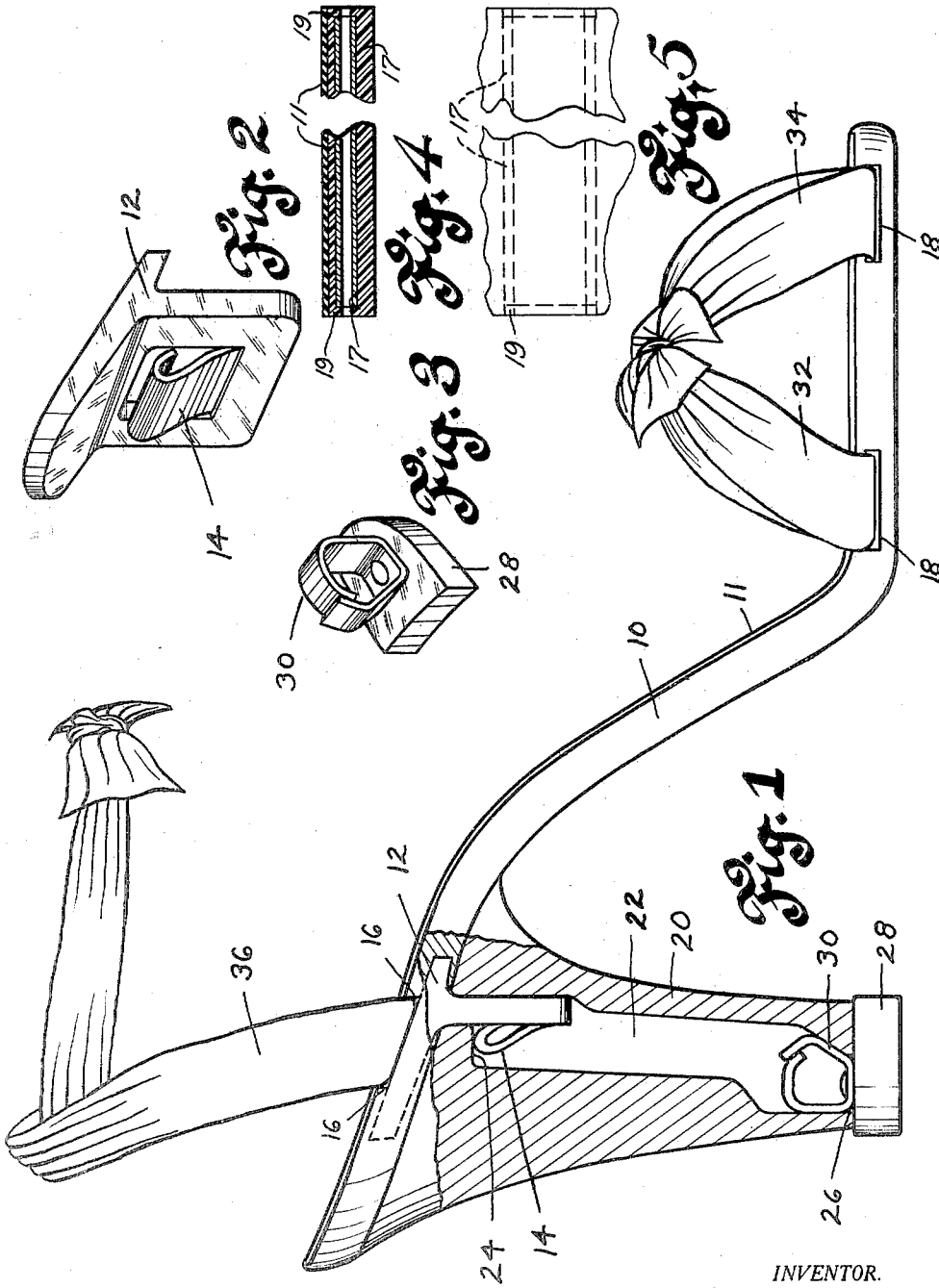
May 30, 1950

H. A. DADISMAN

2,509,335

SHOE WITH CHANNEL MEMBERS EMBEDDED IN SOLE

Filed Sept. 20, 1946



INVENTOR.
HARRY A. DADISMAN
BY
Roy M. Eilers
ATTORNEY.

UNITED STATES PATENT OFFICE

2,509,335

SHOE WITH CHANNEL MEMBERS EMBEDDED IN SOLE

Harry A. Dadisman, Wichita, Kans.

Application September 20, 1946, Serial No. 698,157

3 Claims. (Cl. 36—11.5)

1

This invention relates to improvements in shoes. More particularly, this invention relates to improvements in shoes wherein the heel is removably attached to the body portion of the shoe and wherein the upper section of the shoe is also removably secured to the body portion of the shoe.

It is, therefore, an object of the present invention to provide a shoe wherein the heel is removably secured to the shoe body and wherein the upper section of the shoe is also removably secured to the shoe body.

In the methods that are presently being used to manufacture shoes, and in particular in the methods that are presently being used to manufacture attractive and well-built shoes for women, many individual operations must be performed on the elements to be used in making the upper sections of the shoes; and then additional operations must be performed to assemble the various elements and secure them together in the form of the upper sections of the shoes. In addition, the upper sections must be attached to the body portions of the shoes; and this requires operations that are concomitant with or subsequent to the multiple operations called for in preparing the individual elements prior to their assembly as formed upper sections for shoes. These many and varied operations produce smart, well-built shoes but they make the cost of women's shoes inordinately high. Moreover, present methods of making shoes do not permit free interchangeability of the formed upper sections of the shoes prior to and subsequent to the time they are attached to the body portions of the shoes. Similarly, present methods of making shoes do not permit free interchangeability of the heels of the shoes prior to and subsequent to the time they are attached to the body portions of the shoes. As a result, it is not feasible in the shoe industry today to provide one particular type of shoe body and then secure to that body any one of a number of upper sections and any one of a number of heels. The inability of present day shoe manufacturing methods to provide this flexibility and interchangeability in the making of shoes cooperates with the many operations required in making and assembling the individual elements of the upper sections to maintain the prices of women's shoes at unduly high levels. Moreover, once the upper sections and heels are attached to the body of the shoe, they are not easily removed and replaced. For these reasons, present day shoes and the methods of making them are objectionable. The present invention obviates these objections by providing a shoe body to which a heel and an upper section can be remov-

2

ably secured. It is therefore an object of the present invention to provide a shoe wherein the upper section and the heel are removably secured to the body of the shoe.

5 In many present day shoes, the shoe body is itself formed of a number of individual elements; for example, the body of the shoe may include a platform, a platform cover, an insole and an outsole. Such shoes are expensive because of the cost of making the individual elements and because of the high cost of assembling those elements properly in making the shoe body. The present invention avoids these high costs by providing a molded or cast, plastic shoe body of unitary construction. It is therefore an object of the present invention to provide a shoe with a molded or cast, plastic shoe body.

15 In making shoes, it is often desirable to attach bright metal objects of various shapes to the shoes to make them more attractive. It is the present practice with shoes of this type to cement, nail or otherwise attach these objects to the shoes. However it has been found that these objects sometimes become separated from the shoes and are lost. This is objectionable since the loss of the objects impairs the appearance of the shoe. The present invention obviates such loss by casting or molding the plastic body of the shoe around the metal objects. It is, therefore, an object of the present invention to provide a shoe wherein metal objects are cast or molded on the shoe body.

25 Present day methods of making smart and well constructed open-toe and open-heel shoes for women can necessitate the performance of over one hundred individual and assembly operations. A tremendous number of those operations can be completely eliminated by using the present invention; and, in fact, as many as one hundred of those operations can be eliminated. This greatly decreases the cost of the shoes; and the present invention does this by providing a plurality of spaced channels in the body of the shoe to receive and hold portions of the open-toe and open-heel upper section of the shoe. It is, therefore, an object of the present invention to provide a shoe which is provided with spaced channels that receive and hold portions of the upper section of the shoe.

30 35 40 45 50 55 By providing a shoe body to which various heels and various upper sections can be removably secured, it is possible to buy a shoe with one style or color of heel and one style or color of upper section and then, after wearing that shoe for a while, remove the original upper section or

3

heel or both and replace them with a different upper section or a different heel or both. Thus it is possible to provide one shoe body that can be used with different upper sections and different heels to fit the changing interests and ideas of the user.

Other objects and advantages of the invention should become apparent from an examination of the drawing and accompanying description.

In the drawing and accompanying description, a preferred embodiment of the invention is shown and described but it is to be understood that the drawing and accompanying description are for the purpose of illustration only and do not limit the invention and that the invention will be defined by the appended claims.

In the drawing, Fig. 1 is a partially sectioned side view of a shoe that is made in accordance with the present invention,

Fig. 2 is a perspective view of the heel-attaching plate molded or cast into the shoe body of Fig. 1,

Fig. 3 is a perspective view of the heel tap shown in Fig. 1.

Fig. 4 is an enlarged cross sectional view of the shoe sole of Fig. 1 and it is taken along a plane which is parallel to and extends through one of the channels in the front portion of that shoe sole, and

Fig. 5 is a plan view of a portion of the shoe sole of Fig. 1 which encases one of the channels in the front portion of that shoe sole.

Referring to the drawing in detail, the numeral 10 denotes a shoe sole or body which may be made of cast or molded plastic. As shown in the drawing, the shoe body 10 does not have a metal shank support incorporated therein but it is obvious that if additional strength is desired or required a metal shank plate could easily be cast or molded in the shoe body 10. Formed unitarily with the rear portion of the shoe body 10, as by molding or casting the plastic of the shoe body 10 around it, is a heel-attaching plate 12, which has a generally-horizontally disposed section and a generally-vertically disposed section. The vertically disposed section carries a spring latch 14. Also formed unitarily with the rear portion of the shoe body 10 is a hollow, open-ended, rectangular tube or channel, of the type shown in Figs. 4 and 5, which is immediately above the generally-horizontal section of the attaching plate 12. This channel is completely enclosed by the plastic of the shoe body and its outer edges are spaced inwardly from the edges of the shoe body 10. Spaced between the outer edges of the channel and the outer edges of the shoe body 10 are thin sections of plastic which have openings 15 therethrough; and the inner surface of the channel is flush with the surfaces of the openings 16 in the shoe body 10. If desired, this channel may be secured to the heel-attaching plate 12 prior to the time the channel and the attaching plate 12 are cast, molded or otherwise embedded in the shoe body 10; or, if desired, this channel and the attaching plate 12 may be independent of each other prior to the time they are embedded in the shoe body 10.

Also embedded in the shoe body 10 are two hollow, open-ended rectangular tubes or channels, 17, that are adjacent the front portion of the shoe body 10. These two channels, as well as the channel at the rear of the shoe body 10, are preferably of light metal such as aluminum or magnesium; and thus they do not materially increase the weight of the shoe. These two chan-

4

nels are completely enclosed by the plastic of the shoe body 10 and their outer edges are spaced inwardly from the outer edges of the shoe body 10. Spaced between the outer edges of these two channels and the outer edges of the shoe body 10 are thin sections 19 of plastic which have openings 18 therethrough; and the inner surfaces of these two channels are flush with the surfaces of the openings 18 in the thin sections of the shoe body 10.

In casting or molding the shoe body 10, care must be exercised to keep the plastic of the shoe body 10 from filling or obstructing the channels at the front and rear of the shoe body 10. This can be done conveniently by inserting plugs of material, to which the plastic will not adhere, in the ends of the channels prior to the casting or molding operation. It can also be done conveniently by having projections on the interior of the mold sections that are in register with the ends of the channels and will close those ends during the casting or molding operation. Upon completion of the molding or casting operation, the plugs or the mold projections can easily be removed.

Attached to the plate 12 by means of the latching member 14 is a heel 20 which has a hollow recess 22, a shoulder 24, and a bottom opening 26. The heel 20 is adapted to slip upwardly along the attaching plate 12 until the top of the heel 20 engages the bottom of the shoe body 10. At such time the shoulder 24 will be at the level of the top of the latching member 14; and the member 14 will spring into the position shown in Fig. 1. Thereafter the heel 20 will be held against separating movement by the engagement between shoulder 24 and latching member 14 until an elongated instrument, such as a nail file or a pencil, is inserted through the open bottom 26 of the heel 20 and is used to force the latching member 14 into a position flush with the rear face of the vertically-extending portion of attaching plate 12. In such a position, the latching member will be out of engagement with and will be clear of the shoulder 24 thus permitting the heel 20 to be separated from the shoe body 10.

Normally closing the open bottom 26 of the heel 20 is heel tap 28 which carries latching clip 30. This heel tap not only provides a removable closure for the opening 26 but it also provides the required cushioning for walking, protects the edges of the opening 26, and permits ready replacement of one of the most quickly worn portions of the shoe.

Passing through the openings 18 and the channels contiguous therewith are straps 32 and 34 that are tied or otherwise held in a bow. Passing through the opening 16 and the channel contiguous therewith is a strap 36 which is twisted into the configuration shown in the drawing and is formed into a bow. These straps 32, 34 and 36 may be of any design or material so long as they will pass through the channels; and therein lies part of the flexibility of the present invention. Any straps of suitable design or strength can be inserted through the channels: they can be of the type that lace up the leg, they can be of the type indicated in the drawing, they can be of the type that are connected to each other by additional straps, they can be of the type that buckle to their own ends, they can be of the type that have their free ends insertable into the channels and held there by suitable locking means, or they can be of any other type that

conforms to the teachings of the present invention. If desired, more than two channels can be located adjacent the front section of the body 10, and additional channels can be located adjacent the rear section of the shoe body 10. Moreover, if desired, not intended to be used channels or solid metal objects can be embedded in the cast or molded shoe body 10. Such metal objects would add to the aesthetic value of the shoe.

The shoe body 10 shown in the drawing is provided with a thin perspiration-resistant allergy-proof layer 11 that isolates the major portion of the shoe body 10 from the wearer's foot. This layer will protect the major portion of the shoe body 10 from any deleterious action perspiration might tend to have on it, and the layer 11 will also protect the wearer's foot from contact with the plastic material of the shoe body 10 and will thus permit use of the shoe by persons who may be allergic to plastic materials. While it is not contemplated that the plastic materials usable in making the shoe body 10 could affect people, the invention can provide complete protection for everyone. Such a layer may not be desirable in every case, and it can easily be dispensed with in those instances where the plastic of the shoe body 10 is fully perspiration-proof and is fully allergy-proof. In those instances where the layer 11 is used, it can be cemented or otherwise secured to the shoe body 10.

In making the shoe, a number of shoe bodies 10 are made up in different sizes and colors and with different arrangements of channels, upper sections are made up in different sizes, colors and styles, and heels are made up in different shapes, colors and styles; thereafter the heels are assembled with the shoe bodies by pressing them into engagement with the attaching plates of the shoe bodies and the upper sections are secured to the shoe bodies by means of the channels. Thus in an extremely small number of operations it is possible to make an attractive and useful shoe. In using the shoe, the wearer uses it as it is received from the store; but if the user wishes to change the color or style of the upper section or the heel, she need only have a repairman remove the heel or upper section and replace it with a suitable replacement.

Whereas the drawing and accompanying description have shown and described a preferred form of the invention, it is obvious to those skilled in the art that many changes may be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. A shoe that comprises a unitary shoe sole, an upper section, and a plurality of transversely extending channel members that are embedded in and carried by said shoe sole and are adapted to cooperate with said upper section to maintain said shoe sole and said upper section in assembled relation, said channel members having the ends thereof spaced inwardly of the sides of said shoe sole, said shoe sole having portions thereof extending outwardly beyond the ends of said channel members to define openings in register with said channel members.

2. In a shoe, a shoe sole that has transversely disposed, hollow, open-ended channel members embedded therein that communicate with the atmosphere external of said shoe sole, and straps that are carried by said channel members, said channel members being of metal and having the interior thereof flush with those portions of said shoe sole that extend outwardly beyond the ends of said channel members.

3. A shoe that comprises a shoe sole, a plurality of open-ended channel members embedded in said sole so the outer ends of said channel members are spaced inwardly from the outer edges of said shoe sole, said shoe sole having thin sections that are spaced between the outer edges of the channel members and the outer edges of the shoe sole and have openings therethrough in register with the open ends of said channel members.

HARRY A. DADISMAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
226,532	McDonald	Apr. 13, 1880
477,851	Saunders	June 28, 1892
950,933	Koch	Feb. 22, 1910
1,333,138	Snider	Mar. 9, 1920
1,681,548	Marcus	Aug. 21, 1928
2,109,657	Perault	Mar. 1, 1938
2,151,152	Riess	Mar. 21, 1939
2,239,206	Tietig	Apr. 22, 1941
2,262,680	Hosker	Nov. 11, 1941
2,381,389	Riesing	Aug. 7, 1945

FOREIGN PATENTS

Number	Country	Date
760,714	France	Dec. 14, 1933