Aug. 10, 1954 L. A. DANCO, JR 2,685,722

ARTICLE ATTACHABLE TO SHEET MATERIALS

Filed June 16, 1951

2 Sheets-Sheet 1

FIG. 1.

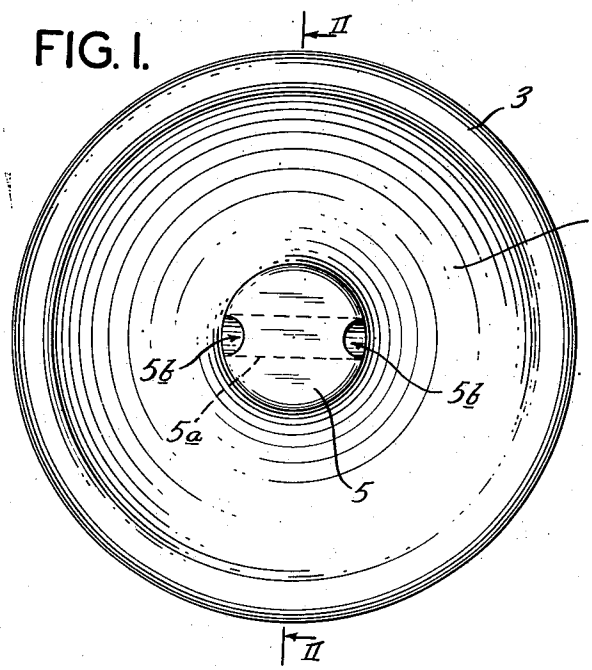
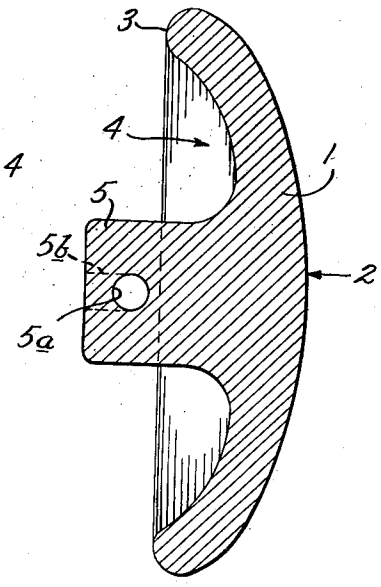


FIG. 2.



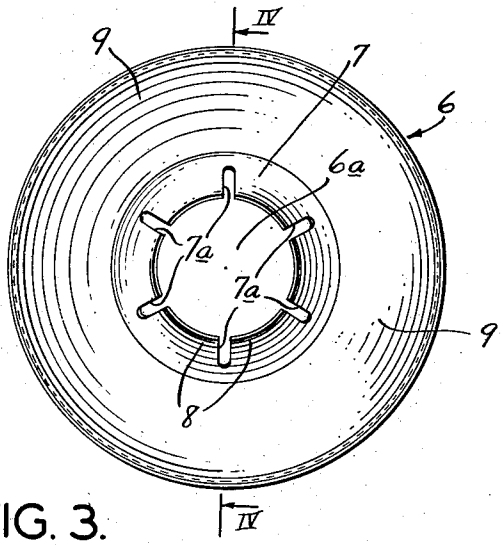


FIG. 3.

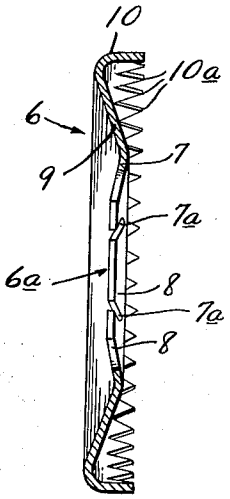


FIG. 4.

INVENTOR.
LEON A. DANCO, JR.
BY
his ATTORNEY

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FIG. 5.

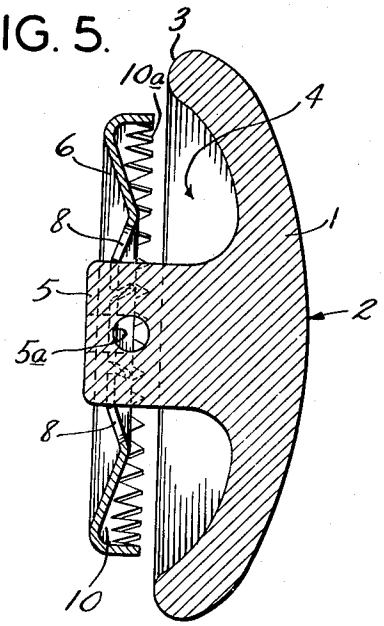


FIG. 6.

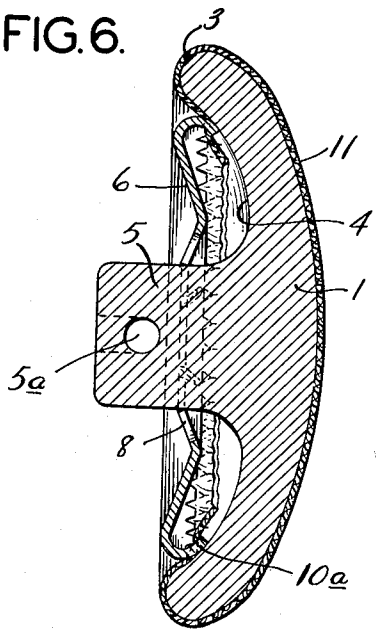


FIG. 7.

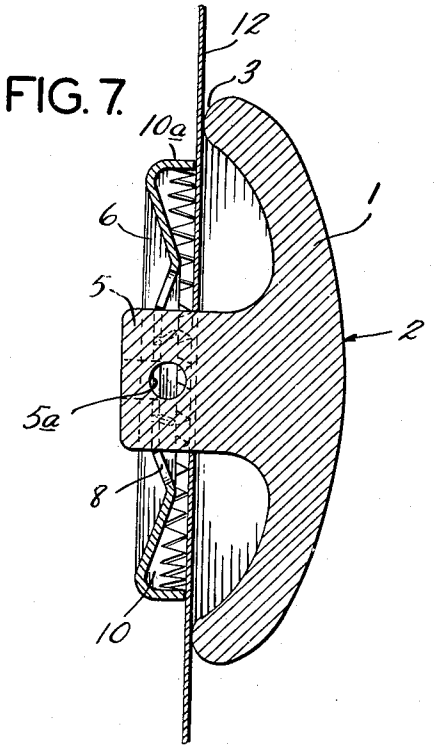
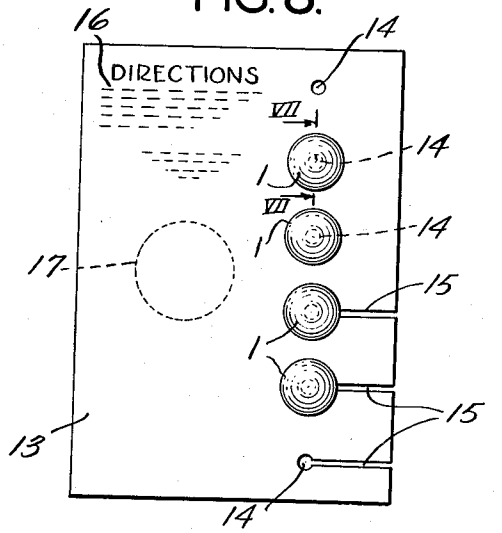


FIG. 8.



INVENTOR.
LÉON A. DANCO, JR.
BY
his ATTORNEY

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ARTICLE ATTACHABLE TO SHEET MATERIALS

Léon A. Danco, Jr., Fairfield, Conn., assignor to The Risdon Manufacturing Company, Naugatuck, Conn., a corporation of Connecticut

Application June 16, 1951, Serial No. 232,010

4 Claims. (Cl. 24—113)

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This invention relates particularly to covered buttons, i. e. buttons covered with cloth, and especially to buttons or button forms to be covered with cloth of their own selection by dressmakers and housewives.

However the construction is applicable to articles to be attached to sheet material rather generally, e. g., in addition to covered buttons, to buckles, clasps, etc., and regardless of whether or not covered with cloth or other sheet material, and it permits articles to be attached to cards and the like for packaging and display purposes.

The construction is comparatively simple and compact, and economical to manufacture, and as a coverable button, it provides a form of button that is readily covered with cloth by even unskilled persons .

The foregoing is accomplished by forming the article in two parts as it were, hereinafter termed a body and an inwardly projecting backing piece. The body is provided with at least one projecting shank and the backing piece is provided with an aperture to receive the shank which is somewhat smaller than the shank. The backing piece, or at least a portion of it at the aperture, is yieldable so that the shank may be inserted into and usually through the aperture. When so inserted, the shank is yieldably gripped by the backing piece so that the backing piece and body are held against separation again. Any sheet material located between the backing piece and the body is thereby retained and the article held to it. The engagement of the backing piece and body with the sheet material may vary from a simple contact to a forceful gripping accompanied by deformation of the sheet material or the backing piece or both and piercing of the sheet material.

A covered button embodying the form of the invention which I now prefer is shown in the accompanying drawings.

In these drawings, Fig. 1 is a view looking directly at the rear of the body of the button. Fig. 2 is a sectional view on the line II—II of Fig. 1. Fig. 3 is a view looking at the back of the backing piece which in this instance is a disc. Fig. 4 is a sectional view on the line IV—IV of Fig. 3. Fig. 5 is a sectional view showing the disc of Figs. 3 and 4 partly assembled on the body of Figs. 1 and 2. Fig. 6 is a sectional view similar to Fig. 5 but showing the body covered with fabric and the disc forced to its innermost position to hold the covering fabric in place. Fig. 7 is a sectional view similar to Fig. 5 showing the button of Fig. 5 assembled on a supporting card,

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the section being along the line VII—VII of Fig. 8. Fig. 8, on a smaller scale, shows a number of such coverable buttons assembled on a mounting card.

The button shown in Figs. 1 and 2 has a body portion 1 which is circular like most buttons, and has a front surface 2, usually made convex, a rearwardly projecting peripheral rim 3, and an internal annular concave recess 4. From this body portion 1 projects rearwardly shank 5. The shank 5 is pierced as at 5a to provide an aperture for receiving sewing thread by which the finished button is fastened to the garment. Usually grooves 5b extending between the ends of the aperture 5a and the end of the shank are added to receive the legs of the loops of the thread.

The backing piece 6 of Figs. 3 and 4, which is a disc since the rim 3 and recess 4 of the body are circular, has a central aperture 6a to receive the shank 5 of the body. Preferably, immediately outside the aperture 6a, a portion 7 of the disc is formed as a backwardly projecting cone and radially extending slots 7a form teeth 8 at the periphery of the aperture 6a. Also, preferably, the portion 9 of the disc between the conical portion 7 and the outer edge of the disc is formed as a forwardly projecting cone, projecting inwardly from its rim, i. e. toward the body 1. The conical form at 7 tends to increase the grasp of the backing piece on the body shank, and the conical form at 9 tends to reduce the length of shank required; together they tend to stiffen the backing piece and increase its rigidity as a whole. The outer edge of the disc is provided with or formed as a forwardly-directed peripheral flange 10, at least preferably, and preferably is provided with pointed teeth 10a. Both of the conical portions 7 and 9 may be shallow as will be understood, and so related as to locate the aperture 6a back of the plane of the forward edge of the peripheral flange 10, i. e. back of that plane which contains the pointed ends of the teeth 10a (Fig. 4).

Essentially the edge of the aperture 6a is resiliently yieldable, and since this yieldability is provided by the teeth 8 in the present instance, the disc 6 is constructed of a resiliently yieldable material, preferably metal. The diameter of the aperture 6a in the disc, i. e. the diameter from end to end of the teeth 8, is made somewhat smaller than the diameter of the shank 5 of the body 1.

The disc 6 and body 1 may be sold separated one from the other, or they may be sold partly assembled as in Fig. 5. In any event usually the

first step in the use of the button shown is to partly assemble the two as shown in Fig. 5 by pushing just the end of shank 5 into the aperture 6a. This bends the teeth 8 backwardly somewhat so that they yieldably engage the surface of the shank 5 and thereby tend to prevent removal of the disc from the body again. However the resiliency at 8 permits the disc to be rocked on the shank somewhat.

When such a button is to be covered by sheet material such as a fabric, a piece 11 of the fabric first is cut to the proper size, and generally more or less circular in shape. The piece then can be covered over the body 1 either before or after the disc 6 and the body 1 have been partly assembled as shown in Fig. 5. Most conveniently it is done after such partial assembly. The piece 11 then is held against the forward face 2 of the body by the fingers while its edge is tucked in between the periphery 3 of the body and the teeth 10a of the disc, and into the recess 4 of the body. This can be done readily by first tucking the edge of the fabric in at some one place, and then rocking the disc forwardly at this place to hold this part of the fabric in place. Then tucking an adjacent part of the fabric edge in between the disc and body, and rocking the disc forwardly at this second place to hold this second part of the fabric between the disc and body. By continuing this step by step action, the whole of the edge of the fabric piece 11 can be inserted between the disc and body both readily and quickly, and the piece 11 drawn substantially smoothly onto and across the forward face 2, and at the end of these operations the disc 6 will be displaced at least somewhat further forwardly into the recess 4 than in Fig. 5, i. e. more or less to its position in Fig. 6. However, if the disc is not then completely seated, it then can be thrust still further forwardly into the recess 4, and this action tends to draw the fabric even more tightly and smoothly to the face 2 of the body. In either event however, the end result is something as shown in Fig. 6. I. e., the teeth 10a pierce more or less into the fabric piece 11, providing this fabric is one that can be pierced by the teeth, and if the teeth are made long enough relative to the thickness of the fabric, they may pass completely through the fabric, and they may be turned inwardly toward the shank 5. The disc therefore serves, when thrust home, to hold the fabric to the body part 1 securely, while the relative diameters of the aperture 6a and the shank 5, plus the resiliency of the disc at the aperture 6a, cause the disc to be anchored securely in its final forward position. Teeth such as 8, it will be observed, are bent a little rearwardly, to good anchoring position, on the forward movement of the disc and the conical shaping at 7 tends to augment this action.

Fig. 7 shows how a body member and its backing member of the invention, e. g. 1 and 6, can be attached to sheet material without carrying this sheet material over the forward face 2 of the body member. I. e., a hole is made through the sheet material 12, the shank 5 of the body is thrust through the hole, and then the backing member 6 is thrust at least partly onto the shank. Obviously the backing member 6 can be thrust farther forward on the shank 5 than shown in Fig. 7 if desired. Also, the portion 9 of the disc 6 will remain spaced from the sheet material.

Fig. 8 shows how the ability to attach a device of the invention to a flat sheet of material can be utilized to mount such devices for display

and transportation. In Fig. 8, 13 is a display card arranged to carry a number of the devices of the preceding figures. The card is pierced with a hole 14 for each of the devices it is to carry, each hole being large enough to receive a shank 5. The shank of each device then is inserted in one of the holes and its backing member is applied as in Fig. 7, the card 13 taking the place of the sheet material 12 of Fig. 7 and each backing member 6 being only partly assembled on its shank as in Fig. 7. Not only are the devices plainly and pleasingly displayed with this arrangement, but also a person desiring to make a covered button needs to only, say, tear the card to release one of the devices from the card and then proceed to cover it with a piece of fabric as described above. If desired the card can be slit or slotted from each hole 14 to an edge of the card, as at 15, to facilitate removal of an article from the card, while retaining the article securely for transportation and for preservation until needed. Directions for using the article may be printed on the card as at 16. Preferably also, in the case of articles to be covered by the user, a pattern 17 for the covers is printed on the card, or is outlined on the card by score lines. By observing the shape and dimensions of the pattern 17, the user can readily cut the piece of covering fabric to the proper shape and size, or by cutting or punching the pattern 17 from the card the user obtains a templet by means of which the desired covering piece can be cut directly.

It will be understood that my invention is not limited to the details of construction and operation shown in the accompanying drawings and described above except as appears hereafter in the claims, and those claims are intended to include equivalents of the various elements and features mentioned in them, as well as specific elements and features themselves.

I claim:

1. An article to be attached to sheet material comprising a body having a rim, at least one shank projecting rearwardly from said body and projecting farther rearwardly than the rim of said body, and a backing piece, said backing piece being provided with a flange extending forwardly from its rim and said body being recessed inwardly from the rim of the body to receive said flange, said backing piece being provided also with an aperture smaller in diameter than the greatest transverse dimension of said shank and at least a portion of the backing piece adjacent said aperture being resilient to permit said shank to be inserted in said aperture by flexing the backing piece, the backing piece moved along the shank toward said body and movement of the backing piece along said shank away from said body restrained, and the distance which said flange projects forwardly from said rim of the backing piece being less than the distance which the stem projects rearwardly beyond the rim of the body and said aperture in the backing piece being located farther forward than said rim of the backing piece.

2. An article to be attached to sheet material comprising a body having a rim, at least one shank projecting rearwardly from said body and projecting farther rearwardly than the rim of said body, and a backing piece, said backing piece being provided with a flange extending forwardly from its rim and said body being recessed inwardly from the rim of the body to receive

said flange, said backing piece being provided also with an aperture smaller in diameter than the greatest transverse dimension of said shank and at least a portion of the backing piece adjacent said aperture being resilient to permit said shank to be inserted in said aperture by flexing the backing piece, the backing piece moved along the shank toward said body and movement of the backing piece along said shank away from said body restrained, and the distance which said flange projects forwardly from said rim of the backing piece being less than the distance which the stem projects rearwardly beyond the rim of the body and said aperture in the backing piece being located farther forward than said rim of the backing piece and farther to the rear than the forward edge of said flange.

3. A button form comprising a body having a rim over and around which a sheet of material can be wrapped, a substantially centrally located shank projecting rearwardly from said body and projecting farther rearwardly than the rim of the body, and a backing piece provided with a flange projecting forwardly from the rim of the backing piece to engage material wrapped around said body and provided centrally with an aperture to receive said shank, said body being recessed around said shank to receive said backing piece, said aperture being smaller in diameter than the greatest transverse dimension of said shank, the distance which said flange projects forwardly from the rim of the backing piece being less than the distance which the stem projects rearwardly beyond the rim of the body, the said backing piece from said flange toward said aperture having a forwardly projecting conical shape and from the inner margin of said forwardly projecting conical shape to substantially

said aperture having a rearwardly projecting conical shape, the backing piece being resilient at least adjacent said aperture to permit said shank to be inserted in said aperture by flexing the backing piece, the backing piece moved along the shank toward said body and movement of the backing piece along said shank away from said body restrained, and said aperture being located farther forward than said rim of the backing piece and farther to the rear than the forward edge of said flange.

4. The combination with the subject matter of claim 1, said backing piece being on said shank with the backing piece spaced from said body and with said shank gripped by said apertured portion, of a card having an aperture through which said shank projects with said body at one side of the card and said backing piece at the other side of the card, and said card being provided with a slit extending from said aperture to one edge of the card through which said article can be slipped from the card.

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