

Dec. 6, 1960

B. WILKENS

2,962,724

PLASTIC RING FOR BLOUSING OF TROUSER LEGS

Filed July 5, 1956

FIG. 1

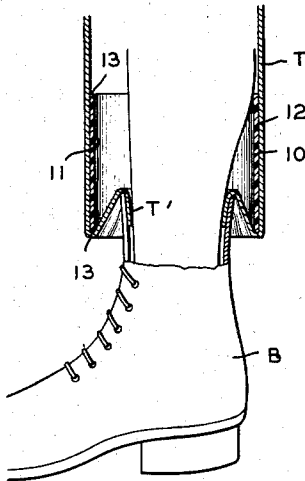


FIG. 2

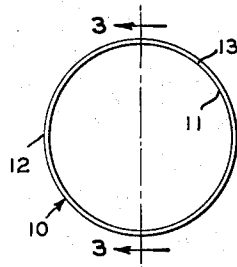


FIG. 3

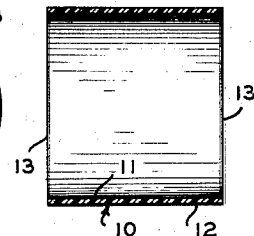


FIG. 4

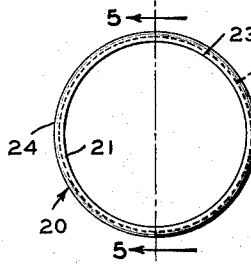


FIG. 5

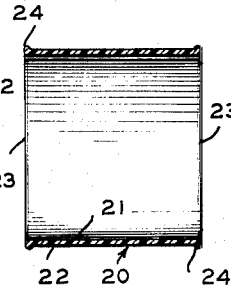


FIG. 6

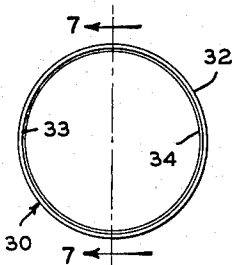


FIG. 7

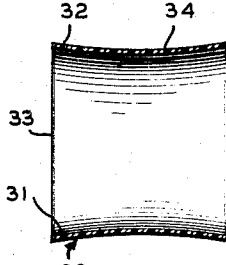


FIG. 10

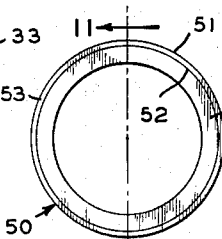


FIG. 11

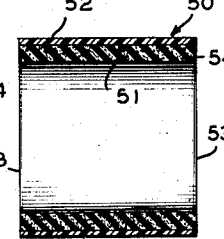


FIG. 8

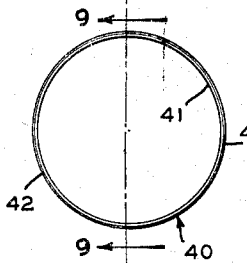


FIG. 9

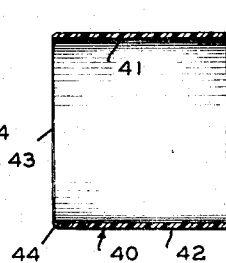


FIG. 12

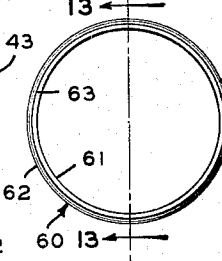


FIG. 13

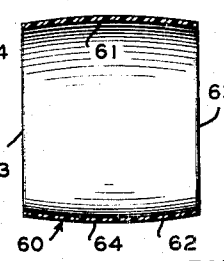
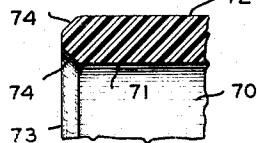


FIG. 14



INVENTOR
BERNARD WILKENS

BY *A. Yates Dowell*
ATTORNEY

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PLASTIC RING FOR BLOUSING OF TROUSER LEGS

Bernard Wilkens, 722 W. 168th St., New York, N.Y.

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1 Claim. (Cl. 2—232)

This invention relates to articles of wearing apparel and more particularly to a device especially designed for use in connection with trousers whereby the lower extremities thereof may be retained in a uniformly bloused condition.

One field in which the invention has particular applicability is that of military uniforms of the character worn by paratroopers where the lower extremities of the trouser legs are received within boot tops and the trouser legs are then bloused over the boot tops, thereby concealing the latter. The invention is applicable equally to other and related types of uniforms, costumes, and trousers of the plus-four varieties.

In connection with military organizations and uniforms, of the character referred to hereabove, it is essential that uniform appearance be maintained, with a substantially identical and orderly manner of dress. The present invention is designed first to accomplish this end and second to provide the wearer with a maximum of comfort. Additionally, the device will insure constant uniformity that will not be varied to any appreciable extent by change of position of the wearer as through standing, sitting, walking, etc.

Related devices have been produced heretofore which have sought to rely upon the insertion within the bloused trouser leg of a weight. One such item is to be found in U.S. Patent No. 2,720,656 where a flexible element comprising a chain in ring form is proposed for present purposes. Such a weight cannot function efficiently since no inherently uniform shape or blousing can be imparted through the use thereof, the very flexibility of the element resulting in constant changes in external appearance from an initial condition which will of necessity vary from the moment and manner of initial installation.

Accordingly, it is a major object of the present invention to provide a device for the blousing of trouser legs whereby a constant condition of appearance will be established, this configuration being one which will not be varied by such influences as the manner of insertion or movement of the wearer.

It is a further object of the invention to provide a device of the class set forth which will be light in weight, not to interfere with or affect the comfort of the wearer.

It is a still further object of the invention to provide a device of the class with which we are here concerned which desirably is formed of such material as to facilitate the insertion and wearing thereof.

It is a further object of the present invention to provide a device for the blousing of trouser legs which will be strong and durable, may be produced economically, and cannot fail to produce the ends desired.

Further objects and advantages of the invention will be apparent from the following description, taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a side elevational view illustrating one form of the invention in applied position, parts being broken away;

Fig. 2, a top plan view of the form of the invention shown in Fig. 1;

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Fig. 3, a sectional view taken on the line 3—3 of Fig. 2;

Fig. 4, a top plan view of a modified form of the invention;

Fig. 5, a sectional view taken on the line 5—5 of Fig. 4;

Fig. 6, a top plan view of a further modified form of the invention;

Fig. 7, a sectional view taken on the line 7—7 of Fig. 6;

Fig. 8, a top plan view of a still further modified form of the invention;

Fig. 9, a sectional view taken on the line 9—9 of Fig. 8;

Fig. 10, a top plan view of a still further modified form of the invention;

Fig. 11, a sectional view taken on the line 11—11 of Fig. 10;

Fig. 12, a top plan view of a still further modified form of the invention;

Fig. 13, a sectional view taken on the line 13—13 of Fig. 12; and

Fig. 14, a fragmentary sectional view illustrating a novel edge conformation for a device constructed in accordance with the present invention.

As shown in the drawing, particular reference being had to Figs. 1, 2 and 3, the invention comprises an annulus 10 formed from suitable lightweight material. Desirably, the annulus is of rigid, predetermined configuration, including an interior surface 11, an exterior surface 12 and end or edge surfaces 13. As illustrated, this annulus may be circular in cross-sectional configuration having an interior diameter of approximately six inches and a wall thickness of approximately one-eighth inch to provide adequate rigidity. The width of the annulus may vary within reasonable limits, from possibly three to six inches, with a five and one-half inch median width found to be particularly satisfactory. A six-inch interior diameter will provide adequate room for the convenient insertion of the foot of the wearer and will not result in pressure or binding upon the lower portion of the calf of the wearer when the device is in use.

The manner of application is particularly simple. As illustrated in Fig. 1, the user dons trousers T, slides annulus 10 over the foot to a position within the trousers leg and then places the boot B upon the foot. The lower extremity T' of the trouser leg then is placed within the upper portion of the boot which is laced or otherwise secured upon the foot. The annulus 10 is then slid or permitted to drop down the leg within that portion of the trousers which overhangs the boot, thus creating the desired bloused effect which will remain constant in appearance from an initially uniform condition.

While various materials may be employed for producing the annulus 10, a highly desirable material has been found to be one of the modern oriented plastics which are lightweight and may be molded or extruded with particular ease and will provide extremely smooth interior, exterior and edge surfaces whereby possibility of frictional or other injury to fabric or skin is avoided.

When applied, and the wearer stands erect, the annulus will slide readily to the bottom of the bloused portion and will remain in position. Thus, the rigid configuration of the annulus will impart a uniform conformation to the bloused portions of the trouser legs that will be both neat and orderly and will be repeated with equal facility whether with repeated wearings or a plurality of individuals using similar blousing devices.

In the modified form of the invention illustrated in Figs. 4 and 5 of the drawing, the annulus 20 includes an interior surface 21, an exterior surface 22 and end or edge surfaces 23. One or both of the edge surfaces

23 may be provided with an outwardly directed beaded portion 24 to facilitate downward sliding movement of the annulus within the trouser leg.

In the modified form of the invention illustrated in Figs. 6 and 7 of the drawing, the annulus 30 includes an interior surface 31, an exterior surface 32 and end or edge surfaces 33. In this form of the invention the side wall 34 of the device is slightly concave whereby only the top and bottom outside edges of the device may contact the trouser leg within which employed.

In the modified form of the device illustrated in Figs. 8 and 9 of the drawing, the annulus 40 includes an interior surface 41, an exterior surface 42 and end or edge surfaces 43. One or both of the outer corners of the edge surfaces 43 may be beveled as indicated at 44 to facilitate downward sliding movement of the annulus within the trouser leg.

In the further modified form of the invention illustrated in Figs. 10 and 11 of the drawing, the annulus 50 includes an interior surface 51, an exterior surface 52 and edge or end surfaces 53. As illustrated, a liner 54 of suitable material, such as sponge rubber or the like, may be provided for possible increased comfort to prevent contact between the leg of the wearer and the interior surface 51 of the annulus.

In the further modified form of the invention illustrated in Figs. 12 and 13 of the drawing, the annulus 60 includes an interior surface 61, an exterior surface 62 and edge or end surfaces 63. In this form of the invention the side wall 64 of the annulus is slightly concave whereby actual engagement with the interior of the trouser leg may be had at the height of such concave surface.

In the form of the invention illustrated in Fig. 14 of the drawing, the annulus 70 includes an interior surface 71, an exterior surface 72 and edge or end surfaces 73. Desirably, one or both of said edge surfaces may be beveled interiorly and exteriorly as indicated at 74 whereby engagement of the corners defined by the edge surfaces with either the leg of the wearer or the trouser leg is prevented.

While rigidity of the device is essential to the creation of constant uniformity of appearance, it is important that the device is not unwieldy. Further, inherent rigidity must be accompanied by a sufficient degree of flexibility that deformation under external stress will not occur and the legs of the wearer will be protected against injury resulting from impact upon the annulus. Accordingly, the plastic materials suggested, and particular reference is had to flexible thermoplastic materials such as polystyrene, polyvinyl or cellulose esters, are particularly suitable for present purposes. Such materials will give under pressure, or impact, but being oriented will return to initial predetermined configuration. Except under most unusual circumstances fracture will not occur and, even with fracture, there is no fragmentation whereby particles, sharp or otherwise, may cause injury to skin or limb.

It will be understood that, if desired, the beaded lip portion illustrated in Figs. 4 and 5 of the drawing may be combined with any of the other forms of device illustrated. Additionally, while the annulus has been illustrated in the several forms thereof as being truly circular, variation within reasonable limits to the elliptical or void is well within the instant inventive concept. With such variation, the device will be worn with the long axis extending forwardly of the wearer.

It will be obvious to those skilled in this art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawing and described in the specification but only as indicated in the accompanying claim.

What is claimed is:

In combination, a boot provided with an upper, a pair of trousers having a leg extending into said upper when the boot and trousers are placed in use, said trouser leg overlapping a portion of said upper to present an upwardly facing and continuous cavity in said leg surrounding the upper adjacent to and immediately below the uppermost end of the upper, a cylindrical member of sheet material disposed in the cavity with the upper edge of the cylindrical member being disposed above the uppermost end of the upper, said cylindrical member having a diameter substantially equal to the diameter of the trouser leg thereby providing a cylindrical shape to the lower end of the trouser leg with a sharp lower edge defined by the lower edge of the cylindrical member, the portion of the trouser leg extending upwardly and inwardly from the lower edge of the cylindrical member to the uppermost end of the upper being held in taut condition for limiting lateral movement of the cylindrical member and the lower end of the trouser leg in relation to the upper unless the cylindrical member is moved vertically in relation to the upper, the area defined by the upper, the upwardly and inwardly extending portion of the trouser leg and a horizontal plane coincidental to the lower edge of the cylindrical member being triangular in cross-sectional configuration.

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