Nov. 20, 1956 J. DE GRAZIA 2,770,810

VENTILATING WAISTBAND

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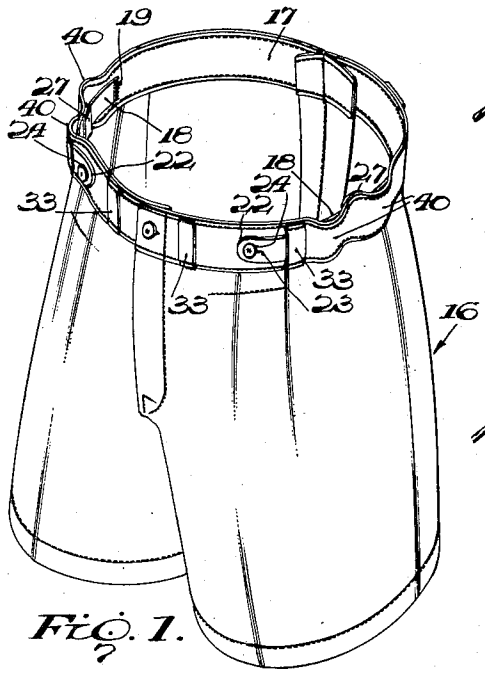


FIG. 1.



FIG. 2.

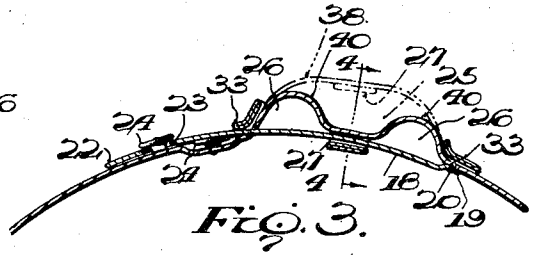


FIG. 3.

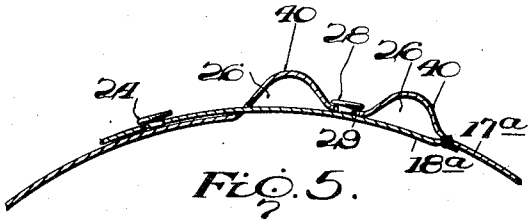


FIG. 5.

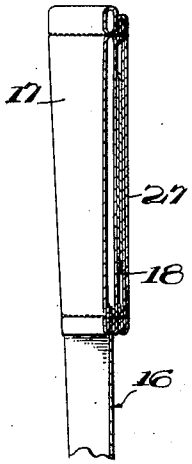


FIG. 4.

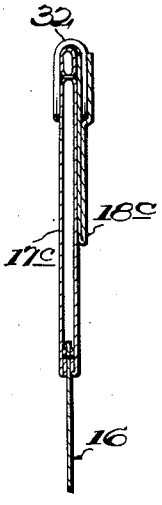


FIG. 8.

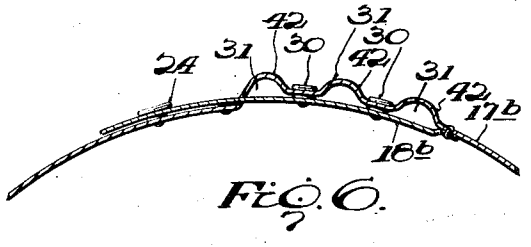


FIG. 6.

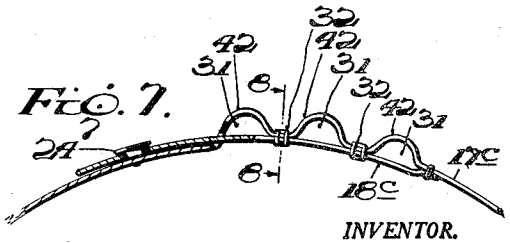


FIG. 7.

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FIG. 9.

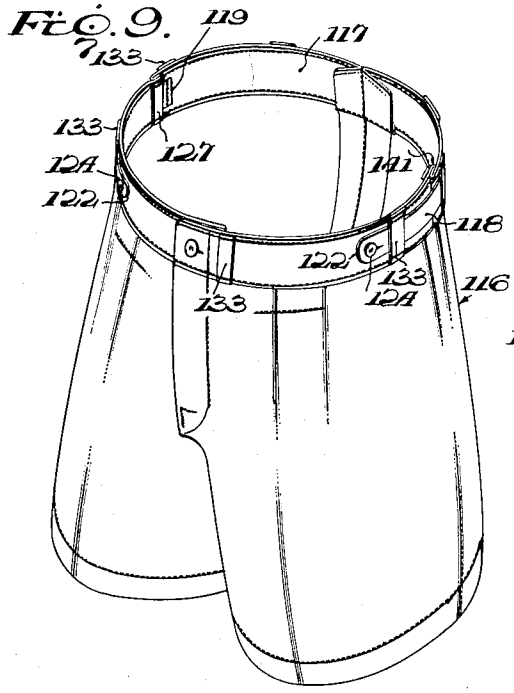


FIG. 13

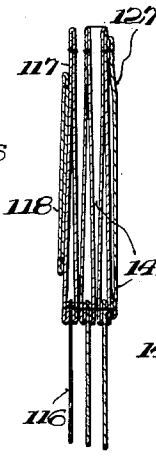


FIG. 14.

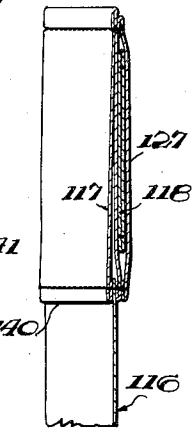


FIG. 15.

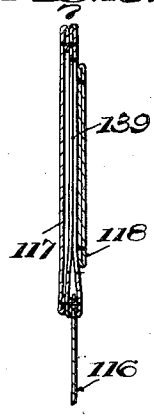


FIG. 10

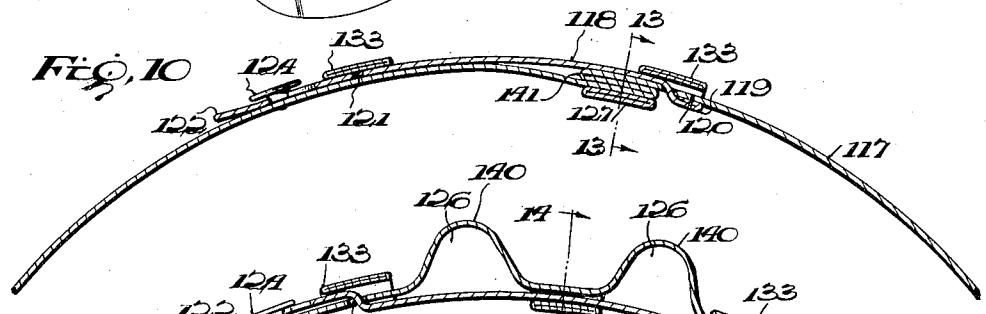
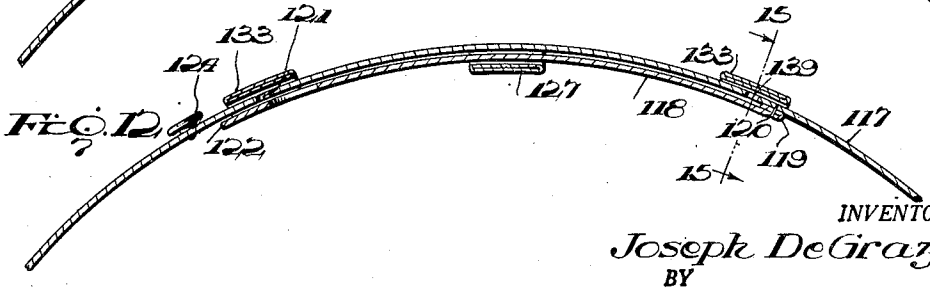


FIG. 11.

FIG. 12.



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United States Patent Office 2,770,810 Patented Nov. 20, 1956

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VENTILATING WAISTBAND

Joseph De Grazia, Washington, D. C.

Application June 9, 1954, Serial No. 435,650

3 Claims. (Cl. 2—236)

(Granted under Title 35, U. S. Code (1952), sec. 266)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

My invention relates to waistband for garments and more particularly to garment waistbands which are formed with vertical vents for the entrance or escape of air to or from the garment, or in the case of a union garment, for the circulation of air between the upper and nether portions of the garment.

With the exception of union garments or suspender-supported garments, the waistband of a nether garment necessarily has a tight fit with the waist of the wearer or is tightly bound to the waist by a belt or the like to support the garment. Also, almost all waist bands fit rather closely to provide a neat appearance. This close fit while it enhances the appearance of the garment, prevents the escape of air from the garment whereby the heated air causes considerable discomfort in hot weather. Likewise, the lack of air circulation through this conventional waistband prevents the rapid evaporation of perspiration whereby the garment becomes soaked with the same. This is a serious matter in cool or cold weather where exercise sufficient to cause perspiration is followed by rest periods. Then the damp garments cause too rapid chilling of the wearer and inevitably produce a condition favorable for the development of colds, grippe and other ailments of the respiratory tract.

With the foregoing in view, it is an object of my invention to provide a waistband of improved construction which provides ample ventilation when desired to cool the wearer and evaporate perspiration rapidly but which can be readily adjusted to reduce or even entirely cut off the ventilation as desired.

A further object is to provide in such a garment means for selectively providing one large ventilating opening or two or more ventilating openings of reduced size.

A further object is to provide a ventilating waistband wherein one or more vents are formed by a semi-belt extending chordally of the waistband interiorly thereof and which vents are closed by belt means disposed exteriorly of said waistband.

A further object is to provide a ventilating waistband such as that last described and wherein said semi-belt and said belt means comprise the same element.

Other objects and advantages reside in the particular structure of the invention, the structure of the several elements of the same, combinations and subcombinations of such elements, all of which will be readily understood by those skilled in the art upon reference to the attached drawing in connection with the following specification wherein the invention is shown, described and claimed.

In the drawing:

Figure 1 is a perspective view of a garment showing one form of the invention applied thereto;

Figure 2 is a fragmentary, horizontal, sectional view through a portion of the waistband of the garment of Figure 1 but with the vent-providing means in an inoperative position;

Figure 3 is a view like Figure 2 but showing the parts in the operative position;

Figure 4 is a fragmentary, vertical sectional view taken substantially on the plane of the line 4—4 of Figure 3;

Figures 5, 6 and 7 are views like Figure 3 but showing different means for forming the vents;

Figure 8 is a fragmentary vertical sectional view taken substantially on the plane of the line 8—8 of Figure 7;

Figure 9 is a view like Figure 1 but showing a modification of the invention;

Figure 10 is an enlarged, fragmentary, horizontal sectional view through the waistband of the modification showing the parts in a non-vent providing position;

Figure 11 is a view like Figure 10 but showing the parts in the vent-providing position;

Figure 12 is a view like Figures 10 and 11 but showing the parts in an inoperative position;

Figure 13 is a fragmentary, vertical sectional view taken substantially on the plane of the line 13—13 of Figure 10;

Figure 14 is a like view but taken substantially on the plane of the line 14—14 of Figure 11; and

Figure 15 is a like view but taken substantially on the plane of the line 15—15 of Figure 12.

Referring specifically to the drawing wherein like reference characters designate like parts throughout the several views and referring at first to the form of invention illustrated in Figures 1 to 8 inclusive, **16** designates any suitable garment having a waistband **17** to which one form of the invention has been applied. The garment illustrated comprises a pair of shorts but it should be understood that the invention is intended to be applied to any garment having a waistband whether a body garment, a nether garment or a union garment.

In this form of the invention, a semi-belt **18** of any suitable flexible but preferably inelastic material is disposed at each side of the garment. A tethered end **19** of each semi-belt **18** is secured to the inside of the waistband **17** in any suitable manner as by the stitching **20**. Each semi-belt **18** has a free end **22** which is passed outwardly through a belt slit **21** formed in the waistband **17** in spaced relation to the tethered end **19**. Each free end **22** is formed with suitable means such as the buttonhole **23** for engagement with complementary fastening means such as the buttons **24** so that the free ends **22** may be readily releasably secured to the waistband **17** exteriorly thereof.

The length of each semi-belt **18** is less than the distance between its tethered end **19** and the nearest fastening means **24** whereby when its free end **22** is anchored by a fastener **24**, the intermediate portion of each semi-belt **18** extends chordally of the waistband **17** and forms a relatively large gathering **38** and forms a correspondingly large vent **25** between each semi-belt and the inside of the waistband as illustrated by the broken lines in Figure 3. However, the relatively large gathering **38** of the waistband formed by this arrangement is unsightly and also provides ready entrance for dirt or like extraneous matter. Hence, it is usually desirable to provide instead of a single large vent **25** for each semi-belt, two or more smaller vents **26**.

This result is accomplished by providing any suitable means for readily releasably securing at least one intermediate portion of each semi-belt to the inside of the waistband or at least releasably restraining such portion to the region of the waistband. Thus, in Figures 1 to 4, inclusive, a belt loop **27** has been secured to the inside of the waistband **17** preferably intermediate each tethered end **19** and slit **21** to restrain an intermediate portion of each semi-belt **18** and form the smaller vents **26**. Obviously, other means may be used instead of the belt loop **27** to form smaller gatherings **40** which provide the vents **26**.

Thus, in Figure 5, a button **28** has been secured to the outside of each semi-belt **18***a* and corresponding buttonhole **29** has been formed in the waistband **17***a*. Likewise, in Figure 6, two pairs of separable snap fasteners **30** have been attached to the semi-belt **18***b* and the waistband **17***b* so as to form three gatherings **42** and three vents **31** of still further reduced size. In Figures 7 and 8 a pair of hooks **32** have been secured to one of the semi-belt **18***c* or waistband **17***c* for engagement over the upper edge of the other. As illustrated, the hooks **32** are carried by the semi-belt **18***c* and are secured thereto in any suitable manner, not shown, as by being sewed or riveted thereto.

In this form of the invention, when no venting is needed, the semi-belts may be disconnected from the fasteners **24** and free ends **22** withdrawn through the slits **21** but without disengaging them from the inside belt loops **27** as best seen in Figure 2. This permits the waistband to flatten out and the garment may be supported by a conventional belt or the like, not shown, in cooperation with the outside belt loops **33**. Alternatively, the usual outside belt may be applied without disconnecting the semi-belts from their fasteners **24**. In this manner of use, not shown, the gathered portions of the waistband which provide the vents **25**, **26** or **31** are simply mashed or pleated down by tightening the usual outside belt aforesaid. The vents are re-established simply by removing the outside belt.

Referring now to the modification of Figures 9–15, inclusive, it will become apparent that a structure has been provided which eliminates any need for an outside belt. In this modification, the garment **116** has a waistband **117** which is provided with one or more semi-belts **118**. As in the first form these have tethered ends **119** secured to the inside of the waistband **117** in any suitable manner as by the stitching **120**. There are also provided belt slits **121** remotely of the tethered ends through which the free ends **122** may pass and be suitably and adjustably secured as by the buttonholes **123** and buttons **124**. There are also provided one or more inside belt loops **127** or corresponding fastening means for securing intermediate portions of the semi-belts **118** to waistband **117**. As so far described, this form of the invention corresponds to the form of Figures 1 to 8.

However, here the waistband **117** is formed with a second belt slit **139** in the region of the tethered end **119**. With this arrangement, each semi-belt may be passed outwardly of the waistband **117** either through the slit **121** or the second slit **139**. In the first instance, Figure 11, the semi-belts form gatherings **140** in the waistband **117** and vents **126** corresponding to the like structures in the first described form. In the second instance, Figure 10, the semi-belt goes outwardly through the second slit **139** so that it is located substantially entirely outside of the waistband **117**. When it is secured by one of the fasteners **124**, a pleat **141** is formed in the waistband **117**. Thus, the waistband has a close fit and a neat appearance when the vents are not needed and no separate belt need be applied nor removed. At the same time, when the vents are desired, it takes but a few moments to disconnect the free ends of the semi-belts, withdraw them through the slits **139** and thread them through the slits **121**. As in the first form, the inside belt loops **127** or corresponding fasteners may be used or not as desired depending upon the number and size of the vents needed. As in the first form, the semi-belts **118** may be placed in an inoperative position (Fig. 12) when the garment is not being worn by securing them to the inside loops **127** or the like. Likewise, an outside belt may be worn if desired or needed.

In both forms of the invention it will be noted that the outside belt loops **33** and **133** have been located to overlie and conceal the slits **21**, **121** and **139**. This improves the appearance of the garment and the outside belt loops serve as handy guides for locating the slits and facilitating the change of position of the semi-belts when the change must be made under black-out conditions by the sense of touch alone.

From the foregoing, it is apparent that the ventilating waistbands according to the invention may be readily formed on or applied to conventional garments with a minimum of alteration and skilled assistance. It is apparent also, that the invention is equally applicable to any garment having a waistband or the equivalent. While each form of the invention has been shown utilizing two semi-belts, it is obvious that a single centrally disposed semi-belt or number greater than two may be utilized.

Thus, while I have shown and described what are now thought to be the preferred forms of the invention, it should be understood that the same is susceptible of other embodiments and expressions. Consequently, I do not limit myself to the precise structures shown and described hereinabove except as hereinafter claimed.

I claim:

1. In a garment, a waistband at least one semi-belt having a tethered end secured to said waistband interiorly thereof, said waistband being formed with a belt slit therethrough remotely of said tethered end for the passage of said semi-belt therethrough, said semi-belt having a free end, means for readily releasably securing said free end to said waistband outwardly thereof and beyond said slit, said last-named means being located at a distance from said tethered end which is greater than the length of said semi-belt whereby to cause said semi-belt to extend chordally of said waistband interiorly thereof and provide a vertically directed vent between said semi-belt and waistband, a second belt slit formed in said waistband immediately adjacent said tethered end of said semi-belt for the selective passage therethrough of the same when it is desired to use said semi-belt exteriorly of said waistband and eliminate said vent, and means for readily releasably securing at least one intermediate portion of said semi-belt to said waistband between said slits to form two air vents of reduced size.

2. In a garment, a selectively ventilated waistband, comprising at least one semi-belt having a tethered end secured to said waistband interiorly thereof, a belt slit formed in said waistband closely adjacent said tethered end, a second slit formed in said waistband in spaced relation to said first slit, said semi-belt having a free end, fastening means for readily releasably and adjustably securing said free end to said waistband beyond said second belt slit, said semi-belt being shorter than the distance between said tethered end and said fastening means, said semi-belt forming at least one ventilating gathering in said waistband when extending chordally thereof and passed outwardly through said second slit and secured to said fastening means, and said semi-belt providing a close fitting, a non-ventilating waistband when passed outwardly through said first slit and secured to said fastening means.

3. The combination with a garment waistband, of first and second spaced belt slits formed through said waistband, a semi-belt having a tethered end secured to said waistband interiorly thereof immediately adjacent said first slit, securing means at least partially on said waistband beyond said second slit, said semi-belt having a free end, said semi-belt being shorter than that portion of said waistband lying between said tethered end and said securing means to provide a gathering in said portion of said waistband, said semi-belt at times extending to said securing means through said first slit so as to overlie and flatten

said gathering, and means between said slits for readily releasably connecting at least one intermediate portion of said semi-belt to said waistband interiorly thereof when said semi-belt extends through said second slit to said securing means.

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