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C. A. LIGHT

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SELF LOCKING SLIP UNDER BUTTON

Filed July 29, 1932

Fig. 1

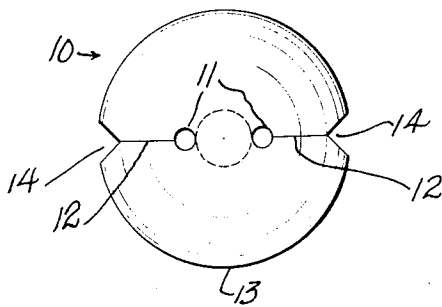


Fig. 2

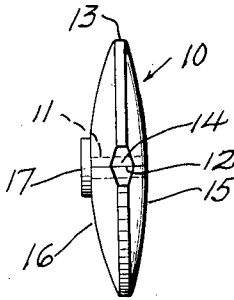


Fig. 3

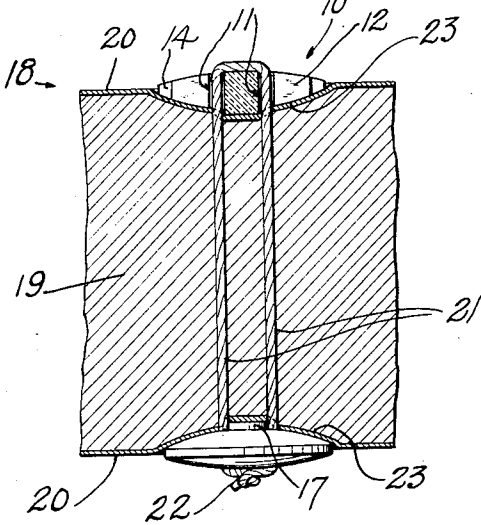


Fig. 4

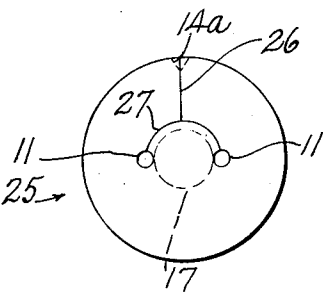
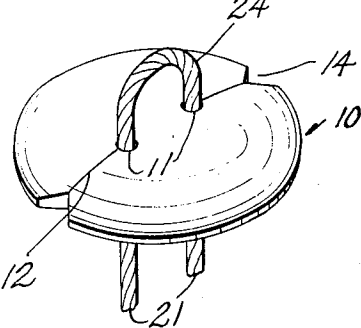


Fig. 5

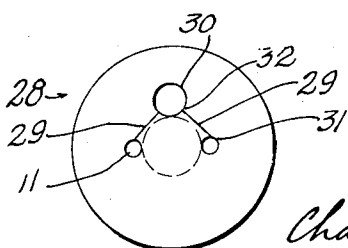


Fig. 6

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SELF LOCKING SLIP UNDER BUTTON

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This invention relates to buttons and has particular reference to buttons of the slip under type.

One object of this invention is to provide a device of the character described for locking the strand or cord which is used to secure the button in place.

The invention finds especial application in connection with mattress tufts, the binding strands or cords in which become loose as the mattress thins down under repeated use, so that the ordinary slip under button becomes loose and is frequently detached and lost.

Another object of the invention is to furnish a button for use with mattress tufts and the like, which button has improved means whereby it gradually forms a seating depression in a mattress so as to lie substantially uniformly with respect to the surface of the mattress.

Another object of the invention is the provision of a device of the nature set forth which is simple and inexpensive in construction, convenient, durable and efficient in use.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid and other objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claim, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

In the drawing:

Figure 1 is a top plan view of a button embodying the invention.

Fig. 2 is an edge view thereof.

Fig. 3 is a fragmentary vertical sectional view of a mattress showing a typical application of the invention.

Fig. 4 is a perspective view of the device.

Figs. 5 and 6 are top plan views of buttons showing different modifications of the invention.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in

one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which this invention appertains, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplification of the invention.

Heretofore it has been proposed to provide slip under buttons with a plurality of slots through which a securing strand could be passed for anchoring the button. These slots have detracted from comfort in using the button, and have permitted loss of the button if the strand loosened. By my invention, I provide a button of resilient or elastic material having apertures for the securing strand and slits leading to said apertures, which slits are closed by the elasticity of the button to prevent accidental removal of the strand from said apertures. If desired, the button may have peripheral entering openings or notches for the slits. This button may be used for various purposes, as in connection with garments and different devices, but is especially applicable to mattresses. For the latter purpose, the button may have a reinforcing projection at the apertures and may be downwardly convex so as to bear into the mattress and afford a permanent seat for the button which may thus lie uniformly with the mattress surface. The button may also be arranged with but one slit extending to the periphery thereof, and by this invention an improved novel tuft structure is provided.

Referring in detail to the drawing, 10 denotes a device embodying the invention. The same may be in the nature of an anchorage or button consisting of an elastic material such as rubber or other composition material. Said button may be of any suitable size and shape, and can be round as shown. Near the central region of said button, a plurality of apertures 11 may be provided, and slits 12 may individually connect these apertures with the periphery 13 of the button. If desired, said slits may extend along a diameter

of the button and may each terminate in a notch or entrance portion 14 at the periphery.

The top or front face 15 of the button may be substantially plane or slightly convexed as shown, while the opposite face 16 may be considerably convexed, the peripheral portion 13 being comparatively thin. At the surface 16, the button may have a central projection 17, the apertures being in direct proximity thereto, so that said projection reinforces this part of the button against the pull by a strand.

In making a tuft, the mattress 18 having any filling 19 and a fabric casing 20 has a cord 21 passed therethrough so as to form a loop. The buttons 10 may be applied to opposite faces of the mattress, the cord being entered into the apertures 11 by slipping the same through the slits 12, after which the cord may be tied as at 22 at the underside of the mattress. Thus the threading of the cord through the apertures is avoided and time and labor saved.

It will be noted that the lower convex portions of the buttons gradually work into the mattress to afford concave seats 23 therefor, whereby the buttons are reliably located even if the cord 21 should loosen somewhat. Moreover, the upper surfaces of the buttons lie substantially along the surface of the mattress.

In course of repeated use, the mattress thins down so that the cord is of relatively excess length and hence the condition shown in Fig. 4 occurs, with a slack 24 in the cord. However, the button will remain in engagement with the cord because the slits are closed by the resilience of the button material. In fact, any pull on the button will tend to cause the slits to close even more tightly. Similar advantages as above described will be obtained by using the buttons for garments, and generally wherever a button may be required.

For some uses, as in connection with garments it is preferable to have as few slits as possible in the button, and hence I have devised an elastic button 25 as shown in Fig. 5, which may be similar to that hereinbefore described except that apertures 11 are intercommunicated with the button periphery by a single slit 26. The latter may communicate with a curved slit 27 extending between the apertures and around the lower projection. The opening 14a may be formed only in the lower face of the button adjacent to the periphery so that the periphery is unbroken at the top surface of the button. If the button be sufficiently thin, the slit 26 may be omitted and an edge portion of the button may be flexed from the plane thereof so that the central portion of the button between the apertures 11 will constitute a tongue having its edge formed by the slit 27, and whereby a strand may be passed around said tongue to be received in the apertures.

In Fig. 6 I have shown an elastic button 28 which is entirely free of any slit extending to the periphery. In this button, the apertures 11 are connected by slits 29 with a relatively large opening 30. A loop of strand may be easily entered into the opening 30 and the individual strands of the loops passed through slits 29 into apertures 11. As shown, said slits may connect with the apertures 11 near their outermost portions as at 31 and with opening 30 near its innermost portion as at 32. This button is self locking and can be otherwise similar to the button 10.

Buttons of the type above described consisting of a homogenous, permanently flexible, non absorbent material and having a flexible edge are easily kept clean and can be used in many ways without being subject to breakage. If the buttons be made of rubber, the same can be vulcanized at such a temperature as not to be affected by boiling water, acids or the temperatures which are used in ironing. The button material can of course be colored to suit the article to which it is applied. However, the buttons can also be made of a pliable material such as leather or fabric, which can be stiffened or rubberized if desired, and even thin resilient sheet metal may be used. It may also be noted that the slits serve to increase the pliability of the button, so that it can more easily be passed through button holes, especially if these be somewhat smaller than the buttons, and yet the central portions of the buttons are sufficiently heavy to resist all ordinary stresses. In certain instances, slots may be used as at 26.

It will be appreciated that various changes and modifications may be made in the device as shown in the drawing, and that the same is submitted in an illustrative and not in a limiting sense, the scope of the invention being defined in the following claim.

I claim:

A slip-under button for mattress tufts, said button consisting of rubber and having a relatively thin edge and a substantial circular convexity on one side thereof to form a depressed seat for the button in a mattress, said button having an integral reinforcing central projection on said one side thereof for reinforcing the button, said button additionally being provided with a pair of apertures adjacent to said projection, the apertures being on opposite sides of said projection, elastically self-closing slits being provided in said button, said slits extending in opposite directions from said apertures to the periphery of the button, and said slits terminating in notches at said periphery for guiding strands to said apertures, the strands being retained in the apertures by the self-closing action of the said slits.

In testimony whereof I affix my signature.
CHARLES A. LIGHT.