

R. GORTON.
HOSE SUPPORTER STUD.
APPLICATION FILED NOV. 8, 1911.

1,057,396.

Patented Mar. 25, 1913.

Fig. 1.

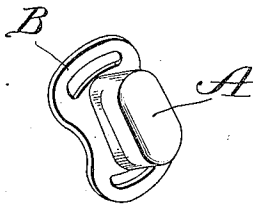


Fig. 2.

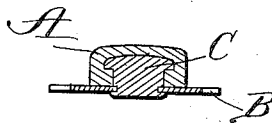


Fig. 3.

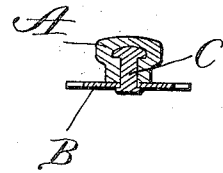


Fig. 5.

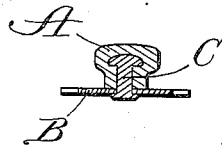


Fig. 4.

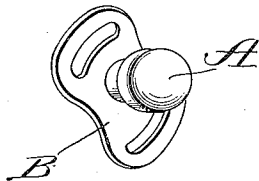


Fig. 6.

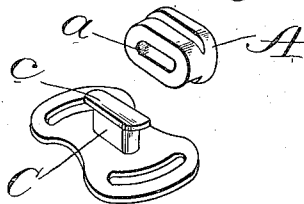


Fig. 7.

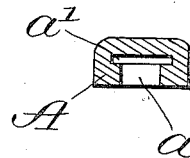


Fig. 8.

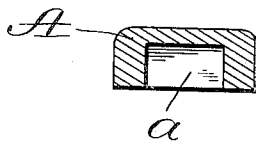


Fig. 9.

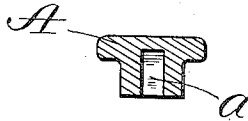


Fig. 10.

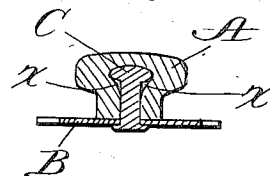
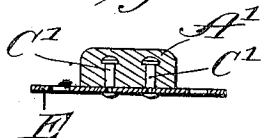


Fig. 11.



Witnesses:

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UNITED STATES PATENT OFFICE.

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HOSE-SUPPORTER STUD.

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1,057,396.

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To all whom it may concern:

Be it known that I, ROBERT GORTON, a citizen of the United States, residing in Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Hose-Supporter Studs, of which the following is a specification.

This invention relates to hose-supporter studs comprising a soft rubber button and a base plate of the type shown in Letters Patent of the United States No. 552,470, granted to me, December 31, 1895, and my present invention consists in a novel stud of the type therein shown. In studs of this type the button is made of soft rubber in order to provide the necessary clinging and yielding characteristics which are important factors in the operation of the clasp of which the stud forms a part, but such a button is more or less flexible, and lacks the required rigidity, therefore it is necessary that it should be attached to its base plate in such manner as not only to secure it permanently in place but at the same time to furnish it with a central support whereby, when the clasp is under strain, the button cannot collapse and thus release itself from the loop member of the clasp with which it is associated. Heretofore the common way of securing such a soft molded button to the base plate and to supply it with the necessary central support has been to attach the button to the base plate by means of a rivet extending through the button. This riveting operation has involved considerable hand labor in the assembling of the base plates, rivets and buttons and also a machine operation for upsetting and heading over the rivets. Furthermore, this method of manufacturing the stud has left the head of the rivet as an exposed metallic part at the top of the button which is objectionable because, owing to the necessary handling of the parts when they are being assembled for the riveting operation, the heads of the rivets are liable to tarnish and discolor and thus mar their appearance. Furthermore, after the rubber buttons have become worn or pressed down in use the metal heads are liable to be left exposed to such an extent as to tear or otherwise injure the garments of the wearer.

I have invented a new stud of the type above mentioned, in which, while the soft rubber button is securely fastened to the base plate in such manner as to afford it the

necessary support, the assembling of the parts is simplified, the operation of riveting the button to its base plate is dispensed with, and a rubber button having no exposed metal surface at its top is produced.

In the accompanying drawings I have shown some hose supporter studs made in accordance with my invention, and I have indicated the method of their manufacture.

Figure 1 is a perspective view of a stud with an oblong button constructed in accordance with my invention. Fig. 2 shows a vertical central section therethrough. Fig. 3 shows a transverse section thereof. Fig. 4 is a perspective view of a stud constructed in accordance with my invention having a round button of the usual shape. Fig. 5 shows a vertical central section therethrough. Fig. 6 is a perspective view, indicating how the button is applied to the post of the base plate. Fig. 7 shows a longitudinal central section through the oblong rubber button. In the foregoing figures of the drawings the rubber button is shown as being provided with an enlarged recess or cavity adapted to receive the head of the post. Figs. 8, 9 and 10 illustrate a modification in which such enlargement or cavity is dispensed with, the recess for the post being of substantially uniform cross section or of uniform dimensions. Fig. 8 shows a vertical central section through a rubber button having a recess of the form just mentioned. Fig. 9 shows a transverse section thereof. Fig. 10 shows a vertical central section through the button illustrated in Figs. 8 and 9, and a base plate and post to which it is applied. Fig. 11 is a sectional view, showing a modification.

A indicates the rubber button, B the base plate and C the central support or post.

The button is made of soft rubber, having the requisite clinging and yielding characteristics. It may be molded in any suitable way, given any appropriate shape and is provided with a flanged or enlarged head and a recess *a* extending from the bottom or outer end of the shank of the button into but not through the head thereof. The base plate, which is of the usual shape and construction, has extending from it a post C having a head *c*. The post may be made by automatic machinery and secured by automatic machinery to the base plate. The rubber button shown in Figs. 1, 2, 3, 6 and 7 is oblong, and the recess *a* is correspondingly

shaped, and in this instance the inner end of the recess is enlarged to form a cavity a' adapted to receive the head of the post. The button is attached to the post by placing the former over the latter and then forcing the button over the post, in the manner indicated in Fig. 6. When thus assembled, the recess a and cavity a' are filled by the headed post which latter forms a substantial support for the button, and the latter will not be separated from the post by the strain to which it is subjected when in use.

I have found that it is not necessary to enlarge the inner end of the recess a to form a cavity for the end of the post. A substantially straight recess or one of uniform cross section or of uniform dimensions, as shown in Figs. 8 and 9, may be employed. In such case, after the headed post is pressed into the recess the walls of the latter will be stretched around the head and contracted around the shank of the post, leaving small vacant spaces x on each side of and immediately below the head of the post, as shown in Fig. 10. These spaces are not objectionable but on the contrary slightly increase the cushioning characteristics of the button. As it is somewhat easier to mold buttons with the straight recess shown in Figs. 8, 9 and 10, I prefer to so make them.

In Figs. 1, 2 and 3, I have shown an oblong button and a correspondingly shaped post, while in Figs. 4 and 5 I have shown a round button and a post which may be circular in cross section in order to indicate that my invention is applicable to buttons and posts of various shapes.

The construction of my improved hose supporter stud will now be clearly understood, and it will be observed that the method of its manufacture, briefly stated, consists in molding the soft rubber button with a suitable post-receiving recess and then slipping it over and pressing it on to a suitably shaped post which has been previously secured to a base plate of ordinary construction. By this novel method the complete stud can be readily produced with a considerable saving in handling and assembling and without the necessity of a riveting operation for securing the button to the base plate. It is merely necessary for the hose supporter manufacturer to have at hand two parts, viz., the molded rubber buttons and the base plates with the posts extending therefrom and the complete studs can be readily produced, as needed, by merely pressing the rubber buttons over the posts, an extremely simple operation, quickly and easily performed. The best results are obtained by applying pressure to the top of the button and forcing it evenly over the post toward the base plate. By my invention a stud is produced with

a soft rubber button possessing the necessary yielding and clinging characteristics and having the required rigidity by reason of its interior support, the button and base plate being reliably secured together in such manner that there is no metallic surface at the top of the button to become tarnished and discolored or to injure the garments of the wearer.

I have herein shown a round button and an oblong button by way of example, but it will be understood that my invention is not limited to any particular shape of button or to a single post and recess for each button as two or more posts and recesses may be employed in each stud. Thus in Fig. 11 the base plate E is shown as being provided with two posts C' which enter suitable recesses in the button A' . By providing the button with a flanged head or outer end and thus thickening the walls of the inner end of the recess it is given greater capacity for clinging to the post. The solid head performs a similar function; i. e., it gives greater firmness or gripping power to the button than would a recessed head so that when the button head is both flanged and solid the most secure attachment of the button to the post is obtained. When two posts are used, as shown in Fig. 11, a solid portion of the button is retained between the posts which adds to the stability of the stud.

I claim as my invention:

1. As a new article of manufacture, a stud for hose-supporters consisting of a soft rubber button having a recessed post-receiving shank and a solid head of greater cross section than the shank, a base plate, and a post secured to said base-plate having a head of greater cross-section than the cross-section of the recess in the said shank, said headed post being pressed into said recess so that its headed upper end is seated within the headed portion of the button and is gripped by the contraction of the recess in the button shank below the head of the post.

2. As a new article of manufacture, a stud for hose-supporters, consisting of a soft rubber button having a flanged head, a shank and an expansible recess of substantially the same cross section throughout its length extending through its shank and into but not through the head where the walls of the recess are thickest, a base plate and a headed post secured to said base plate and slipped into said recess to form an interior support for said button and to attach it to said base plate, the head of said post being of such cross section as to expand the recess whereby the recess is stretched around the head of the post and contracts below it.

3. As a new article of manufacture, a

stud for hose supporters consisting of a
soft rubber button having a shank provided
with two post-receiving recesses and a solid
head of greater cross section than the
5 shank, a base plate, and two posts secured
to said base plate each having a head of
greater cross section than the cross section
of the recess in the shank which it enters,
said posts being pressed into said recesses
10 so that their headed upper ends are seated
within the headed portion of the button

and are gripped by the contraction of the
recesses in the button shank below the
heads of the posts while a solid portion of
the button is retained between the posts. 15
In testimony whereof, I have hereunto
subscribed my name.

ROBERT GORTON.

Witnesses:

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ALPHONSO W. BELCHER.