Feb. 10, 1959 F. MACCARONE 2,872,746

SHOEMAKING

Filed Feb. 1, 1957

Fig. 1a

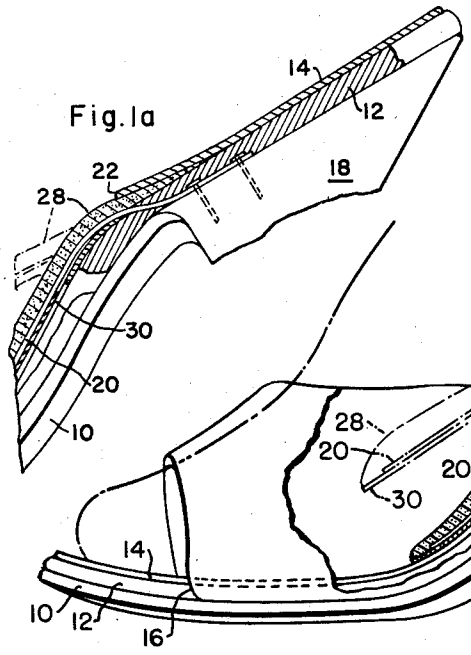


Fig. 1

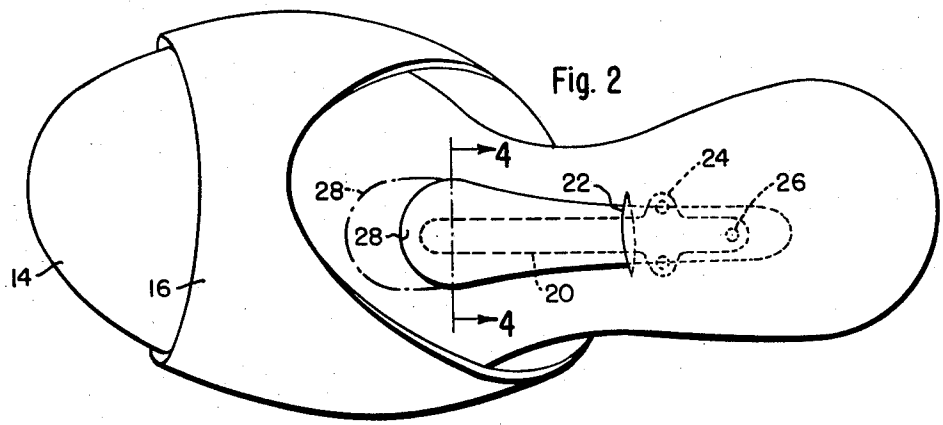


Fig. 2

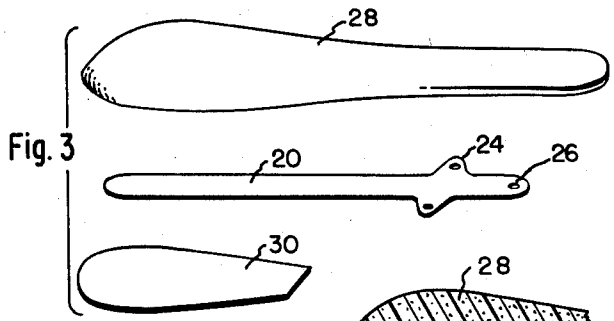


Fig. 3

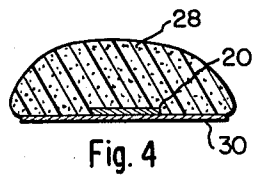


Fig. 4

Fig. 5

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SHOEMAKING

Fred Maccarone, Brooklyn, N. Y.

Application February 1, 1957, Serial No. 637,785

2 Claims. (Cl. 36—76)

My invention relates to shoemaking and more particularly to a device for improving the comfort and appearance of shoes.

In recent years women have come increasingly to favor open back shoes wherein the upper comprises a vamp and either entirely lacks the quarters or includes only narrow heel straps. In any case such shoes are not held firmly on the feet by upper structure. One result has been that as the weight is removed from the foot at the termination of the stride, the heel lifts away from the shoe. In addition to the rather sloppy appearance thus resulting, the shoe is not a stable platform. Moreover when a seated wearer crosses her legs, one shoe tends to dangle unattractively.

The primary object of my invention is to improve the fit, comfort, and appearance of shoes.

An important feature of my invention resides in a resilient shank tongue anchored in the heel seat portion of the interior of the shoe and projecting forwardly above the shank portion in position to encounter the instep of the wearer in such fashion that the tongue acts as a lever gently urging the rear portion of the shoe into contact with the foot.

Another feature of the invention consists in a cushion surrounding the tongue and cooperating therewith to provide a metatarsal pad lending support to the transverse arch of the foot.

These and other objects and features of the invention will be more readily understood and appreciated from the following detailed description of preferred embodiments thereof selected for purposes of illustration and shown in the accompanying drawing in which:

Fig. 1 is a view in side elevation of a shoe incorporating the invention, portions of the shoe being shown in section,

Fig. 1*a* is a fragmentary view showing an alternative arrangement of the shank tongue,

Fig. 2 is a plan view of the shoe,

Fig. 3 is an exploded view showing in perspective the elements comprising the cushioned tongue.

Fig. 4 is a view in cross-section along the line 4—4 of Fig. 2, and

Fig. 5 is a view in longitudinal cross-section through the forward end of the cushioned tongue, showing an alternative embodiment thereof.

Although the shank tongue of my invention may be incorporated in all kinds and styles of shoes, it is particularly advantageous when embodied in a lady's open back shoe of the type illustrated in Fig. 1. The shoe comprises the usual outsole **10**, insole **12**, and a sock lining **14**. The upper comprises an open-toed vamp **16** assembled and lasted in customary fashion, the rear portion of the shoe having no upper. A conventional heel **18** completes the normal structure of the shoe. The shank tongue of my invention is best shown in Fig. 3 where it will be seen that the principal element comprises an elongated strip **20** of resilient metal or plastic

provided adjacent its rear end with a pair of laterally extending apertured tabs **24**, a third hole **26** being disposed at the extreme rear end back of the tabs **24**. Combined with the resilient leaf spring **20** is a cushion **28** of sponge rubber or any other suitable resilient cushioning material. The cushion is generally of spatulate form having an enlargement or button portion at its forward end and recessed on the lower surface to accommodate the spring **20**. A cover piece **30** of leather or other suitable stout material is cemented to the lower surface of the cushion **28** and forms a pocket accommodating the leaf spring **20**. Alternatively, as shown in Fig. 5, the cushion may include an integrally molded pocket for the reception of the forward end of the leaf spring **20**, thereby eliminating the necessity for the separate cover piece **30**.

To incorporate the shank tongue into the structure of the shoe, the sock lining **14** is slashed transversely as shown at **22**, adjacent the heel breast line, and the rear end of the leaf spring **20** is inserted through the slash so that the rear end of the spring, including the tabs **24**, overlies the heel seat of the shoe beneath the sock lining. To accommodate the thickness of the spring, the heel seat portion of the sock lining may be provided with a cushioning pad cut away to form a recess fitting about the leaf spring; alternatively the sole in the heel seat portion may be provided with a recess accommodating the spring in such fashion that the upper surface of the leaf spring is flush with the upper surface of the insole. Nails or other fasteners are driven through the three holes in order to anchor the spring securely in place. It should be pointed out that it is customary to employ a metal shank stiffener (not shown) running rearwardly from a point behind the ball line into the heel seat portion of the shoe. The tabs **24** are dimensioned to straddle the shank stiffener so that the nails driven through the holes in the tabs will fall on each side of the metal shank stiffener. The hole **26** at the extremity of the leaf spring is situated far enough back to avoid the rear end of the conventional shank stiffener. Other methods of anchoring the spring in place will suggest themselves to those skilled in the art. For example, instead of passing the leaf spring merely through a slash in the sock lining, it may also be passed through a similar slash in the insole so that the rear end of the spring will lie beneath the insole rather than on top of it. In the latter case the lower surface of the insole may be recessed to accommodate the spring.

The latter construction is shown in Fig. 1*a* in which the sole **12** is recessed longitudinally in its under surface to receive the rear end of the leaf spring **20**. At the forward end of the recess the insole is slashed transversely and the spring **20** passed outwardly and provided with the cushion **28**. This spring-supported cushion **28** now extends forwardly and downwardly into free space, terminating at a point substantially in advance of the ball line of the shoe bottom as in Fig. 1.

It will be apparent, of course, that the whole rear portion of the shoe bottom, including its heel seat and shank, is substantially rigid almost up to the ball line but that at the ball line and in advance thereof the shoe bottom is extremely flexible. This is one of the essential requirements of modern shoes of this class.

In all cases, however, the tongue is biased by its built-in spring so that when depressed it tends to flex the whole rear portion of the shoe bottom upwardly holding it close to the foot of the wearer.

When a shoe incorporating a shank tongue of the character herein described is placed on the foot, the spring is depressed from the dotted line position of Fig. 1 to the full line position. The resiliency of the spring pressing upwardly upon the bottom of the foot gently urges the

upper portion of the foot at the instead into firm engagement with the vamp. Thus the shoe is held firmly but gently in place on the foot. Moreover the shank tongue further cooperates with the foot and the vamp to exert some lever action tending to urge the heel seat of the shoe into engagement with the wearer's foot. The result is that the shoe feels more comfortable and serves as a more stable platform on which to walk. The action of walking also brings about a pleasant massaging of the arch of the foot by the forward end of the cushioned shank tongue, an effect which increases the comfort afforded by the shoe. It has been found in practice that the shoe is so snugly held on the foot that it cannot easily be removed except by depressing the shank tongue with the thumb as the shoe is drawn off the foot; otherwise, the shank tongue tends to resist removal of the shoe.

It should be pointed out that the shank tongue imposes no undue stresses on either the sole or upper structure of the shoe and that the steel spring is not subject to wear or deterioration.

While the embodiments of the shank tongue of my invention as herein shown and described represent the preferred embodiments, many alternatives will become apparent to skilled shoemakers. The dimensions of the tongue and cushion are not critical, and the location of the slash in the sock lining is a matter of judgment depending upon the general characteristics of the particular shoe in which the shank tongue is to be incorporated.

Having thus disclosed my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In an open back shoe including an outsole, an insole, and a shank stiffener, the combination of an elongated metal spring having apertured lateral tabs at its rear end, fastening elements passing through the apertured tabs and into the insole, said fasteners straddling the rear end of the shank stiffener, and a piece of cushioning material disposed upon the forward portion of the spring, the forward end of the cushioned spring extending freely above the shank portion of the insole and terminating adjacent the ball line.

2. In an open back shoe having an insole, the improvement comprising an elongated leaf spring having its rear end passing through a slash in the heel seat portion of the insole, means anchoring the rear end of the spring in place, and a cushion disposed on the forward end of the spring, the cushioned forward end of the spring projecting above the shank portion of the insole.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,872,746 February 10, 1959

Fred Maccarone

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 1, for "instead" read -- instep --.

Signed and sealed this 9th day of June 1959.

(SEAL)
Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents