June 18, 1929. W. B. IHNEN 1,717,690

TRANSPARENT FOLDABLE FOOTWEAR

Filed Dec. 11, 1926

Fig. 1.

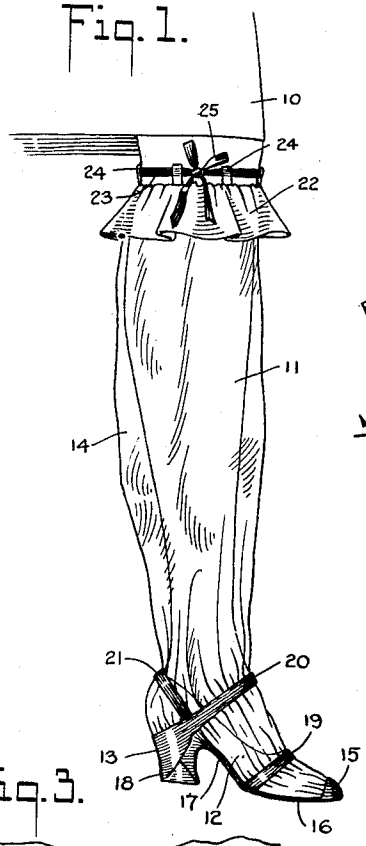


Fig. 2.

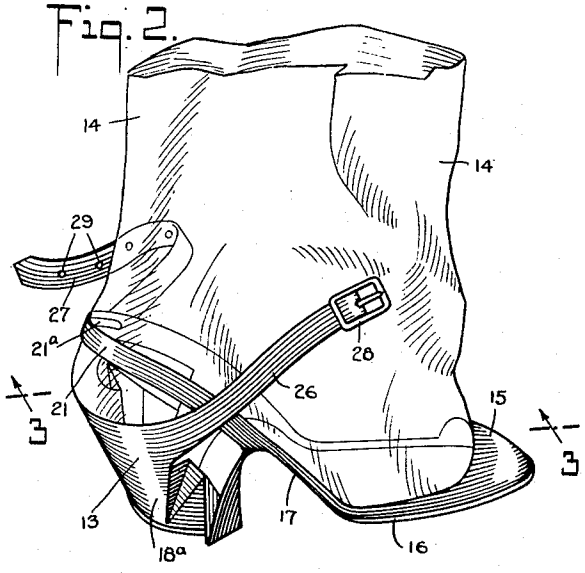


Fig. 3.

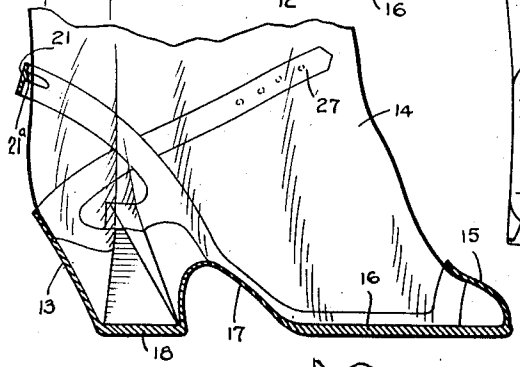


Fig. 4.

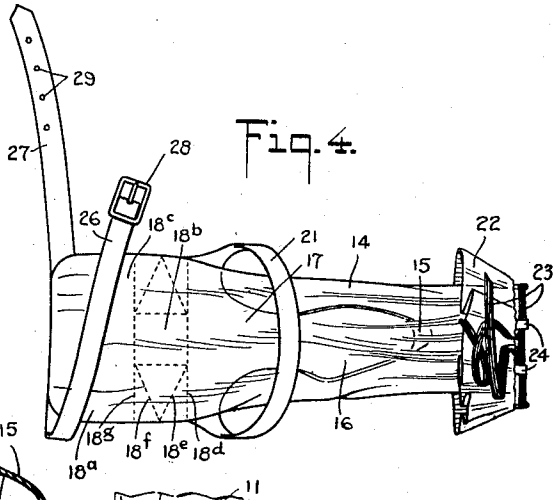


Fig. 5.

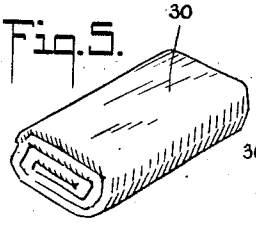


Fig. 6.

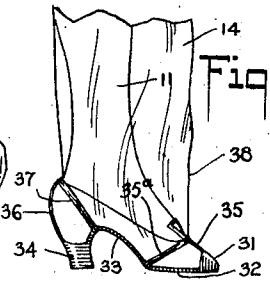
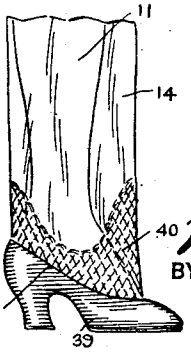


Fig. 7.



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UNITED STATES PATENT OFFICE.

WIARD B. IHNEN, OF NEW YORK, N. Y.

TRANSPARENT FOLDABLE FOOTWEAR.

Application filed December 11, 1926. Serial No. 154,106.

This invention relates to transparent, foldable footwear.

My invention is applicable to several types, including the "galosh" type having a sole and heel portion formed of integrally connected parts of appropriate shape and usually of rubber composition and having further an upper portion formed of transparent waterproof material. In another type, which I term the "footwear" type, the lower or shoe portion of my invention is formed usually of leather or other suitable material of appropriate shape and the upper portion of transparent waterproof material.

I prefer oil silk for the transparent waterproof material, by reason of its superior transparency and its distinctive characteristics of waterproof, readibility to be folded or otherwise collapsed to reduced dimensions, freedom from creasing and from cracking, and simplicity of forming a waterseal joint with rubber, leather, fabrics and the like which may be employed. Oil silk is also readily cleaned and is unstained by rain, mud and the like and in the claims I have used the expression, "non-self-sustaining" to characterize the tendency of oil silk and the like to collapse.

Further features and objects of the invention will be more fully understood from the following detail description and the accompanying drawings, in which

Fig. 1 is a side elevation of one form of my invention; the illustration shows this form for women's use;

Fig. 2 is a detail perspective view of another form of my invention as worn by a female; certain parts of my invention are illustrated in partly open position;

Fig. 3 is a sectional elevation on line 3—3 of Fig. 2;

Fig. 4 is a top plan view indicating certain parts in partially collapsed positions; this form of my invention corresponds to that illustrated in Figs. 2 and 3;

Fig. 5 is a perspective view showing in fully collapsed position the form of my invention appearing in Fig. 4; and

Figs. 6 and 7 are side elevations illustrating further modifications of my invention.

While my invention is illustrated in the drawings of the application for women's wear, it will be understood that my invention is equally adaptable for men's use.

Referring to Fig. 1, the form of my invention herein illustrated is what may be defined as of the "galosh" type and is illustrated as worn by a female; the skirt of the wearer is indicated at 10, one leg at 11 and the shoe of the pump style at 12. For such form of my invention, the "galosh" comprises a "rubber" of the sandal style 13 and an upper or protective portion 14; the sandal is preferably of rubber composition and the latter preferably of oil silk. The line of joint or connection between the lower portion of the protective portion 14 and the juxtaposed portions of the sandal 13 are suitably united to form a waterseal. Such waterseal joint may be effected by the use of any suitable cement by direct cementing of these materials to one another, as explained more fully hereinafter in connection with Fig. 3, or by the use of such cement in coaction with fabric, partly rubberized or unrubberized, as will be understood by those skilled in the art.

The toe portion 15 of the sandle 13 is preferably of rubber composition which is molded or otherwise integrally connected with the sole portion 16, in turn with the arch portion 17 and with the heel portion 18. Such rubber parts, 15, 16, 17, 18, constitute what may be considered as the essential parts of the sandal so far as relates to the waterproof seal joint with the oil silk or other transparent protective material forming the upper portion of my invention. A corresponding sealed joint is made for other types of "rubbers" or like footwear apparel.

Usually, one or more straps of rubber composition such as the instep strap 19, and forward and rearward ankle straps 20, 21 are provided, the opposite ends of which are molded or otherwise integrally connected with the appropriate portions of the sandal 13 or equivalent. Such straps 19, 20, 21 are preferably not directly connected to the abutting or engaging portions of the oil silk 14 or equivalent material.

In the use of the embodiment of my invention as shown in Fig. 1, the wearer puts on the same in a manner similar to putting on a galosh or boot. The upper end portion 22 of the protective material 14 may hang loosely, that is to say, free from the wearer's leg 11, or, as is illustrated in Fig. 1, may be secured in more or less open and ventilating position by the use of a ribbon 23 or the like passing through spaced loops 24 formed of the oil silk 14 or other material. The ends of such ribbon 23 may be tied as is indicated at 25. Such form of my invention embodies dis-

tinctive artistic features, as well as structural features.

In the wear of my invention, the leg 11 of the user is clearly perceived through the transparent oil silk or equivalent material 14.

The water-proof character of such material 14 affords protection against rain, mud and the like to the stocking or sock worn by the female or male user as well as to the pump or other leather or other footwear.

As is illustrated and described hereinafter in relation to another form of my invention, the type of my invention shown in Fig. 1 is readily collapsed, after removal from the leg of the wearer, as by folding the oil silk or equivalent material 14 on itself and placing the same in folded position upon the sandal 13, or by rolling the sandal 13 within the oil silk 14, or in any other suitable or preferred manner.

In Figs. 2, 3, and 4, I have illustrated another form of my invention which is capable of greater reduction of size when collapsed or folded. As appears in Figs. 2 and 4, the sandal 13 in this instance comprises toe, sole and instep portions corresponding generally to similar parts in Fig. 1, and marked by like reference numbers, 15, 16, 17, respectively. However, the heel portion 18^a comprises a heel base 18^b consisting of a substantially flat block of rubber which is molded or otherwise integrally connected with adjacent lateral heel portions marked generally 18^c which are of relatively thin rubber composition to enable the same to assume a wholly flat position. Such lateral heel portion 18^c is molded or otherwise formed with creases as indicated at 18^d, 18^e, 18^f and 18^g, whereby upon drawing up the oil silk 14 or equivalent material forming the upper portion of my invention when putting on my article, or when suspending the same for display or the like, the respective sub-portions of the lateral heel portion 18^c are self-conforming, i. e., interfold with one another at such creases 18^d, 18^e, 18^f and 18^g to fit snugly about the heel of the pump or other footwear of the wearer. In Fig. 2 I have illustrated these parts in partly open and partly closed positions.

In such form of my invention, I prefer to have a front ankle fastening means in the form of two co-acting "straps", see 26, 27, one of which is provided with a buckle 28 and the other with a series of holes 29 for adjustably receiving the tongue of the buckle 28, or in lieu thereof any other form of adjustable connection may be employed. It is also desirable to employ a rearward loop 21 of rubber composition or other suitable material, the ends of which are molded or otherwise integrally connected to the arch portion 17 of the sandal 13. Such loop 21 is preferably free from the intermediate portions of the protective material 14.

If desired, the central portion of the loop 21 on its inner face may be provided with a lug 21^a, see Fig. 4, formed of rubber composition and integral with the body of the loop 21, to serve as a hook to engage over the contacted portion of the oil silk 14 and be caught over the upper edge of the back heel portion of the pump or like footwear worn by the user.

Fig. 4 illustrates the "rubber" parts, including the toe part 15, sole part 16, arch 17 and heel parts 18^a, 18^b, 18^c, in substantially flattened position, preparatory to rolling up or folding up the oil silk portion 14 and its upper terminal portion 22. The oil silk may be rolled upon itself firstly and then placed as a flattened roll upon the flattened "rubber" parts for the purpose of collapsing my article to reduced dimensions. Or, the "rubber" part may be first rolled upon itself and within the oil silk 14, and such rolling operation continued until the article assumes a generally flattened rolled shape as is indicated at 30 in Fig. 5.

Another form of my invention is shown in Fig. 6 which conforms generally to that of Fig. 1, excepting that the "rubber" is formed of a toe part 31, sole part 32, arch part 33 and a heel part 34, the remainder of the "rubber" being of cut-away or skeletonized formation of "rubber" composition, to include a strap 35 extending centrally upwardly from the toe part 31, and meets and joins with a transversely extending strap 35^a, which strap 35^a is connected at its opposite ends to a rearward portion on the opposite sides of the vertical flanges of the sole part 32, and further including a strap 36 extending centrally upwardly from the heel proper 34 and meeting and joining with a strap 37 connected at its opposite ends to a rearward portion of the arch part 33.

In the wearing of my invention of the form as shown in Fig. 6, the oil silk or equivalent material 14 extends at its forward margin, see 38, substantially vertically upwardly from the junction of the strap 35 with the middle of the transverse strap 35^a, and thereby gives a "boot" effect as contrasted with the "galosh" effect of my invention as illustrated in Fig 1. It will be understood that the oil silk 14 of my embodiment shown in Fig. 6 is continued upwardly for any desired height to or below the calf of the leg 11 of the wearer and at its upper portion may be free from the leg of the wearer, or that the upper portion of the oil silk 14 may extend above the calf of the wearer's leg and may be trimmed and supported from the leg of the wearer similarly as is illustrated in Fig. 1.

In the form of my invention as shown in Fig. 7, the lower part 35 may be a pump of leather or other suitable material, to which is attached the oil silk 14, the whole serving as footwear to be worn directly on the foot and about the leg 11 of the wearer. The upper

portion 14 of this form of my invention may be in similitude of a "galosh" as shown in Fig. 1 or in similitude of a boot, as may be preferred.

Fig. 7 also illustrates the use of netting of cotton, linen or other suitable material, preferably of wide mesh to insure transparency and visibility. Such mesh 40 may be employed in reinforcement of the oil silk 14 particularly at its lower portion, to relieve any undue strain on the oil silk when putting on and taking off my invention and to minimize the wear of the oil silk when brought into frictional engagement of one "boot" or "galosh" with the other. As is indicated in Fig. 7, the netting 40 or equivalent mesh material is shown applied also to the joint 41 of the oil silk 14 with the foot-wear 35 and to thereby also reinforce the joint 41. In a similar manner, a double or other multiple thickness or ply of oil silk may be employed to yield increased strength at the desired locations.

In the respective forms and types of my invention, the upper or protective portion for at least its major portion reveals the shape of the wearer's legs and preserves the color effect of the stocking or sock worn by the wearer. In men's use, the lower portions of the legs of the trouser are likewise visible through the oil silk or equivalent material, thus preserving the continuity of the color and weave markings of the trousers, and enhancing the appearance of the apparel of the wearer.

Usually, the oil silk is colored, such as of a light yellow tone, "clear" green or other desired color, and preferably artistically consonant with the color of the stocking or other outer garment worn by the wearer.

Oil silk is preferred by me as the upper or protective material, by reason of its high degree of transparency, its water-proof qualities and its freedom of being readily rolled upon itself or otherwise collapsed, and without causing creases or creating cracks. However, other similar material may be employed in lieu of oil silk, and it will be understood that the term "oil silk" as employed in the appended claims includes such similar material.

It is also understood that the term "shoe" as used in the appended claims connotes the several ordinary forms of shoes and also the various forms of so-called "rubbers" and waterproof sandals.

Whereas I have described my invention by reference to specific forms thereof, it will be understood that many changes and modifications may be made without departing from the spirit of the invention.

I claim:

1. An article of foot and leg apparel comprising a leg portion of non-self-sustaining material constructed to loosely fit the leg of the wearer, an uppermost part of said leg portion being formed as a down-turned cuff, a strap loop secured to an upper part of said body portion of said leg portion, a strap passing through said strap loop for securement about the leg of the wearer at a location above the calf, and a foot portion for securement of said sheet material to the foot of the wearer.

2. An article of foot and leg apparel comprising a leg portion of non-self-sustaining material constructed to loosely fit the leg of the wearer, an uppermost part of said leg portion being formed as a down-turned cuff, a strap loop secured to an upper part of said body portion and extending above said body portion, a strap passing through said strap loop for securement about the leg of the wearer above said body portion to thereby provide a ventilating opening at the top of said leg portion, and a foot portion for securement of said sheet material to the foot of the wearer.

3. An article of foot and leg apparel comprising a leg portion of non-self-sustaining material constructed to loosely fit the leg of the wearer, an uppermost part of said leg portion being formed as a down-turned cuff, a strap loop secured to an upper part of said body portion of said leg portion, a strap passing through said strap loop for securement about the leg of the wearer at a location above the calf, and a collapsible foot apparel secured to the lower part of said leg portion.

4. An article of foot and leg apparel comprising a leg portion of non-self-sustaining material constructed to loosely fit the leg of the wearer, an uppermost part of said leg portion being formed as a down-turned cuff, a strap loop secured to an upper part of said body portion and extending above said body portion, a strap passing through said strap loop for securement about the leg of the wearer above said body portion to thereby provide a ventilating opening at the top of said leg portion, and a collapsible foot apparel for securement to the lower part of said leg portion.

In testimony whereof I have signed this specification this 9th day of December, 1926.

WIARD B. IHNEN.