

June 20, 1944.

W. H. JOYCE, JR  
SHOE OR SIMILAR ARTICLE  
Filed April 22, 1942

2,351,818

3 Sheets-Sheet 1

*Fig. 1.*

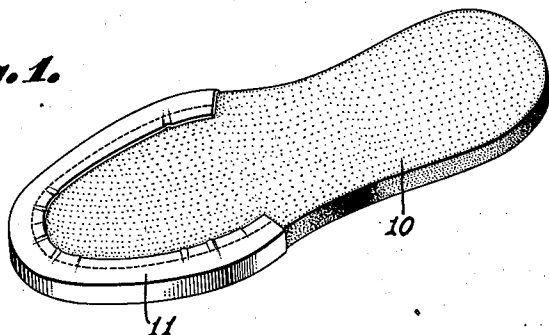


*Fig. 2.*

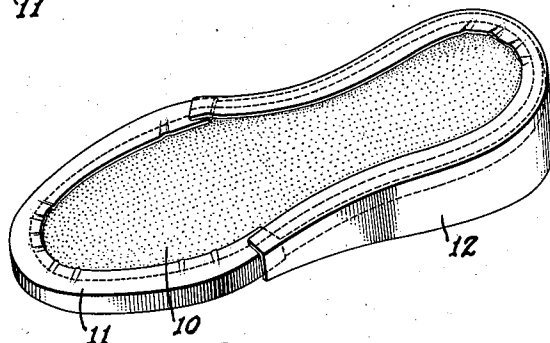


*Fig. 3.*

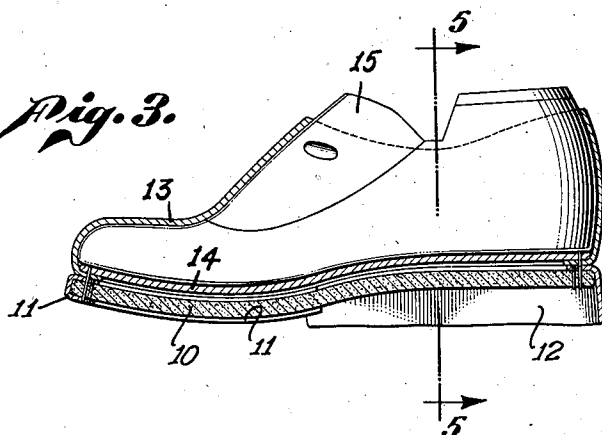
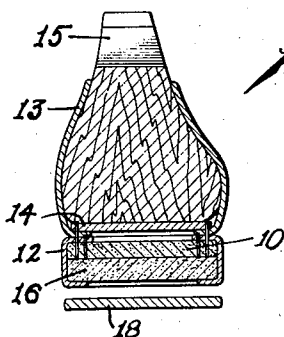


*Fig. 5.*

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*Fig. 4.*

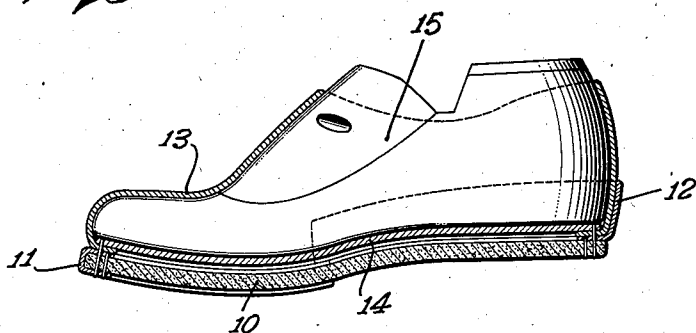


*Fig. 9.*

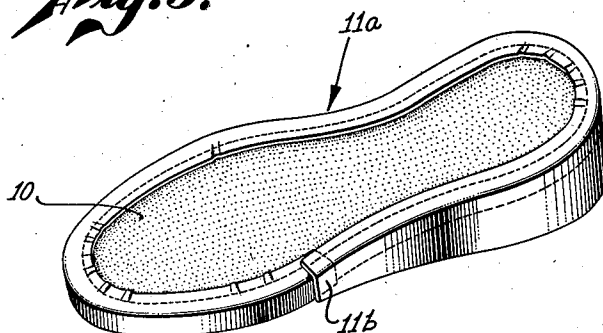
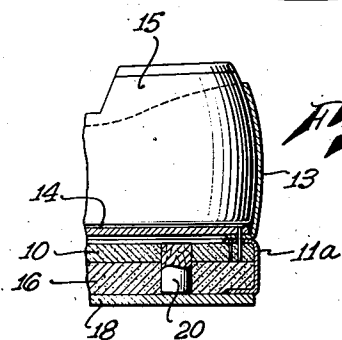


*Fig. 10.*



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*Fig. 6.*

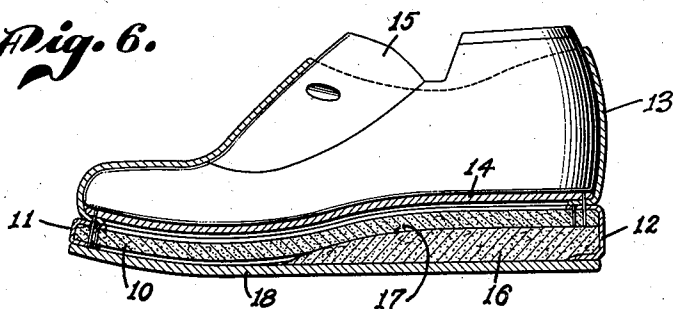


*Fig. 7.*

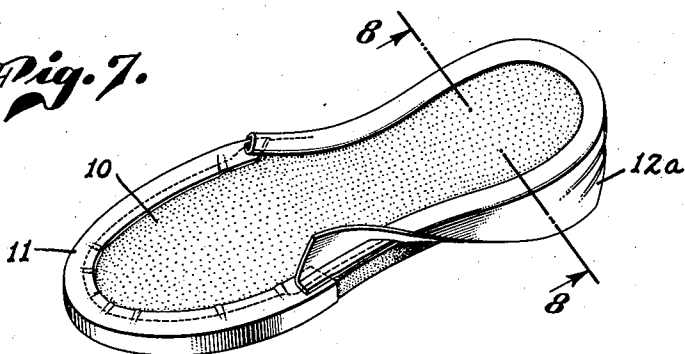
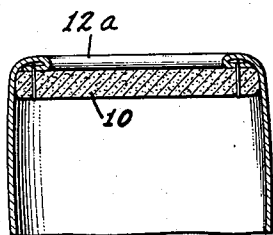


*Fig. 8.*



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## UNITED STATES PATENT OFFICE

2,351,818

## SHOE OR SIMILAR ARTICLE

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to Joyce, Inc., Pasadena, Calif., a corporation  
of California

Application April 22, 1942, Serial No. 440,066

4 Claims. (Cl. 36—19.5)

This invention relates to footwear and particularly an improved construction of a shoe having the basic characteristics disclosed and claimed in my United States Letters Patent No. 2,067,963, granted January 19, 1937, and is an improvement thereon.

In this type of shoe or slipper construction there is provided an upper, the lower edges of which are turned inwardly and secured to an insole, a midsole member of relatively thick cushioning material shaped to extend completely over the surface of the insole and comprising a sole portion of substantially constant thickness and a heel lift portion tapering in thickness from the shank of the shoe or slipper to provide a substantially smooth lower surface to said midsole member and provided with a covering of relatively thin material extending about the edges of the midsole member, such midsole member is secured to the lasted upper and insole, and an outsole member coextensive with the midsole member is attached to the lower surface of the midsole member. Shoes or slippers of the character described have been widely manufactured under said patent and sold under the trade-mark "COOL-EES."

While from a manufacturing standpoint, there are various advantages in manufacturing shoes of such character by the cement process, a possible shortage or lack of cement for the purpose may handicap such production, and I have also found that certain advantages may be realized by the stitching of some of the parts.

I have therefore devised a modified and in certain respects improved construction for achieving what in external appearance is the same shoe as that disclosed in my aforesaid patent, and while in basic structural elements is the same, embodies some differences in detail which are found to be improvements.

It is an object of my present invention to provide in a shoe or slipper of the character described an upper with the lower edges thereof turned under and secured to the lower marginal portions of an insole, a midsole member comprising a pad of cushioning material which is adapted to overlie the entire area of the insole and is provided with an edge covering of fabric, leather or other material, the pad being stitched through to secure it to the insole. The stitching may pass through at least the upper intumed edges of the covering, and a heel raise or lift inserted in a pocket formed by leaving the middle and lower portions of the covering around the heel region loose, the marginal lower edges

being thereafter wiped in upon the heel lift, and an outsole then secured to the lower surface of the completed midsole. Variations of this general construction and additional details thereof are contained in the subsequent description, from which additional objects, and advantages will be apparent. For example, in the form shown in Figures 7 and 8, the stitching securing the pad to the insole does not necessarily pass through the cover.

In the drawings:

Figure 1 is a perspective view of a cushioning pad with an edge covering around the toe portion.

Figure 2 is a view of the same pad with the edge covering around the heel portion attached and left open to form a pocket for a heel lift.

Figure 3 is a vertical sectional view of a shoe on the last, made according to my invention and with the cushioning pad of the midsole attached to the lasted upper.

Figure 4 is a view similar to Figure 3 showing the heel pad cover turned up to facilitate stitching operations and the assembly of the heel lift.

Figure 5 is a sectional view taken on the line 5—5 of Figure 3, exploded in part, with the heel lift in place and illustrating the outsole ready to be applied.

Figure 6 is a vertical sectional view similar to Figures 3 and 4 showing the shoe completed on the last.

Figure 7 is a perspective view of a modified form of attachment of a heel edge covering for the midsole.

Figure 8 is a cross sectional view taken on the line 8—8 of Figure 7.

Figure 9 is a view similar to Figure 2 illustrating a modified form of pad cover made in one piece.

Figure 10 is a fragmentary sectional view of a modified form of heel construction embodying a wooden dowel.

Referring to Figure 1, a cushioning pad 10 is preformed of felt, fiber, sisal, rubber, cork, composition, or any other suitable resilient cushioning material, preferably flat and sufficiently thick to impart a cushioning effect to the shoe or slipper, and cut to substantially conform with the shape of the bottom of the last. A hole in the heel for a wooden dowel or holes for any other heel reinforcing elements desired may be provided, but are not illustrated as they are wholly optional in the practice of my invention, and such modification is shown in Figure 10.

An edge covering 11 comprising a strip of leather, fabric or other material which may correspond to that of the upper or may be of a different or contrasting material, color or pattern, is secured around the forepart of the pad with the marginal edges of the strip turned over the marginal edges of the upper and lower faces of the pad. I prefer to attach this strip 11 by means of stitching, although adhesives may be used. It is preferable that both upper and lower edges be thus attached, although it is within the scope of my invention to attach the upper marginal edge only, allowing the lower edge to remain open and be either stitched or cemented and wiped in at the same time as the cover around the heel portion is wiped in, as subsequently described. It is possible to practice my present invention by using paste or some inferior or temporary adhesive for securing the edge covering 11 upon the forepart of the pad 10.

The next step in the preparation of the midsole is to stitch or cement a heel edge covering strip 12 to the pad 10 with the upper marginal edge of the covering 12 overlying the marginal edge surface of the pad and overlapping the ends of the covering member 11. Inasmuch as the heel covering strip 12 is to be left open, it is easier to stitch it on the pad than to cement it. For convenience of illustration, I show the heel edge covering turned down in Figures 2 and 3, but it is preferable at this stage of manufacture, to retain the heel edge covering turned up, as shown in Figure 4, as the placement of the heel lift subsequently described is thereby facilitated.

In the form shown in Figure 9, the pad covering 11a comprises a single piece of material, joined at a single lap 11b. Except for the use of a single piece of material, the other operations employing this form may follow the optional methods described in reference to the form shown in Figure 2.

The upper and insole have been previously prepared in accordance with the disclosure of my aforesaid Patent No. 2,067,963, comprising an upper 13 the lower edges of which are turned under and secured to the lower face of an insole 14. Preferably while the upper remains upon the last 15, the pad prepared as previously described, is spotted for location. The partly assembled shoe is then taken off the last and the pad is attached by sewing or cementing, or partly sewing and partly cementing, or by other means.

The shoe is then put back on the last, and a heel lift 16 positioned by cement, paste, stapling or any other suitable manner. The heel lift is preferably wedge shaped as illustrated particularly in Figure 6, so that it fits against the upward curved portion of the arch and heel portion, providing a substantially flat lower surface for the outsole member. However, there is no objection to shaping the midsole with an arch or cut out on the lower side, in which case the outsole would be made to conform to such alteration. The heel lift 16 may be of a cushioning material similar to that employed for the pad 10 or it may be of a different material, and it may be also made of wood, or other non-resilient material. It is not required that the heel lift 16 be of a resilient or cushioning material, inasmuch as the pad 10 is alone adequate for that function. (If it is desired to form a hole in the heel lift in line with a hole in the heel portion of the pad 10 for the insertion of a wooden dowel 20, this may be done within the spirit of my invention, as for example, shown in Figure 10.)

The heel flap 12 then is pulled down around the heel lift, and the lower edges turned in, stapled, or otherwise secured to the lower marginal surface of the heel lift, completing the covering of the midsole member, as shown particularly in Figure 6.

A substantially flat outsole 18 of durable leather, rubber or other suitable material is then attached to the lower surface of the midsole by cementing or any other desirable attaching means. As before stated, if the midsole is formed with an arch or cutout, the outsole should conform thereto.

A conventional sock lining (not illustrated) may be placed on the insole, this being a matter of choice.

In the modified form shown in Figures 7 and 8 the difference lies in the exact manner of attaching the edge cover strip 12a to the heel portion of the pad. Here the said cover is stitched to the upper surface of the pad with the outer edge of the cover following the contour of the edge of the pad, instead of the edge being turned in, and the cover is then folded back on itself, as illustrated, to form a pocket for the heel lift.

It is to be understood that the cover 12 of Figure 2, and 12a of Figure 7 may be cemented to the upper surface of the pad instead of being stitched thereto but I consider it better practice when regarding the present construction as a whole to stitch the edges, in one of the ways indicated.

A shoe or slipper may be constructed according to the disclosure and limiting the need for a permanent, high grade cement in attaching the edge covering to the pad member, enabling the use of an inferior type of cement or paste, it eliminates the need for roughening the top of the pad along the marginal turned in edges of the midsole covering (an operation sometimes necessary when cementing the midsole to the upper), the midsole in the present construction being attachable to the upper by stitching, thereby also eliminating the necessity of cement for attaching the midsole to the upper.

Although I have herein shown and described my invention in what I have conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of my invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent structures and methods. Other variations, not described, may be practiced within the scope of my invention.

The essence of my invention is a shoe or slipper construction wherein an upper is lasted with its lower edges turned in and secured to the lower surface of an insole, a midsole is attached to the aforesaid lasted upper, the midsole and manner of attaching it comprising a pad having an edge covering at least the heel portion of which is left open, then spotting it to the bottom of the upper and stitching through the pad, the returned lower edge of the upper, and the insole, or by otherwise attaching the pad to the upper, a heel lift is positioned against the under surface of the heel portion of the pad, and the covering theretofore left open is brought against the heel lift, and the lower edges secured around the lower marginal surface of the heel lift, and an outsole is attached to the lower surface of the midsole thus formed.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A shoe or slipper comprising an upper with the lower edges turned under an insole and secured thereto, a midsole substantially coextensive with the area of the insole and secured to the upper, the midsole and means of attaching it to the upper comprising a preformed pad of cushioning material, an edge covering of material around the toe portion of the pad with the upper and lower edges of the covering turned in over the upper and lower surfaces respectively of the pad and stitched through said pad, an edge covering of material around the heel portion of the pad wide enough to also cover a heel raise and secured against the upper surface only of the heel portion of the pad, the pad being stitched through the body thereof a second time and through the inturned lower edge of the upper and the insole to attach the midsole to the upper, a heel lift positioned against the lower surface of the heel portion of the pad, the edge covering around the heel lift being turned down around same and the lower edges turned in and secured to the lower marginal surface thereof, and an outsole attached to the lower surface of the midsole.

2. A shoe or similar article construction as described in claim 1, in which the cover for the heel portion of the midsole is stitched to the upper surface of the pad with the edge of the cover turned outwardly, and the cover is turned over itself outwardly in enclosing the heel lift.

3. A shoe or similar article comprising an upper with the lower edges turned under an insole and secured thereto, a cushioning midsole substantially coextensive with the area of the insole and secured to the upper, the midsole and means of attaching it to the upper comprising a preformed pad of cushioning material, an edge covering of sheet material around the pad with the upper and lower edges of the covering turned in and attached to the upper and lower surfaces respectively of the pad around the toe portion

of the latter by a line of stitching through the pad and inturned edges of the covering and with the upper edge only of the covering turned over the upper surface only of the pad around the heel portion and attached by a line of stitching through the pad and said inturned edge, a heel raise attached to the pad, the lower edges of the covering around the heel portion being turned in and secured to the lower surface of the heel raise, the midsole being attached to the upper by an additional line of stitching through the pad, the inturned edge of the upper, and the insole, and a substantially flat outsole attached to the bottom of the midsole.

4. A shoe or similar article comprising an upper with the lower edges turned under an insole and secured thereto, a cushioning midsole substantially coextensive with the area of the insole and secured to the upper, the midsole and means of attaching it to the upper comprising a preformed pad of cushioning material, an edge covering of sheet material around the pad with the upper and lower edges of the covering turned in and attached to the upper and lower surfaces respectively of the pad around the toe portion of the latter by a line of stitching through the pad and inturned edges of the covering and with the upper edge only of the covering turned over the upper surface only of the pad around the heel portion and attached by a line of stitching through the pad and said inturned edge, a heel raise attached to the pad, the lower edges of the covering around the heel portion being turned in and secured to the lower surface of the heel raise, the midsole being attached to the upper by an additional line of stitching through the pad, the inturned edge of the upper, and the insole, outside said first line of stitching, and a substantially flat outsole attached to the bottom of the insole.

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