Dec. 6, 1927. 1,651,631

L. M. RADWAY

OUTER FOOT COVERING

Filed Aug. 18, 1925

Fig. 1.



Fig. 6

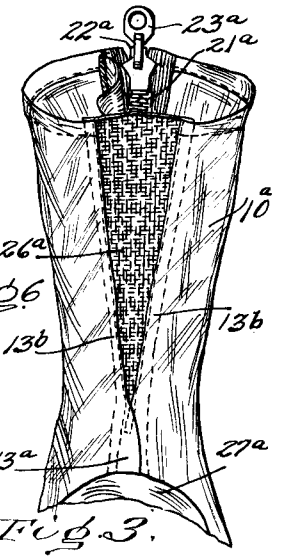
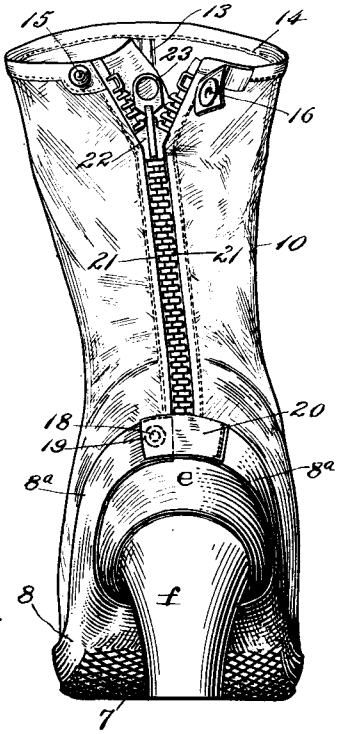


Fig. 3.



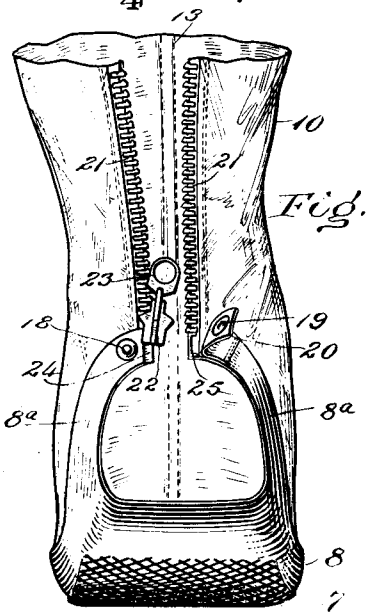


Fig. 2.

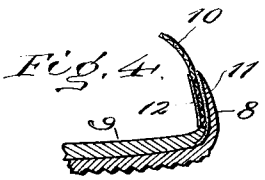


Fig. 4.

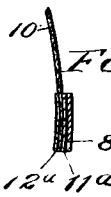


Fig. 5

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UNITED STATES PATENT OFFICE.

LAURA M. RADWAY, OF NEW YORK, N. Y.

OUTER FOOT COVERING.

Application filed August 18, 1925. Serial No. 50,942.

This invention is a novel outer foot covering, having reference especially to a waterproof covering suitable for the warm season, and intended to be placed over a shoe, low shoe or slipper, and the stocking, to afford protection from rain, surface wet and splash.

The general object of the present invention is to provide such an outer foot covering which will protect the shoe sole, edge and upper, and the stocking to a point above the ankle, while leaving the shoe heel free or unenclosed, and which will combine some or all of the following advantages. The described article is complete, unitary and compact; it gives durable wear yet is very light in weight; it is easily applied and readily removed, and can be used with heels of varying size; its upper portions are essentially flexible, thus facilitating applying the article, and permitting free flexing of the material during walking; although flexible the article is able to hold itself in shape and position; it is comfortable to wear, being as cool and ventilated as is consistent with its waterproof quality; despite these advantages the article is sightly, and even stylish looking, and the upper material may be thin and transparent so that the shoe and stocking may be seen beneath the waterproof protection; and the article is inexpensive to manufacture.

I know of no prior article meeting these requirements. The well-known arctic completely protects the shoe and stocking to above the ankle, but it is unduly heavy and uncomfortable in use, and unduly warm and unsuitable except for cold or winter weather; its inflexibility renders it a burden in walking, it is troublesome to apply, and it undesirably boxes in the entire shoe, heel and all, to the added discomfort of the wearer, and rendering it unavailable except with certain shoe heels; and it is inherently unsightly. The gaiter or spat protects the stocking and ankle but gives no protection to the shoe sole or edge and only partly protects the upper; it requires a strap to be applied beneath the shoe, and is usually heavy and unsuitable for warm season protection from rain and wet. The heelless rubber overshoe is small and light and protects the shoe sole and edge but gives no protection to the upper or the stocking; the rear strap is not detachable at the back or elsewhere, and the article can only be applied by inserting the foot and heel from above. A combination of the gaiter and overshoe merely combines the objections of both, constitutes an expensive assemblage, which is not a unitary article, and is substantially impractical because of difficulty in applying and removing.

To the accomplishment of the objects and advantages above recited, and to the avoidance of the objections and difficulties of the prior articles, the present invention consists in the novel outer foot covering, and the novel features of combination, design, structure and detail herein illustrated or described.

In the accompanying drawings, Fig. 1 is a side elevation of an outer foot covering applied outside of a low shoe and stocking. Fig. 2 is a rear elevation of the article removed from the shoe. Fig. 3 is a view similar to Fig. 2 but showing the article applied, and the attachment almost completed. Fig. 4 is a detail of certain parts taken in section on the line 4—4 of Fig. 1, while Fig. 5 is a similar section taken on the line 5—5 of Fig. 1.

The outer foot covering of this invention gives protection to the stocking *a* up to a point above the ankle, and protects also the shoe *b*, or rather the greater part of the shoe, including the upper *c*, the sole *d*, and the counter *e*, but not the heel *f*, which is not enclosed but is free. In its complete embodiment the invention as illustrated comprises the following described elements.

The tough wearing-resisting under part or tread 7 preferably consists of or comprises rubber in its make-up, giving waterproof, wearing and non-slipping qualities. The tread extends from the toe end rearwardy under the ball of the foot and sufficiently along the shank to protect the shoe sole from exposure or wetting. Around its periphery the tread 7 is formed or molded into an upstanding flange or rim 8, which encases the sole edge at the fore part and shank, and extends slightly higher, to cover partly the

shoe upper. This outer rim 8 is shown extending further rearward than the tread 7, namely in the form of a strip 8^a, constituting one of the layers of a stay or strap, to be described, extending to or around the rear end or counter of the shoe. At the interior, laid upon the tread 7, is shown an insole 9, which also may contain rubber, and be held adhesively down upon the tread.

The upper part or component of this invention consists of a flexible unlined but waterproof element 10, composed of light weight material, (for example, oil-silk) and giving protection to the shoe upper and to the stocking to and above the ankle; this upper element being combined and connected to form a substantial continuation of the rubber rim or edge strip 8, 8^a.

The mode of interconnection of the under and upper parts may be greatly varied, in accordance with the preferences of those skilled in the manufacture of footwear, but the following is a convenient arrangement. As shown in Fig. 4, the flexible upper element 10 extends downwardly within the rubber rim 8 substantially to the insole 9. When a thin, light material, as oil-silk, is used, lacking in substantial strength, it is preferably reinforced by a fabric strip 11 arranged between the upper element 10 and the rubber rim 8. This strip 11 may be caused to adhere firmly to the element 10 through rubber cement or otherwise (reinforced by a series of long stitches if desired); and the outer side of the strip 11 may be permanently united with the rubber rim 8 by vulcanization or analogous method, and this latter step may be performed in the process of forming the tread 7 and rim 8. To give greater security, the adhering strip 11 is shown as extending below the lower edge of the flexible element 10, and partly underneath the adhering insole 9, as plainly shown in Fig. 4. A second adhering fabric strip 12 may be applied against the inner surface of the oil-silk element 10, facing the strip 11. This assemblage gives a very strong construction, but as stated may be modified in various ways, according to the practice in the art.

The flexible upper element of the invention may consist of two or more separate pieces cut out of flat sheet material and connected in the form shown. Thus two separate side sections 10, 10 are indicated and these are united along their meeting edges, shown at the front, by means of a seam 13, for example a French seam, consisting of doubled in portions of the two sections of the flexible material 10, united by long stitches. The result not merely gives a weather tight construction but affords also an advantage in a vertical stiffening effect, acting to hold the higher portions in their correct position, without sagging, notwithstanding the soft flexible character of the material. The top edge of the upper element 10 may be finished with a binding or hem 14, also affording a desirable stiffening effect.

The bottom edge of the upper element 10, to the rear of the rubber rim 8, is shown as bound and stayed by the rearward rubber strip 8^a already mentioned, and a fabric strip 11^a, seen in Fig. 5, being a continuation of 11, between the flexible material 10 and the rubber layer 8^a, and an inner fabric strip 12^a, a continuation of 12. These firmly united components form a rear stay passing rearwardly at each side, and around the rear or counter, but interrupted as will be described.

For the purpose of applying and removing the described article it is preferably opened and closed along an upright line at the extreme rear, as shown, although the line of connection might be shifted around to a different point if desired. The mode of connecting the adjacent free edges may be varied, but a substantially continuous connecting system, affording a stiffening effect in an up-and-down direction is preferable, thus cooperating with the stiffening by the seam 13 to hold the applied article in place. The drawings show a top fastening consisting of a stud element 15 at one end of the binding 14, and a socket element 16 on a short flap 17 at the other end of the binding, as indicated in Fig. 3, so that when the article is applied the stud and socket may be snapped together. A similar fastening is shown at the bottom consisting of a stud 18, on one end of the rear stay, engageable by a socket 19 on a flap 20 on the other end of the stay. Between these top and bottom fastenings may be provided other fastenings, of various kinds, but preferably a system of continuous or closely spaced attachments, giving a sightly appearance and the stiffening effect already referred to. An automatic or other mechanical lacing system is well adapted to this purpose, such as the well-known "Zipper" lacing, and such an arrangement is shown at 21, consisting of systems of opposed links arranged to be automatically interlaced through a sliding member or runner 22 having a ring or handle 23 by which the runner may be pulled longitudinally of the lacing system and thus cause the interlocking of the consecutive lacing members, as described. As shown in Fig. 2, the two sides of the lacing system are mutually wholly detachable, permitting complete opening for the insertion of the foot, an arrangement believed to be novel per se. A guard or block 24 is provided at the foot of the lacings at one side to prevent the runner 22 from passing off and becoming lost. At the other side an elongated link 25 is provided, which may readily be inserted by

hand into the runner recess at that side and placed in alinement with the guard 24 before the runner is pulled along to effect the interlacing. Fig. 3 shows the runner pulled almost to the top. When it is completely elevated the snap fastener 15, 16 may be closed, also the snap fastener 18, 19, thus protecting the top and bottom ends of the lacing system.

When closed, the article presents a structure having on opening through which the shoe heel projects downwardly as shown. The upper material is not continuous, but interrupted along a line extending, preferably from the top edge down to the heel opening. If, however, the line of fastenings were at the front, they would have to extend well down to the toe to admit the ready applying of the article. In either case a tongue of material may extend within the line of fastenings. These fastenings might be a close series of eyelets, engaging opposite hooks of a kind readily attached. The upper fabric 10 is preferably a woven material such as silk treated to waterproof it, for example by an oil-process; or it may be rubberized, without destroying its inelastic character; or may have elastic sections or gores to give yield or self adjustment if desired. It may thus be very thin and light, yet strong, soft and flexible, and wholly suitable for the purposes hereof without lining, reinforcement or padding.

It will thus be seen that I have described a unitary outer foot-covering embodying the principles and attaining the advantages of the invention; and since various matters of design, arrangement, combination, proportions and details may be modified without departing from the underlying principles, it is not intended to restrict the invention to such matters except to the extent specifically set forth in the respective appended claims.

What is claimed is:

1. An outer foot-covering for rainy-weather protection comprising a tread portion and an upper portion unitarily interconnected, the tread portion terminating short of the shoe heel to leave an opening through which the shoe heel may project, and the upper portion composed of a thin, flexible, inelastic and transparent, unlined and waterproof fabric, extending from the tread portion upward and rearward around the ankle, and having a line of detachable fastening means along the meeting edges of the upper portion.

2. An outer foot-covering for rainy-weather proctection comprising a tread portion and an upward portion unitarily interconnected, the tread portion terminating short of the shoe heel to leave an opening through which the shoe heel may project, and the upper portion consisting of thin, flexible, waterproof and substantially transparent fabric, extending from the tread portion upward and rearward to surround the ankle, and having a line of continuous lacing means along the meeting edges of the upper portion.

3. An article as in claim 2 and wherein the upper portion has a stiffening means at a point removed from the line of lacing for holding the upper portion against sagging at such point.

4. An outer foot-covering for rainy-weather protection comprising a tread portion and an upper portion unitarily interconnected, the tread portion terminating short of the shoe heel to leave an opening through which the shoe heel may project, and the upper portion composed of a thin, light, inelastic and flexible waterproof fabric, extending from the tread portion upward and rearward around the ankle; the tread portion having an upstanding rim, and a connecting fabric strip between said rim and the lower edge of the upper portion, said rim and strip extending rearward beyond the tread and along the lower edge of the upper portion around to the rear.

5. An outer foot-covering for rainy-weather protection comprising a tread portion and an upper portion unitarily interconnected, the tread portion terminating short of the shoe heel to leave an opening through which the shoe heel may project, and the upper portion composed of a thin, light and flexible waterproof fabric, extending from the tread portion upward and rearward around the ankle; the tread portion having an upstanding rim, and means connecting said rim and the lower edge of the upper portion, said rim and connecting means extending rearward beyond the tread and along the lower edge of the upper portion around to the rear.

In testimony whereof, I have affixed my signature hereto.

LAURA M. RADWAY.

CERTIFICATE OF CORRECTION.

Patent No. 1,651,631. Granted December 6, 1927, to

LAURA M. RADWAY.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 1, after line 81, insert the words "Fig 6 is a rear perspective view of an outer foot covering illustrating a different embodiment of the invention"; page 3, after line 33, insert "Fig. 6 shows an embodiment of the form wherein the line of fastenings is at the front, with an elastic section or gore at the rear to give yield. As before, the upper portion 10a is composed of soft flexible material which is thin and light, but strong, and which is preferably transparent, meaning such that outlines at least can be seen through the upper. A french seam 13a is indicated at the rear, but this is preferably split and continued upwardly as seams 13b and 13b connecting the upper portion with an expansible or elastic gore or insert 26a, as stated. The upper edges of 10a are finished with top hems 14a, and down the front is shown a system of zipper fastenings comprising detachable links 21a extending well down to the toe, and a runner 22a with an operating ring 23a. Around the lower rear edge the upper portion is finished and reinforced by a rear strip or stay 27a corresponding with the combined elements 8a, 11a and 12a of the other figures."; same page, line 61, claim 2, for the word "upward" read "upper"; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 7th day of August, A. D. 1928.

(Seal)

M. J. Moore,
Acting Commissioner of Patents.