Aug. 24, 1937. M. BECHIK 2,090,779

MATTRESS AND CUSHION BUTTON

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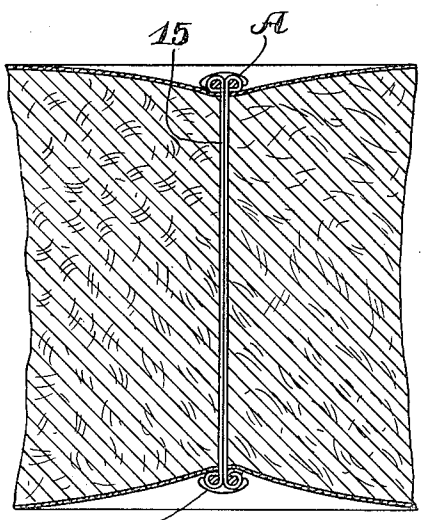


Fig. 1

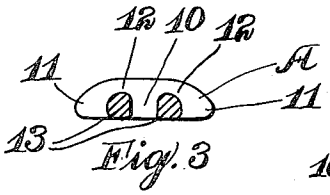


Fig. 3

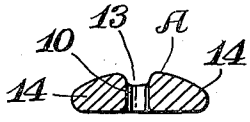


Fig. 4

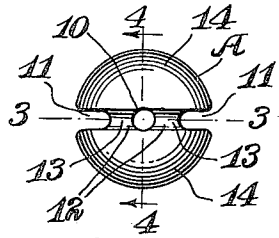


Fig. 2

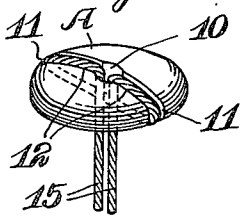


Fig. 5

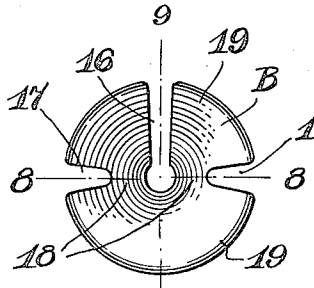


Fig. 6

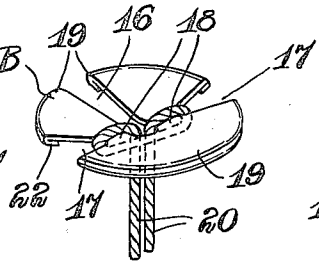


Fig. 7

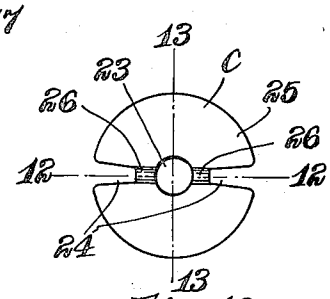


Fig. 10

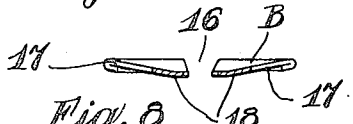


Fig. 8

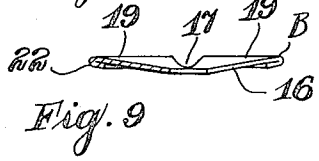


Fig. 9

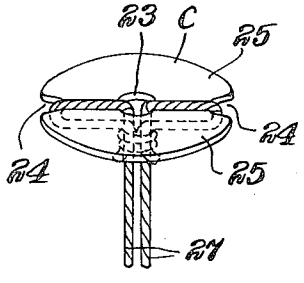


Fig. 11

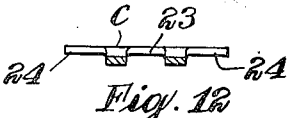


Fig. 12



Fig. 13

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MATTRESS AND CUSHION BUTTON

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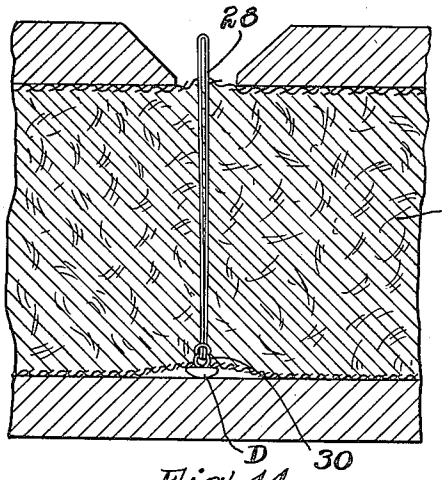


Fig. 14

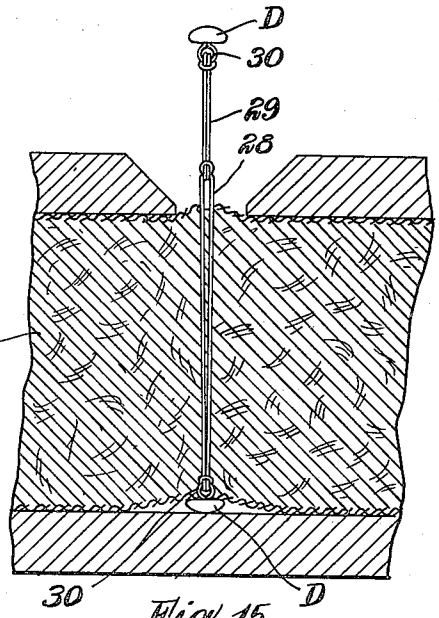


Fig. 15

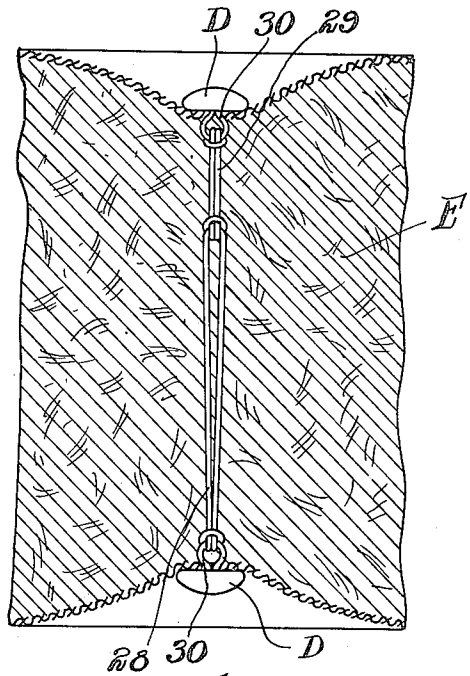


Fig. 16

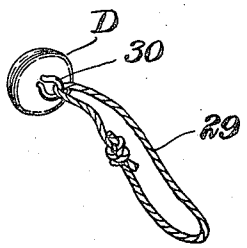


Fig. 17

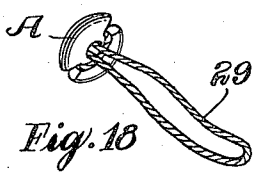


Fig. 18

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Patented Aug. 24, 1937 2,090,779

UNITED STATES PATENT OFFICE

2,090,779

MATTRESS AND CUSHION BUTTON

Michael Bechik, St. Paul, Minn.

Application August 5, 1935, Serial No. 34,774

6 Claims. (Cl. 24—102)

My invention relates to an improvement in mattress and cushion buttons, wherein it is desired to provide an improved button for use on the ends of tufting cords or tie cords.

It is the object of my invention to provide a type of button which may be quickly and easily secured on one end of a tufting cord, and which will lie flat upon the surface of the mattress or cushion. It is also my purpose to provide a type of button about which the tufting cord may extend, and yet which will not present an essentially bumpy upper surface to make an occupant of the mattress or cushion uncomfortable.

It is a further object of my invention to provide a type of button which may be formed without the usual attaching ring projecting from the bottom thereof for attachment with the tufting cord. If desired, this attaching ring may be eliminated entirely in my new construction. Such a construction obviates the danger of having the buttons come loose from the mattress when the mattress is compressed, and having them turn upside down, causing discomfort to the occupant of the mattress or the cushion.

It is a further purpose of my invention to disclose a method of attaching mattress tufts to a mattress so that the buttons or tufts need not be attached during the manufacture of the mattress. It has previously been common practice to attach one button to a cord, pull the cord through the mattress, and then attach the other button in any suitable manner. In the present application, I disclose a method of attaching the buttons or tufts for both sides of the mattress to tufting cords or tie cords previously to the manufacture of the mattress. In completing the mattress, it is then only necessary to loop the cords together to form a single complete tufting cord. Much time may be saved in the manufacture by this construction.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of this specification:

Figure 1 is a cross-sectional view through a portion of a mattress or cushion, illustrating the button tufting.

Figure 2 illustrates one type of button which carries out the principles of operation of my invention.

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a perspective view of the button illustrated in Figure 2, illustrating the manner in which the tufting or tying cord is attached to the button in actual use.

Figure 6 is a top plan view of a slightly different form of button.

Figure 7 is a perspective of the button illustrated in Figure 6, showing the manner in which the tufting cord is attached thereto.

Figure 8 is a cross-sectional view taken on the line 8—8 of Figure 6.

Figure 9 is a cross-sectional view taken on the line 9—9 of Figure 6.

Figure 10 is a top plan view of another slightly different form of button.

Figure 11 is a perspective view of the form of button illustrated in Figure 10, showing the manner in which the tufting or tying cord is attached.

Figure 12 is a cross-sectional view taken on the line 12—12 of Figure 10.

Figure 13 is a cross-sectional view taken on the line 13—13 of Figure 10.

Figure 14 illustrates the first step in a novel method of securing buttons into a mattress.

Figure 15 illustrates a second step in the method of securing buttons and tufting cords into a mattress.

Figure 16 illustrates a cross-sectional view of a mattress having the tufting buttons secured by the method shown in Figures 14 and 15.

Figure 17 illustrates in perspective a tufting button having a tufting cord merely looped through the eye therein and tied.

Figure 18 illustrates in perspective a different type of tufting button having a tufting cord attached thereto.

Buttons have previously been used for tufting purposes. These buttons have, ordinarily, been of two general types. One type of button which has previously been used is the eye type of button in which a solid head is provided with an eye projecting from the bottom side thereof, through which the tufting cord may be inserted for securing the button in place. The other common type of button is the usual two hole button, which is secured to the cord by having the cord pass through one of the holes in the button and then pass out through the other of the holes.

Both of these types of buttons are somewhat disadvantageous. The eye type button is apt to turn upside down when the mattress is depressed, the eye causing the occupant of the mattress or cushion considerable discomfort. The two hole type of button is difficult to thread, and takes more time in the manufacture.

In the form illustrated in Figures 2 through 5, my button A is provided with a central opening 10, and a pair of oppositely disposed peripheral notches 11. Grooves 12 connect the notches 11 to the central opening 10 along the upper surface of the button, leaving only small bearing portions 13 connecting opposite sides 14 of the button together. These bearing portions may best be seen in Figures 2 and 3 of the drawings, where these portions are shown in plan and in section, respectively.

This type of button A is secured in a loop 15 of cord by pushing the end of the loop through the central opening 10 from the bottom to the top, spreading apart the portion of the loop extending above the top surface of the button A, and looping this end around the button so that the cord 15 extends down through the opposed notches 11, connecting beneath the button A, in the manner illustrated in Figure 5 of the drawings. This operation takes but a minimum of time, and securely holds the cord 15 in place. In order to loosen, the loop would have to spread out beyond the periphery of the button. While this can be done manually without a great amount of trouble, it cannot very well happen by accident. As the cord is recessed in the grooves 12, the button is comparatively smooth on top when in place.

In the type of button illustrated in Figures 6, 7, 8, and 9, the button B is preferably dish-shaped in order to recess the tufting cord below the level of the outer end of the button. In this modification, the central opening is omitted. A slot 16 is provided extending inwardly to the center of the button B and the end of the slot 16 is enlarged somewhat. Oppositely disposed on either side of the slot 16, I provide notches 17 in the periphery of the button, extending to a point somewhat spaced from the central enlargement of the slot 16. This construction provides a pair of bearing portions 18 connecting the opposite sides 19 of the button B, one side 19 of which is split in two by the slot 16.

In the use of this modification, the looped end of the cord 20 is drawn through the slot 16 to extend a substantial distance above the top surface of this button. The loop end of the cord 20 above the top of the button B is spread apart, and looped about the bottom of the button, so that the cord passes up through the central enlargement of the slot 16, spreads to opposite sides of the button, extends down through the notches 17, and is connected on the bottom of the button and on a straight line connecting the inner extremities of said peripheral notches. This construction is illustrated in Figure 7 of the drawings. In this modification, the button B is shown made of metal, and is provided with a peripheral reinforced edge 22 formed by doubling back the edge of the metal upon itself.

The type of button illustrated in Figures 10, 11, 12, and 13 is formed of a flat plate, and is substantially flat on top. This button B is provided with a central opening 23, and with oppositely disposed notches 24 on either side of this opening. The two opposite sides 25 of the button C are connected in spaced relationship by connecting portions 26 which are recessed below the surface of the button, connecting the opposed sides 25 between the central opening 23 and the peripheral notches 24.

The cord 27 is attached to this type of button C in a manner identical with the attachment of the cord to the button A. The looped end of the cord 27 is extended through the hole 23, and the portion of the cord 27 above the opening 23 is spread in opposite directions and looped around the bottom surface of the button, the cord passing through the opposed notches 24.

It will be noted that the buttons A, B, and C, being quite large and flat, may quite effectively cover the knot 28 in the loop of the tufting cord 15, 20 or 27. Thus this knot need not be drawn through the opening in the covering of the mattress to enlarge this opening.

If desired, my buttons may be inserted in the manner disclosed in Figures 14, 15, and 16 of the drawings. In this method, the mattress E is compressed, and a button D having a cord 28 of sufficient length to pass through the mattress is drawn up through the mattress E, as illustrated in Figure 14. Any suitable means, such as a hook ended needle, may be used to pull this loop up through the mattress E. A second shorter cord 29, to which has been attached another button D, is then attached to the cord 28 as shown in Figure 15. This may be done by passing the looped end of the cord 29 through the looped end of the cord 28 extending above the top of the mattress, spreading out the loop end of the cord 29 after it has been extended through the looped cord 28, and passing the end of the cord 29 to which the button D is attached through this spread out loop in the cord 29, forming a slip knot between the two cords 28 and 29. While these cords may be tied in various manners, this manner of attachment is given as illustrative of one form of attachment.

The compressing means for the mattress E may then be removed, and the tufting cord and buttons appear as illustrated in Figure 16 of the drawings. It will be noted that for the purpose of illustration, I have shown this manner of attachment used on buttons D having eyes thereon. I have also illustrated the cords 28 and 29 attached to the buttons D by means of slip knots. This is not essential, and the cords may be merely looped through the eyes 30 in the buttons, as illustrated in Figure 17, in which figure the cord 29 is attached to the eye 30 of the button D by being merely looped through the eye, and knotted. Loops can be attached in this manner by simple machinery.

Therefore, by my method it is obvious that time in the assembly of the mattresses can be saved by having the buttons D provided already attached to the loops 28 or 29 by machinery. Then in the tufting operation, it is only necessary to compress the mattress E, pull a looped cord through the same, and attach this cord to another cord on another tufting button D. The mattress E can then be allowed to expand to its normal thickness and the tufting operation is complete.

I have shown buttons D of the eye type merely to show that this method may be used for various types of buttons; and while it is felt that the applicant's type of button is to be preferred, it is not essential to the method. As the passing of the cord loops 28 or 29 over the smooth surface of one of the buttons A, B or C, provides a larger bearing surface and a greater radius of curvature at the bends than does the eye type of button D, there is much less likelihood of breaking the cord with my type of button than in former constructions.

Figure 18 illustrates a button A having a short tufting cord 29 secured thereto. It is obvious that any sort of tufts could be used for this purpose, and may be preferably attached to the cords

28 and 29 before the tufting operation is initiated.

In accordance with the patent statutes, I have described the principles of operation for my buttons for mattresses and for cushions, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that this is only illustrative of a means of carrying out my invention, and that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A button having a central opening having a notch extending thereinto, and opposed notches in the periphery of said button.

2. A button for use in combination with a loop of cord including a central opening having a notch from the button periphery extending thereinto adapted to accommodate the looped end of the cord, and opposed peripheral notches adapted to contain the cord looped over the bottom of the button.

3. A button for use in combination with the looped end of a cord including a central opening having a peripheral notch extending thereinto, opposed peripherial notches in the button, and grooves extending from said central opening to said notches, whereby said cord may be inserted through said central opening, and looped over the bottom of said button, the cord extending through said grooves and opposed notches and connecting beneath said button.

4. A button including a pair of opposed peripheral notches, and a notch extending to a point between said peripheral notches and on a straight line connecting the inner extremities of said peripheral notches.

5. A button including a pair of opposed peripheral notches, a notch extending from the periphery of the button to a point on a straight line between the inner extremities of said peripheral notches, and a bearing surface between said peripheral notches and said last named notches recessed below the periphery of said button.

6. A tufting means for a cushion including a body portion, a pair of opposed notches in the edge of said body portion, a central opening in said body portion having a peripheral slot connecting therewith through which a looped end of said cord may extend, said loop being spread and engaged about the bottom of said body portion, engaging said body in said opposed notches in said body portion.

MICHAEL BECHIK.