Nov. 5, 1968 G. S. HAWIE 3,408,708

DETACHABLE GARTER GRIPS

Filed Sept. 1, 1967

Fig. 1

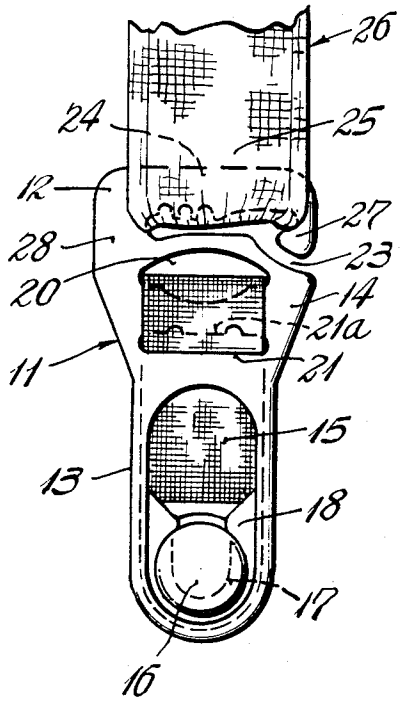


Fig. 3

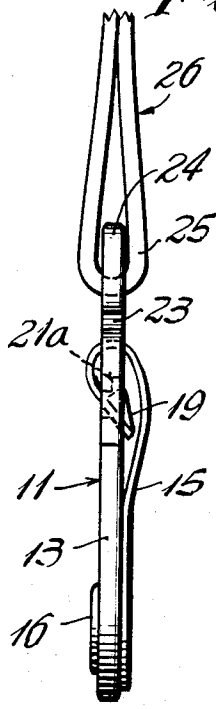


Fig. 2

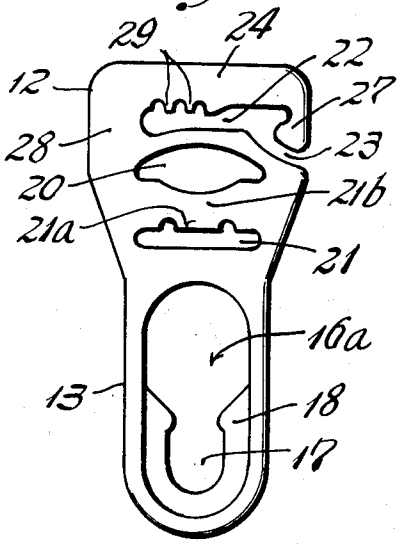


Fig. 4

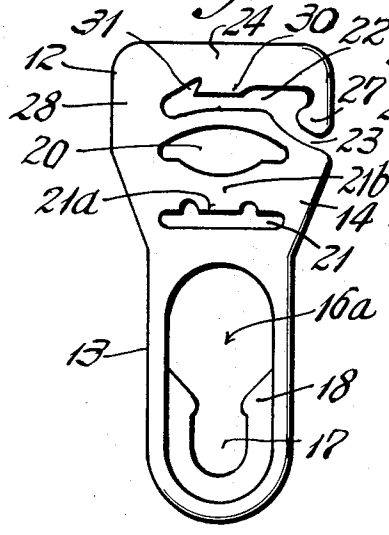
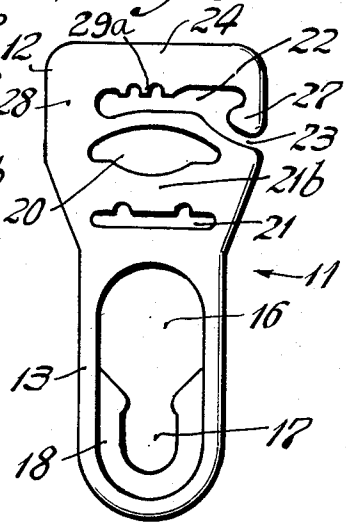


Fig. 5



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DETACHABLE GARTER GRIPS

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ABSTRACT OF THE DISCLOSURE

A plastic garter grip frame in which the garment-loop attaching bar has serrations on its lower edge to prevent gathering of the material of the loop at the free end of the bar and escaping from the bar through an entrance slot when the tension between the frame and the loop is excessive.

This invention relates to garter grips, and more particularly to garter grip frames made from somewhat flexible material, such as a plastic composition.

Frames of such materials have sufficient tensile strength for the use intended. They are, however, subject to being under torsional strains, particularly when subjected to excessive pulling force applied to the portion of the frame which receives the fabric loop which is attached to a garment and forms the connection between the garter grip frame and the garment from which it depends.

The frame is provided at its upper end with a bar formed by a transverse slot closed at one side of the frame and open at the other side to slidably receive the garment loop. The entrance or throat of the slot extends downwardly and outwardly which forms a depending hook which restricts lateral movement of the loop on the bar and out of the slot under normal strains so long as the vector of the force is substantially perpendicular to the length of the bar.

However, when the force applied to the bar becomes so excessive that the material connecting the bar to the frame yields so that the bar is inclined upwardly away from the frame, the material of the attaching loop slides laterally of the bar toward the open end of the slot and gathers against the depending hook on the bar, the force being exerted on the end of the bar, when sufficiently, causes the bar to break off the frame, thus disconnecting the attaching loop from the frame and allowing the portion of the stocking top to which the frame is attached to drop down from the desired position.

In some cases, the material gathered at the hook portion may cause the bar to be bent away from the frame to such an angle that the material of the loop may eventually slide over the hook portion and off the end of the bar, or the hook portion may break off the bar and permit the loop to slide off the bar.

An object of this invention is to avoid this difficulty and still be able to make the frame of the desired plastic material.

This is accomplished by preventing the lateral movement of the portion of the attaching loop which engages the attaching bar so that it does not gather against the hook and ultimately cause the bar to break or the loop to slip off the bar and escape from the entrance slot. For this purpose, according to the present invention, the bottom edge of the attaching bar is provided with one or more serrations which bite into the fabric from the attaching loop and prevent lateral sliding movement of the loop on the bar, even though the bar yields outwardly angularly from the frame to cause the entrance slot to be widened to such an extent that, in the absence of the serrations on the bar, the bar would break or the loop would slide off the bar under excessive strains.

With the serrated attaching bar of this invention, garter

grip frames with unserrated attaching bars were tested and it was found that either the bars broke off the frame or the attaching loop slipped off the end of the bar when a pull of 12 pounds was applied to the loop while the lower end of the frame was held stationary. Other garter grip frames of the same frame construction but with the attaching bars serrated were tested and it was found that a pull of 20 pounds could be applied to the loops without the bar breaking off or the loope slipping off the bar, even though the bar was severely bent under the strain.

Other features and advantages will hereinafter appear.

In the accompanying drawings:

FIGURE 1 is a front view of a garter grip made according to the present invention showing it attached to a depending garment attached loop.

FIG. 2 is a front view of a grip frame before the button tape is attached to it and before the frame is attached to the garment loop.

FIG. 3 is an edge view of the garter grip and garment loop shown in FIG. 1.

FIG. 4 is a front view of a grip frame showing a single tooth on the bottom edge of the attaching bar.

FIG. 5 is a view similar to FIG. 4, but showing a different form of serrations on the attaching bar.

As shown in the accompanying drawings, the frame **11** of the garter grip of the present invention may be made of plastic material and is substantially flat. The frame **11** has an upper portion **12** for attachment to a garment, a somewhat narrower lower portion **13** for attachment to a stocking top, and an intermediate portion **14**. A button tab **15** of suitable flexible material has at its lower end a button **16** which, after being placed under the upper portion of a stocking, is passed through an entrance opening **16***a* in the lower portion of the frame and then pressed into a restricted button-receiving slot **17** to attach the stocking to the garter grip. The slot **17** is defined by fins **18** which enter into an annular groove in the button which takes part of the material of the stocking with it, and thus insures a firm grip between the stocking and the frame.

The button tab **15** is made of a flexible strip, usually a fabric tape, the upper end of which has an enlargement forming an anchor **19** which may be freely passed through a transverse opening **20** from the back to the front side of the frame. Then the anchor **19** is passed edgewise through another slot **21**, from the front side of the frame to the back side, the anchor being passed edgewise through the slot **21**. The tab is then pulled to cause the anchor **19** to engage the upper notched edge **21***a* of a bar **21***b* formed between the opening **20** and the slot **21**. In this situation, the bottom tab lies along the back surface of the frame, with the button facing the front, positioned to receive the stocking top and be inserted into the opening and retaining slot **17**.

The upper portion **12** of the frame has a transverse slot **22** which is closed at one end, and at the other end has a downwardly and outwardly extending entrance slot **23**. Thus, a transversely extending bar **24** is formed on the upper portion **12** of the frame over which may be slid a loop **25** of fabric tape **26** which is secured to the garment and usually depends therefrom.

The slot is provided with the open end for the purpose of permitting the convenient removal of the frame from the garment, which is frequently desired in preparation for laundering the latter and replacement after laundering.

The inclined entrance slot **23** forms a hook portion **27** on the end of the bar **24**. This normally restrains the material of the loop from sliding off the bar **24** accidentally when there is no strain on the garment-attaching tape **26**.

The tape **26** is usually slightly wider than the length

of the slot **22** so that the material of the loop engaging the bar **24** is slightly gathered.

In normal use, the stocking is attached to the garter grip with sufficient tension to hold the stocking on the leg of the user smoothly and without sagging, and this places bending strains on the bar **24** which, being made of somewhat flexible plastic material, may be bent in the area **28** of its connection to the main body of the frame. This causes the bar **24** to lie in a plane more or less inclined to the horizontal depending on the amount of strain to which it is subjected if sufficient force is applied. Heretofore, the loop **25** was caused to shift on the bar toward the open end of the slot, and gather against the hook **27**. This concentration of the force of the loop **25** at the free end of the bar **24** increased the tendency of the bar to bend outwardly.

As a result, if the tension of the loop on the garter grip increased substantially because of the improper attachment of the stocking top to the garter grip, and/or the movements of the body of the wearer because all the force is applied to the free end of the bar **24**, the latter bends to such an extent that it breaks off the frame in the vicinity of the area **28** with the result that the frame and stocking became detached from the loop **25** and hence the garment. It has happened that the concentration of force at the free end of the bar has caused the hook portion **27** to be broken off the bar and the loop to slide off the bar. Sometimes the material of the loop which became gathered at the hook **27** would fold over the hook **27** and escape through the entrance slot **23** which was made wider by the bending of the bar **24**. The frame and the loop having become disconnected would allow the stocking to drop to the discomfort and possible embarrassment of the wearer.

I have discovered that, if the attaching loop **25** is prevented from sliding laterally on the bar **24** so as to keep the material of the loop from gathering at the hook **27**, the loop **25** will remain on the bar **24** even when substantially increased and excessive stresses are applied to the bar.

To keep the loop **25** from gathering at the hook **27**, there is provided, by this invention, along the lower edge of the bar **24**, notches forming one or more teeth or serrations **29** which indent or bite into the portion of the fabric of the loop engaging the underside of the bar. Thus, when excessive tension is applied to the bar **24** by the loop **25**, the force is distributed along the entire length of the bar and not concentrated at the free end of the bar because the material of the loop does not gather at the hook **27** but remains in engagement with the bar for substantially its entire length, and this substantially reduces the amount that the bar bends under a determine pull.

The serrations **29** may extend at spaced intervals from the closed end of the slot **22** to the hook **27** if desired, but if they do not they are preferably located adjacent the closed end of the slot, as shown in the drawings.

There may be a plurality of serrations **29**, as shown in FIGS. 1, 2 or 3, or a single tooth **30**, as shown in FIG. 4, in which the tooth has an undercut edge **31** adjacent and facing the closed end of the slot. The undercut edge **31** is positioned to engage the fabric well within the selvage of the loop material and bites into the fabric to prevent lateral movement of the loop toward the open end of the slot **22**.

In FIG. 5 there is shown another form of serration in which two notches form a single tooth **29***a*.

I claim:

1. A one-piece plastic frame for a detachable garter grip having a lower gripping portion having a button-receiving slot and an upper portion for attachment to the loop of a garment tab, said upper portion having a transverse slot closed at one side of the frame and at the other side of the frame having an entrance opening extending downwardly and outwardly through which the loop of the garment tab may be passed, said slot forming a transverse bar, the lower end of which engages said loop, and said entrance opening forming a hook portion on the end of said bar to retain said loop on said bar against casual removal, said bar having on its loop-engaging edge adjacent and facing the closed end of the transverse slot a single tooth and provided with a flat crest having substantially the same lateral length as the button-receiving slot adapted to engage the fabric of the loop and prevent lateral sliding movement of the loop on the bar toward the open end of the slot and excessive gathering of the material of the loop at the hook portion of the bar.

2. The invention as defined in claim **1**, in which said single tooth has an undercut edge adjacent and facing the closed end of the slot.

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