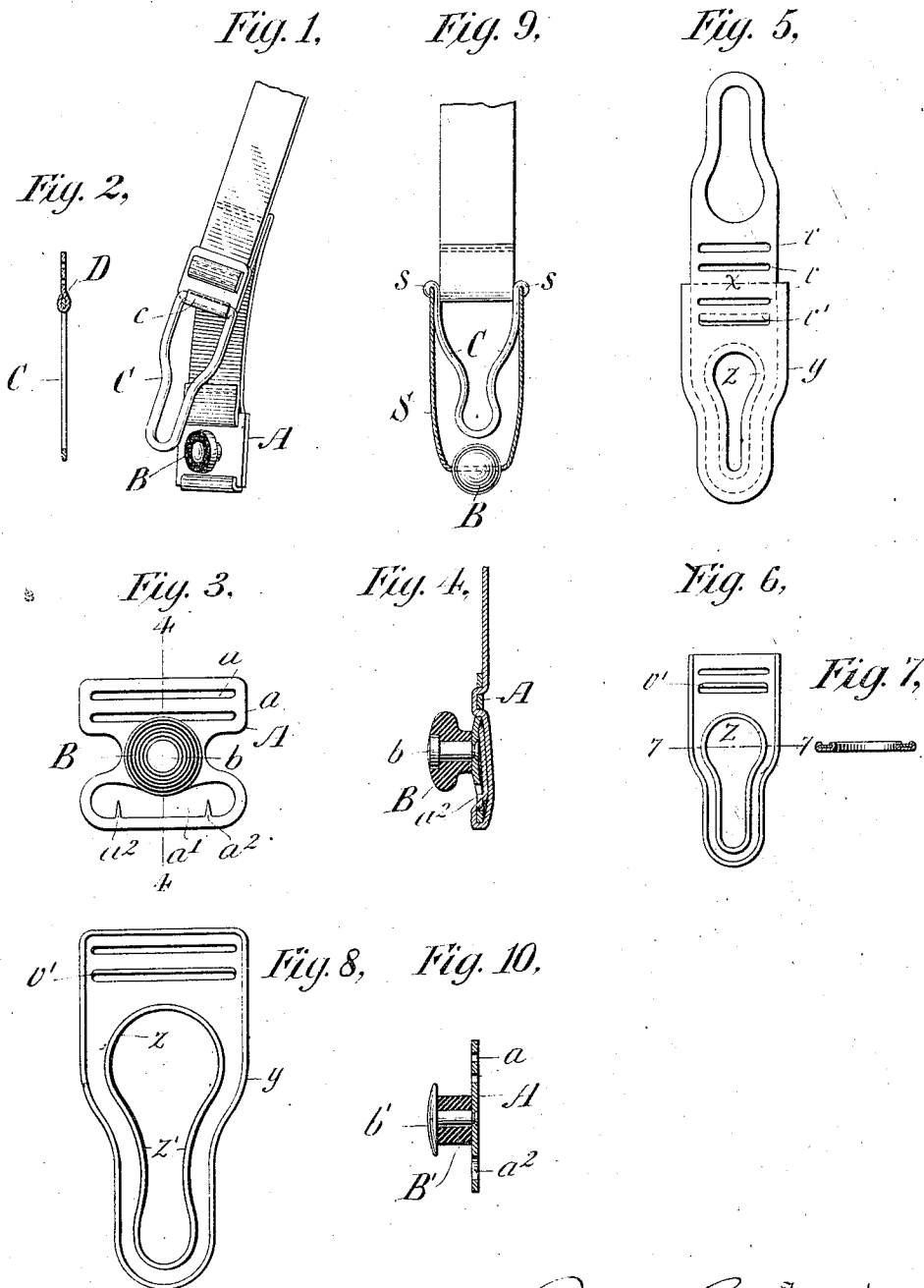


(No Model.)

R. GORTON.
HOSE SUPPORTER.

No. 552,470.

Patented Dec. 31, 1895.



Witnesses
C. E. Ashley
14. W. Lloyd

Inventor
Robert Gorton
By his Attorney
R. L. Brown, David S. W. Smith

UNITED STATES PATENT OFFICE.

ROBERT GORTON, OF PLAINFIELD, NEW JERSEY.

HOSE-SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 552,470, dated December 31, 1895.

Application filed May 14, 1894. Serial No. 511,190. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GORTON, a citizen of the United States, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Hose-Supporters, of which the following is a specification.

My invention relates to hose-supporters of the class in which the hose is held between a button and a retaining-loop that passes over the button and the intervening portion of the hose.

The purpose of my invention is to prevent the slipping of the hose between the button and loop and to reduce to a minimum wear of the hose and liability of breaking or tearing them. To this end I employ a button having a fibrous yielding or elastic surface to which the garment tends to cling, as distinguished from the metallic surfaces heretofore generally used, or a button made of such material, and I preferably make it of rubber or other homogeneous material possessing similar characteristics adapting it to the purposes of my invention. In the ordinary form of supporters the button has a shank that is riveted or otherwise secured to a base-plate. In such supporters the shank only of the button may have such a characteristic surface or body, since the surface of the shank directly co-operates with the loop to hold the hose—that is to say, the hose is clamped between the shank and the end of the loop—and if the clamping-pressure be a yielding or elastic one at such point the advantage of my invention will to a great extent be obtained. I prefer, however, the entire head or edges of the head of the button shall be of the same material as the shank, because the hose will cling to it and further reduce liability of slipping and wear.

The ordinary flat metal loop that has an opening large at one end and narrower at the other may be employed; but to further improve and perfect my supporter I make the metal loop with smooth or rounded edges. I may, for instance, make the loop of flat wire, or I may, and as I prefer, cut the blank for the loop from sheet metal, and then turn or spin over its edges. This construction further reduces wear and liability of tearing the hose, and at the same time there is no danger

of the hose slipping between the loop and button, because the material of the button is of such character that the hose clings to it, nor will the loop in use become disengaged from the button. Since the shank has a yielding or elastic surface, I may constrict the opening in the loop near its clamping end, so that some slight strain upon the loop is required to draw the constricted part past the button. This in effect locks the loop and prevents its accidental displacement in use.

In the accompanying drawings, Figure 1 is a view in perspective, showing one form of my invention; Fig. 2, a longitudinal section through the loop thereof; Fig. 3, a detail view of the slotted plate upon which the button is mounted. Fig. 4 is a section therethrough; Fig. 5, a sheet-metal blank from which the retaining-loop is formed; Fig. 6, a plan of the completed loop; Fig. 7, a transverse section therethrough; Fig. 8, a view of another form of sheet metal-loop. Fig. 9 illustrates a modification in which the elastic button is carried by a cord, and Fig. 10 shows in section a button with a metal head and elastic or yielding shank.

In Fig. 1 the button-supporting plate A is of ordinary construction, and the webbing is threaded through slots therein, and the ends secured by stitching in the ordinary way. The button B is of material of the character described, the head and shank being formed in one piece and secured to the plate, as shown in Fig. 4, by a rivet b.

The loop C in Fig. 1 is of the usual shape—i. e., it has an enlarged opening and a contracted end that embraces the button when drawn laterally into position, but is formed of flattened wire, as is seen from the sectional view, Fig. 2. The ends c are turned at right angles, abut against each other, and are clamped by the overturned lip or edge of the plate D, to which the webbing is attached. The button-base A that I prefer to employ is that indicated in Figs. 3 and 4. On one side of the button it is formed with two slots a a, and on the other side with a single slot a' and teeth or spurs a'' projecting into the slot. As seen in Fig. 4 the webbing may be threaded through this base, as indicated, and the spurs hold it, stitching being unnecessary.

Instead of using flattened wire for the loop

I prefer to make the loop of sheet metal and form it with rounded edges to engage the button. Other edges may be rounded also. In Fig. 5 I have shown a blank for making such a loop cut from sheet metal. The two halves of the blank are folded together, being bent on the line *x*, and the outer edge *y* of the larger side of the blank is turned over upon the edge of the smaller side of the blank, as seen in Fig. 7. The loop-opening of the larger side of the blank is smaller than that in the other side, and its inner edge *z* is turned over the inner edge of the loop of the smaller side of the blank. The slots *v* formed on each side of the line *x* come opposite each other when the sides of the blank are folded together, and instead of punching out the metal of the slot nearest the loop-opening in the larger side of the blank I merely make a cut of the desired shape, leaving the lip *v'* attached to one edge of the slot. This lip is then turned over on the edge of the corresponding slot in the other side of the blank. The completed loop with the two slots is shown in Fig. 6.

In garment-supporters of this class the strain comes upon the webbing attached to the loop, and for this reason I turn over the lip *v'*, as described, so as to form a rounded face or edge against which the strain of the webbing is exerted.

Instead of forming a double blank, as in Fig. 5, and manipulating it in the manner described, the blank may be a single one and have its outer edge *y*, its inner edge *z*, and the lip *v'* of the slot nearest the loop-opening turned or spun over so as to present the desired smooth rounded edges. Such a blank is illustrated in Fig. 8. In this figure the loop is constricted or reduced in width at *Z'* for the purpose heretofore mentioned.

Fig. 10 shows a button having a metal head *U'*, from which the rivet-pin extends, and is surrounded with a sleeve *B'*, of rubber or other yielding or elastic material. The yielding of the sides of such a button-shank permits the constricted part *Z'* of the loop to be drawn past it. I prefer, however, that the head as well as the shank shall be of rubber.

In Fig. 9 I have illustrated a modified construction in which the webbing is passed around the upper end of a round or flat wire-metal loop *C*, and the elastic button *B* is attached to a cord *S* secured to eyes *s*, formed at the sides of the loop and at the opposite ends of the straight portion that is embraced by the webbing. In this construction the button and intervening portion of the hose are pressed through the large part of the opening in the loop, and the loop then drawn up to bring its narrower part in proper relation to the button.

By making the loop as indicated in Figs. 5, 6, and 8 I am enabled to employ very thin sheet metal, since the overturned edges give strength and stiffness as well as a smooth rounded edge.

In my improved device, as before stated, the head as well as the shank of the button may be made of elastic or yielding material. My construction provides a cushion against which the hose is pressed by the strain of the loop, and there is no liability of the loop cutting the hose or becoming unfastened, as is the case in ordinary supporters, where the fastening-surfaces are all of metal, nor is there danger of the head being forced through the stocking, which may occur when the head is metallic and the stocking thin.

The rubber used in my supporter may be as elastic or yielding as that ordinarily employed for pencil-erasers; but it may be either softer or harder. I prefer that it shall be of about the grade mentioned. Rubber is the material best suited to my purpose, so far as I am aware; but when I use that term in the claims I intend to include as an equivalent any other material adapted to prevent the button from slipping and having characteristics similar to rubber and adapted to the same use.

I claim as my invention—

1. In a hose supporter, the combination of the webbing, the loop having an opening large at one end and narrower at the other, the button supporting plate, and the button composed of the central support and the surrounding rubber portion, substantially as set forth.

2. In a hose supporter, the combination of the webbing, the loop having an opening large at one end and narrower at the other, and the rubber button, substantially as set forth.

3. In a hose supporter, the combination of the webbing, the loop having its inner edge turned over to form a smooth rounded edge, and the rubber faced button against which the loop draws, substantially as set forth.

4. In a hose supporter, the combination of the webbing, the supporting plate attached thereto, the button or stud mounted thereon and having a flanged head of rubber, the loop also attached to the webbing and having an opening large at one end and narrower at another, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

ROBERT GORTON.

Witnesses:

EDWARD C. DAVIDSON,
FRANK S. OBER.