United States Patent [19]

Shepherd

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[54] **TUFTING BUTTON**

[75] Inventor: **Stephan C. Shepherd,** Winnetka, Ill.

[73] Assignee: **Maxant Button & Supply Co.,** Chicago, Ill.

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[52] **U.S. Cl.** ..... **24/90 B;** 5/356

[51] **Int. Cl.**[2] **A47C 27/00;** A44B 1/18

[58] **Field of Search** ..... 5/356; 24/102 T, 90 B, 24/90 TB, 221 A

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Primary Examiner—Donald A. Griffin

Attorney, Agent, or Firm—Dominik, Knechtel, Godula & Demeur

[57] **ABSTRACT**

A tufting button which preferably is molded as an integral unit of plastic, and has a head portion and a shank portion. The shank portion has a first longitudinal slot formed in it which extends from its free end towards its attachment to the head portion, and a second longitudinal slot which is angularly offset with respect to the first longitudinal slot and which is closed at the free end of the shank portion. These two longitudinal slots are connected by two generally horizontal slots which extend from the respective edges of the first longitudinal slot to the second longitudinal slot, such that the button can be attached to a tufting cord by extending the latter through the first longitudinal slot and then rotating the tufting button to extend the tufting cord through the two horizontal slots into the second longitudinal slot. The tufting cord then is lockingly engaged in the second longitudinal slot, by pulling it toward the free end of the shank portion to seat it within the second longitudinal slot.

12 Claims, 5 Drawing Figures

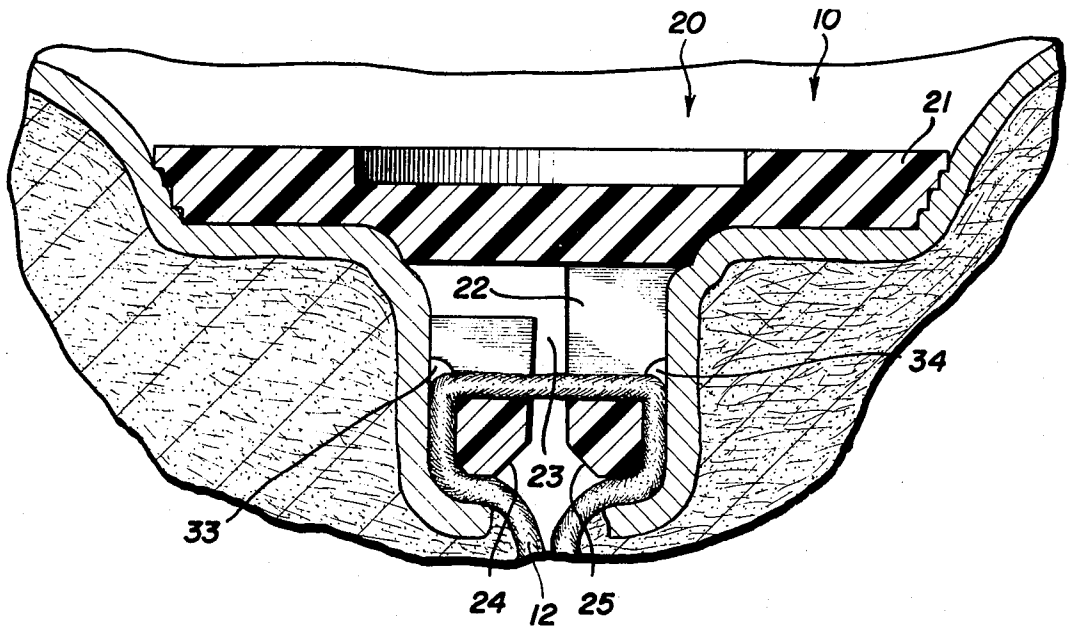


FIG. 1

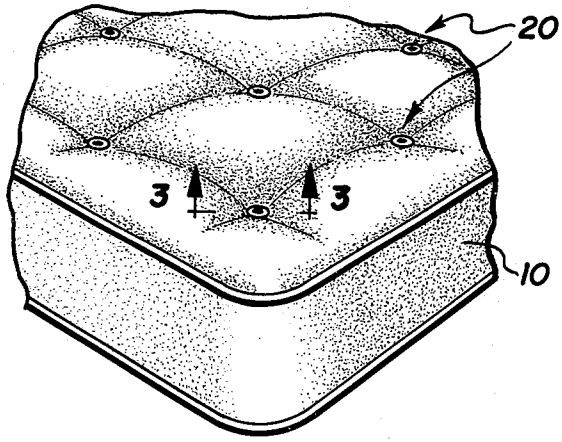


FIG. 2

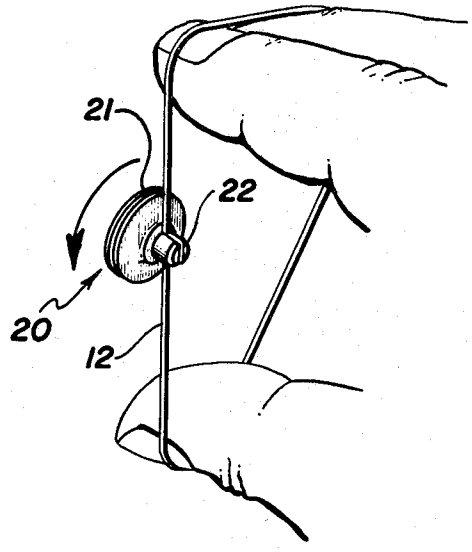


FIG. 3

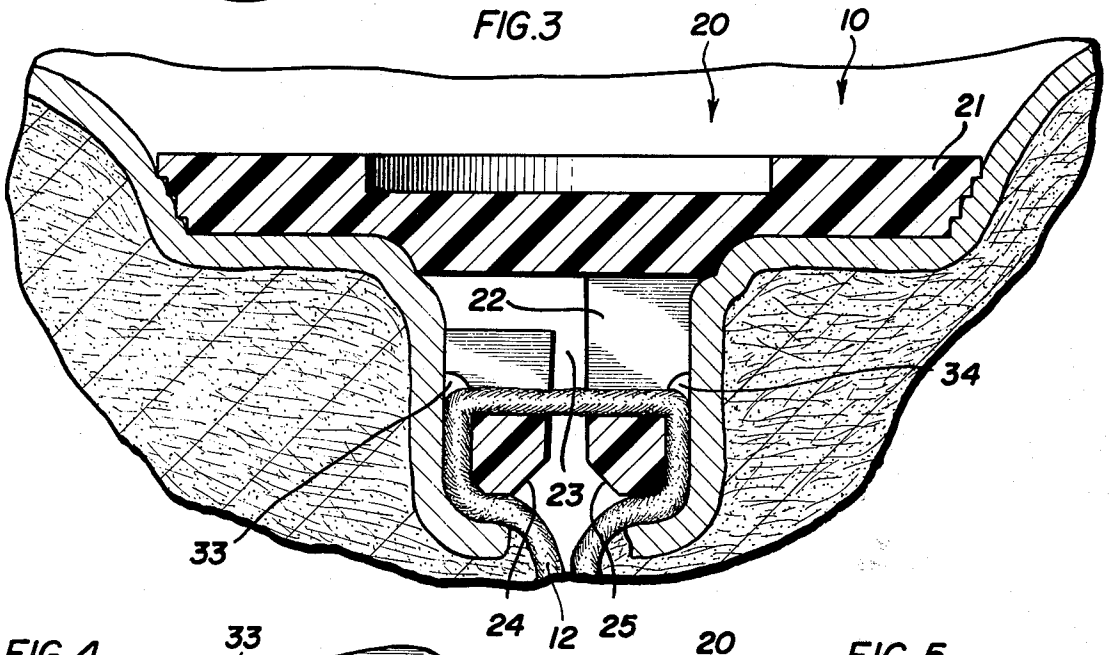


FIG. 4

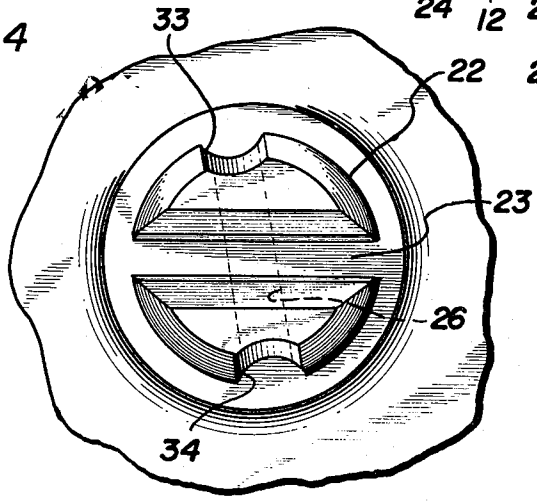
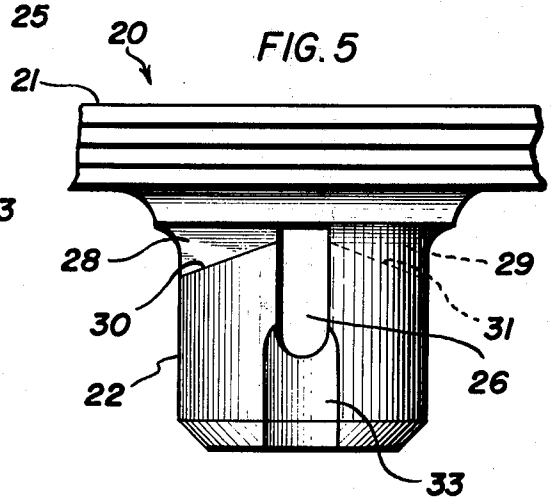


FIG. 5



TUFTING BUTTON

This invention relates, in general, to buttons and, more particularly, to tufting buttons such as are used in tufting upholstery and the like, having a construction which permits them to be easily applied to a tufting string or loop (hereinafter collectively referred to as tufting cord) which has been previously or is to be inserted in the article to be tufted and to retain their attachment to the tufting cord when in use.

Tufting buttons of various different constructions presently are available, however, most if not all of them are objectionable, for one reason or another. For example, many of these tufting buttons are difficult to affix to a tufting cord. Some which are easily affixed to the tufting cord are easily detached during use. Others are easily broken or do not seat properly on the article in view of the manner of attachment.

The tufting button of the present invention preferably is molded as an integral unit of plastic, and has a head portion and a shank portion. The head portion, in use, can have a button cover attached to it which matches the material of the article to which the tufting button is attached. The shank portion has a first longitudinal slot formed in it which extends from its free end towards its attachment to the head portion, and a second longitudinal slot which is angularly offset with respect to the first longitudinal slot and which is closed at the free end of the shank portion. These two longitudinal slots are connected by two generally horizontal slots which extend from the respective edges of the first longitudinal slot to the second longitudinal slot, such that the button can be attached to a tufting cord by extending the latter through the first longitudinal slot and then rotating the tufting button to extend the tufting cord through the two horizontal slots into the second longitudinal slot. The tufting cord then is lockingly engaged in the second longitudinal slot, upon being pulled toward the free end of the shank portion to seat it within this second longitudinal slot. The slots are formed to frictionally receive the tufting cord through them so that inadvertent detachment is substantially, if not completely, eliminated. Also, the construction is such that stresses on the button are substantially eliminated, and the button seats or lies flat on the surface of the article, once the tufting cord is seated within the second longitudinal slot.

Accordingly, it is an object of the present invention to provide an improved button and, more particularly, an improved tufting button.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

FIG. 1 is a partial perspective view of a portion of an upholstered cushion having tufting buttons exemplary of the present invention affixed thereto;

FIG. 2 is a partial perspective view generally illustrating the manner in which the tufting button is affixed to a tufting cord;

FIG. 3 is a sectional view taken generally along lines 3—3 of FIG. 1;

FIG. 4 is a partial bottom view of the tufting button; and

FIG. 5 is a side plan view of the tufting button.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings, in FIG. 1 there is illustrated a portion of an upholstered cushion **10** having a number of tufting buttons **20** exemplary of the invention affixed to each of the opposite sides thereof, by means of a tufting cord **12** extended through the cushion in the well-known manner. For example, one of the tufting buttons **20** is affixed to the tufting cord **12** and the latter then is drawn through the cushion **10** by means of a hooked needle or the like. The other one of the tufting buttons then is affixed to the tufting cord. Alternatively, the tufting button can be affixed to the tufting cord, and the latter drawn through the article to be tufted and then secured in the well-known manner. Other known manners can, of course, be used.

The tufting button **20** of the present invention, as can be best seen in FIGS. **2–5,** has a head portion **21** and a shank portion **22,** and preferably and advantageously is molded as an integral unit of plastic, however, it can be of other types of material and of a two-piece construction, if desired. As indicated above, in use, the head portion **21** of the tufting button **20** also can be covered with a button cover or the like which is of a material which matches the material of the article to which the tufting buttons are affixed. This button cover can be affixed to the tufting button **20** in any suitable fashion. In the illustrated embodiment, for the sake of clarity, the tufting button **20** is shown without a button cover affixed to it.

The shank portion **22** of the tufting button **20** has a first longitudinal slot **23** formed in it which extends from its free end substantially or completely through the shank portion **22** to its point of attachment with the head portion **21.** The edges of the longitudinal slot **23** at the free end of the shank portion **22** preferably are beveled as at **24** and **25,** so as to provide camming surfaces to guide the tufting cord into the longitudinal slot **23.** The width of the longitudinal slot **23** preferably is slightly tapered so as to be narrower at its end near the point of attachment with the head portion **21** so as to frictionally engage the tufting cord as it is extended through the longitudinal slot **23,** in the manner described more fully below. The longitudinal slot **23** also preferably extends along the axis of the shank portion **22** so as to divide the latter substantially in half.

A second longitudinal slot **26** also is formed in the shank portion **22,** with this longitudinal slot **26** being angularly offset with respect to the first longitudinal slot **23,** as can be best seen in FIG. **4.** The extent to which this longitudinal slot **26** is offset with respect to the longitudinal slot **23** may vary within a range of **10°** to **90°,** however, preferably and advantageously it is offset somewhat less than **90°** so as to provide greater strength in the shank portion **22** to resist breakage.

The first longitudinal slot **23** communicates with the longitudinal slot **26** by means of a pair of generally horizontal slots **28** and **29** which, as can be seen in FIG. **5,** extend from the respective edges of the longitudinal slot **23,** through the opposite sections of the shank portion formed by the slot **23** into the longitudinal slot **26.** In this case also, at least one wall of the horizontal slots **28** and **29** is tapered as at **30** and **31** to permit the tufting cord to be more easily guided into and extended through these slots into the longitudinal slot **26.**

In affixing the tufting button **20** to the tufting cord, such as the tufting cord **12,** the tufting cord is first ex-

tended into and through the longitudinal slot **23** and then rotated, as illustrated in FIG. **2**. In rotating the tufting button **20**, the tufting cord is caused to enter and to extend through the horizontal slots **28** and **29**, into the longitudinal slot **26**. The tufting cord then is pulled forward to seat it within the longitudinal slot **26**, at the base of the slot near the free end of the shank portion **22** of the tufting button. The tufting cord then is drawn through the article and secured, in any of the well-known methods or, alternatively, the tufting cord can be looped and another tufting button secured to it, on the opposite side of the article.

As can be best seen in FIG. **3**, the base of the longitudinal slot **26** is horizontally disposed with respect to the head portion **21** of the tufting button so that the tufting button seats or lies flat on the surface of the article to which the tufting button is affixed. Furthermore, the side wall of the shank portion **22** has a pair of recessed cavities **33** and **34** formed in it in axial alignment with the longitudinal slot **26**, for receiving therein the tufting cord to assist in seating the tufting button on the article. The lower edges of these cavities **33** and **34** are tapered or rounded to eliminate any sharp edge which may cut the tufting cord. With the width of the longitudinal slot **23** and the horizontal slots **28** and **29** being tapered, the tufting cord is frictionally engaged as it is extended through these slots into the longitudinal slot **26**, so that it is releasably lockingly engaged within the longitudinal slot **26**, so that inadvertent detachment of the tufting button **20** from the loop of tufting cord is substantially, if not completely, eliminated. Further still, the arrangement is such that the tufting cord, when seated within the longitudinal slot **26**, exerts a vertical pull on the shank portion **22** such that substantially all stresses on the tufting button except for a straight tensile stress are eliminated. Accordingly, the tufting button is far less susceptible to breakage than other similar tufting buttons.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and certain changes may be made in the above article. Accordingly, it is intended that all matter contained in the above description or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense.

Now that the invention has been described, what is claimed as new and desired to be secured by Letters Patent is:

1. A tufting button having a head portion and a shank portion, there being a first slot extending longitudinally through said shank portion from the free end thereof, there being a second slot extending longitudinally through said shank portion, said second slot being angularly displaced with respect to said first slot and being closed at the free end of said shank portion, there being a pair of generally horizontal slots extending in opposite directions through said shank portion from the respective edges of said first slot to said second slot, whereby the button can be secured to a tufting cord by extending the tufting cord through the first slot and by rotating the button to extend the tufting cord through the pair of horizontal slots into the second slot.

2. The tufting button of claim **1**, wherein said first and second slots each divides said shank portion substantially in two halves.

3. The tufting button of claim **1**, wherein said second slot extends substantially from the point of attachment of said shank portion to said head portion towards the free end of said shank portion.

4. The tufting button of claim **3**, wherein said second slot extends substantially through one-half of the length of said shank portion.

5. The tufting button of claim **1**, wherein said pair of generally horizontal slots angle slightly downwardly from the free end of said shank portion towards the point of attachment of said shank portion to said head portion.

6. The tufting button of claim **1**, wherein said first slot and said horizontal slots are proportioned to frictionally receive a tufting cord through them.

7. The tufting button of claim **1**, wherein said pair of generally horizontal slots are proportioned to frictionally receive a tufting cord through them, whereby a tufting cord is generally lockingly secured within the second slot once engaged therein.

8. The tufting button of claim **1**, wherein the edges of said first slot are beveled so as to permit a tufting cord to be more easily inserted therein.

9. The tufting button of claim **1**, wherein a pair of recessed cavities are formed in the side wall of said shank portion adjacent the edges of said second slot for receiving therein a portion of a tufting cord.

10. The tufting button of claim **1**, wherein the base of said second slot extends parallel with said head portion.

11. The tufting button of claim **1**, wherein a tufting cord disposed within said second longitudinal slot exerts a vertical pull on said button such that substantially all stresses except for a straight tensile stress are eliminated.

12. The tufting button of claim **1**, further including a plurality of ribs formed on said head portion about its circumference.

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