Feb. 8, 1938. H. J. STUART 2,107,453

HOSE SUPPORTER BUTTON

Filed Feb. 16, 1935

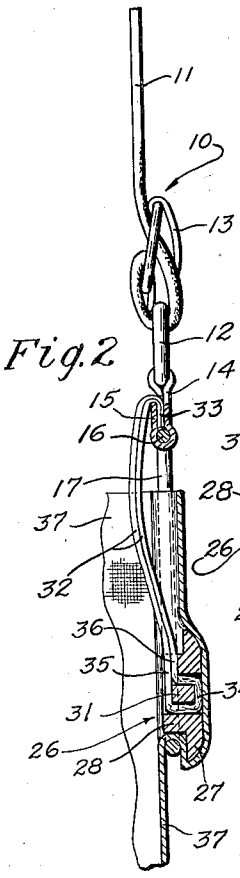


Fig. 2

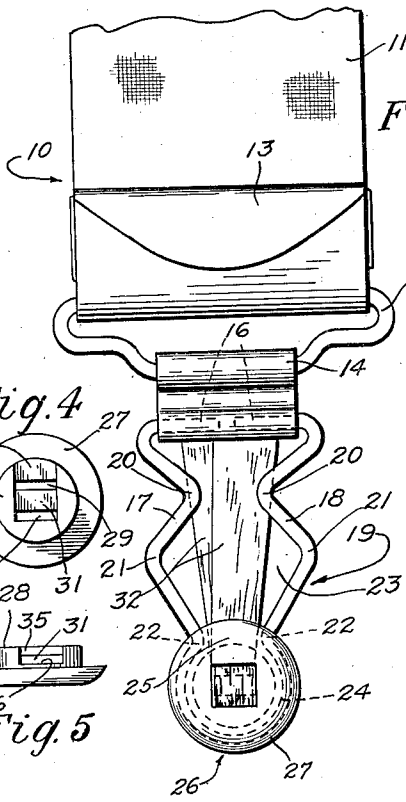


Fig. 1

Fig. 4

Fig. 5

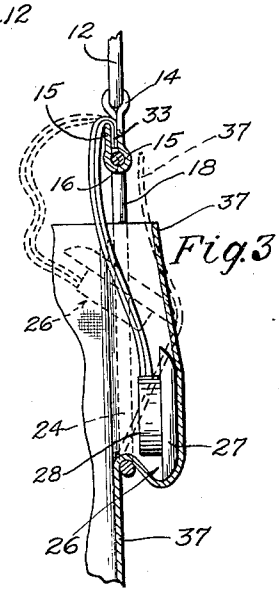


Fig. 3

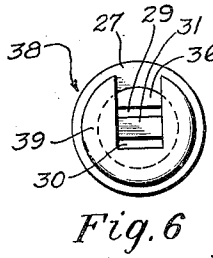


Fig. 6

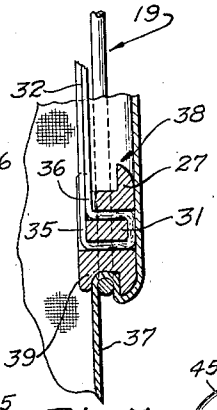


Fig. 7

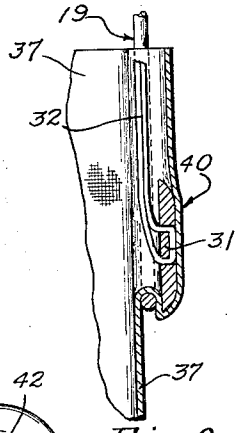


Fig. 9

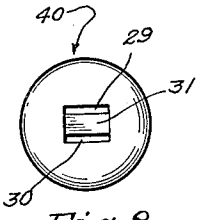


Fig. 8

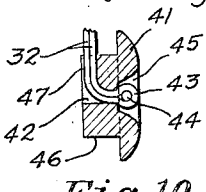


Fig. 10

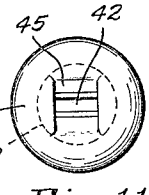


Fig. 11

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HOSE SUPPORTER BUTTON

Henry J. Stuart, New Haven, Conn.

Application February 16, 1935, Serial No. 6,776

4 Claims. (Cl. 24—245)

This invention relates to new and useful improvements in hose supporters and has particular relation to a hose supporter button, the means of mounting it, and associated elements.

An object of the invention is to provide a hose supporter securing means or button which is very flat and of less height than the old buttons whereby it will not show through an outer garment.

Another object is to provide a hose supporter including a loop and a cooperative button the said loop and button being so constructed that a hose held by them will not be released even though the supporter be slack.

A further object is to provide a hose supporter which may be of one piece of material as rubber, porcelain, fibre, celluloid, glass, wood or any other suitable material, and which does not require a metal stud or base.

The invention also comprehends a hose supporter including an improved construction and arrangement of loop, button and button attaching means.

Other objects and advantages will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein satisfactory embodiments of the invention are shown. However, it will be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

Fig. 1 is a front elevational view on an enlarged scale of a hose supporter including the features of the present invention;

Fig. 2 is a view partly in section and partly in elevation also on an enlarged scale showing the supporter in use;

Fig. 3 is a view partly in elevation and partly in section and illustrating the manner in which the supporter is applied to a hose;

Fig. 4 is a rear elevational view of the hose supporter button detached;

Fig. 5 is an edge view of the button;

Fig. 6 is a rear elevational view showing a slightly modified construction of button;

Fig. 7 is a vertical sectional view showing the button of Fig. 6 in use;

Fig. 8 is a rear elevational view showing a slightly different construction of button;

Fig. 9 is a detailed sectional view showing the button of Fig. 8 in use;

Fig. 10 is a sectional view similar to Fig. 1 showing a modified construction; and

Fig. 11 is a top plan view of the button of Fig. 10.

Referring in detail to the drawing and at first particularly to Figs. 1 through 5 thereof a hose supporter is generally indicated at 10 and includes a web 11 which may as usual be of elastic material. Web 11 as shown is looped about the upper bar of an eye or loop 12 and is equipped with a slide buckle 13 whereby its effective length may be adjusted. To the lower bar of loop 12 there is attached a sheet metal member 14 a portion 15 of which is bent upon itself to form a tube receiving the end portions 16 of the arms 17 and 18 of a loop generally designated 19.

The arms of loop 19 are bent toward one another to be disposed in relatively close relation at 20 and they then diverge and are spaced a substantial distance apart at 21 and they again converge so that they are fairly close at 22. This arrangement provides a relatively large upper eye 23 and a relatively small eye 24 the said eyes being connected by a restricted neck or throat 25. The loop 19 cooperates with a button, later to be described, and as the description proceeds it will become apparent that the particular construction of loop shown and described is not absolutely essential. Further, the other supporter details above described may be modified or changed. For example, the slide buckle 13 forms no particular part of the present invention.

Cooperating with the loop 19 is a button 26 which may be formed of any suitable or desired material such as rubber, porcelain, fibre, Celluloid, glass, wood or the like. This button 26 includes a head 27 of a diameter to pass freely through the large eye 23 of loop 19 but of a greater diameter than that of the eye 24 of said loop. Carried by the button head 27 is a shank 28 of a diameter too great to pass through the restricted throat 25 of the loop. However, this shank passes freely through the loop eye 23 and is of somewhat less diameter than the eye 24 whereby the latter is adapted to receive the button shank together with a layer of the material of a hose 37.

Through the entire button 26, that is, the button head 27 and shank 28, there extends a pair of spaced openings 29 and 30, the said openings being separated by a bar-like portion 31 of the button body. A length of flexible woven, braided or other suitable tape 32 is threaded through both of the openings 29 and 30 whereby to dispose the button 26 on an intermediate portion of the tape

and the end portions 33 of the tape are then clamped to the member 14 by its portion 15 as clearly shown in Figs. 2 and 3. With the described arrangement it will be understood that the tape 32 is looped about the bar-like portion 31 of the button and serves to mount the button on the supporter.

The forward face of the bar-like portion 31 is preferably cut away or recessed as at 34 whereby this forward face lies below or inwardly of the outer face of the button. With this arrangement the looped or intermediate portion of the tape will be so arranged as to lie flush or inwardly of the plane of the outer or forward face of the button. Also, the inner end of bar 31 is cut away or recessed as at 35 and the depth of this cut is substantially equal to the thickness of one layer of the tape 32. The inner end of the shank is notched as at 36 and this second notch extends laterally of the opening 29 and through one side or edge of the button shank. Notch 36 is of substantially twice the depth of notch 35 and is adapted to receive two layers of tape, it being understood that each notch is of a width equal to substantially the width of the tape.

With the described arrangement it will be apparent that the tape will lie flush with the outer surface of the button head since the tape where it passes over the bar-like portion 31 lies within the recess 34. This recess may if desired be somewhat deeper so that the mentioned portion of the tape will lie below the outer surface of the button head 27 and in any case the recess is optional since it may well be omitted. Owing to the presence of the notches or recesses 35 and 36 in the inner end of the button shank the tape may be carried laterally across the inner end of the button shank and yet lie within the plane of the inner end of said shank. Therefore, the tape does not add to the height or depth of the button and a very short or shallow button is provided.

The tape 32 is flexible and provides a means for mounting or attaching the button 26 to the supporter 10. In the use of the device the metal loop 19 is disposed against the outer side of the upper end portion of a hose 37 and the button 26 is then placed against the inner surface of said portion of the hose in the rear of the relatively large eye 23 of the loop. This is as suggested by the dotted lines in Fig. 3. The button is then passed through the loop eye 23 forcing a portion of the hose through the loop and the button is then carried downwardly forwardly of the loop to dispose the shank of the button in alignment with the smaller loop eye 24. The button may then be passed inwardly to dispose its shank 28 in said eye 24 of the loop whereby the parts are arranged as shown in Fig. 2.

Any tension on the supporter will result in the button, particularly the inner surface of the head of the button, being drawn against the loop 19 to more tightly hold the hose. This clamping action on the hose will be assisted by the shank of the button which shank will maintain a portion of the hose drawn inwardly about the rear of the button head and against the inner surface of the loop portion 24. It will be noted that with the described arrangement the button projects above the loop only for a distance equal to the depth or thickness of the head of the button, the shank of the button being received in the loop 24.

Therefore, the supporter does not project so far or is not of such height as to make an unsightly bulge in an outer garment. Further, owing to the fact that the button shank is of such diameter as not to pass through the restricted neck or throat 25, between the eyes 23 and 24 of the loop, it will be retained in the eye 24 by this restricted neck so the supporter will not become detached from a hose even though the wearer assumes a position permitting the supporter to become slack. In attaching the supporter the button 26 must be carried outwardly of the restricted neck portion of the loop after it has forced a portion of the hose through the loop and to detach the supporter the button is carried upwardly at the forward or outer side of said restricted neck or throat portion 25 and then passed rearwardly through the large eye 24 of the loop. It will be evident that no metal stud or base is required to support this button or attach it to the tape.

Referring now particularly to Figs. 6 and 7, a slightly modified construction of the button is shown. This button is generally designated 38 and where the parts and features are the same as those of button 26 identical reference characters have been applied. The only difference between the two structures resides in the fact that the button 38 at the inner end of its shank includes a base or flange-like portion 39. This portion is disposed at the inner side of the loop when the supporter is attached to a hose and will serve somewhat to relieve the strain on the hose. As the wire loop 19 is between the flange and the head, or that is, in the groove formed between the flange and the head the flange provides means to retain the button in the loop and prevent it inadvertently moving outwardly from the loop. Owing to the fact that the addition of this flange or base 39 adds to the height of the button it is preferred not to use such flange since it is very desirable that these buttons be as short as possible. Button 38 is provided in its inner end with the notches 35 and 36 for the accommodation of the tape whereby the tape will not add to the height of the button.

Figs. 8 and 9 show yet another modification wherein the button 40 is in the form of a disc and does not include any shank portion. The button 40 is provided with openings 29 and 30 spaced apart by a bar-like portion 31 and the tape 32 is threaded through said openings to dispose the button on an intermediate portion of the tape after which the ends of the tape are secured as for example in the manner described in connection with Figs. 1 through 5. This button 40 functions in combination with the wire loop 19 to hold the hose, and while providing a flat structure and one which is somewhat cheaper than the button 26 is not so desirable since with the button 40 all strain is placed on the fabric of a hose so that the latter is more likely to be torn. It is also more apt to become unfastened if there is no strain on the supporter.

In Figs. 10 and 11 is shown another modification. In this construction the button 41 instead of having two openings as shown in the first forms is provided with a single opening 42 for the tape 32. The tape can be passed through this opening providing a loop 43 through which may be passed a wire or cord 44 to prevent its being drawn back through the opening. The outer surface is preferably recessed as shown at 45 so the loop 43 will not project beyond the outer surface of the button. At its inner side it may be provided with the shank 46 similar to that of Fig. 1 or this single opening arrangement may be used with the types of buttons shown in Figs. 7 and 9. The shank 46 is

also recessed on one side as indicated at 47 to receive the tape 32 so it will not lie beyond the rear face of the button.

From the foregoing it will be apparent that I have provided a very low or short hose supporter button which will not form an unsightly bulge in an outer garment and which will securely hold a hose even though the supporter is slack. Further, the button is made in one piece and of any desired material such as those above enumerated and does not necessitate the employment of a metal base and stud such as is common in these structures.

Having thus set forth the nature of my invention, what I claim is:

1. In a hose supporter button, a body including a head and a shank, a pair of spaced openings through said button, said button including a bar-like body portion between said openings, a tape threaded through both of said openings whereby to dispose the button on an intermediate portion of the tape with the tape looped about the bar-like portion of the button, said bar-like body portion having its shank end shortened for a distance substantially equal to the thickness of a layer of tape, and said shank having a notch opposite one of said openings and of the width of the tape and of a depth equal to the thickness of two layers of the tape whereby the tape may be carried laterally of the button and be flush with the inner end of its shank.

2. In a hose supporter button, a body including a head and a shank, a pair of spaced openings through said button, a tape threaded through both of said openings whereby to dispose the button on an intermediate portion of the tape, and said button having the inner end of its shank portion notched whereby said tape may be carried across the said end and lie within the plane of the inner surface thereof.

3. In a hose supporter button, a body including a head and a shank, a pair of spaced openings through said button, a tape threaded through both of said openings whereby to dispose the button on an intermediate portion of the tape, said bar-like body portion of the button stopping short of the forward face of the button whereby said tape lies flush with the forward face of the button, and said button having the inner end of its shank portion notched whereby said tape may be carried across the said end and lie within the plane of the inner surface thereof.

4. In a hose supporter button, a body including a head and a shank, said button having an opening therethrough, a securing tape threaded through said opening and having a loop to hold the button thereon, and said button having the inner end of its shank portion notched on one side to receive said tape so that it may be carried across said end and lie inwardly of the face of the shank.

HENRY J. STUART.