Title: DEVICE AND METHOD FOR ATTACHING UPHOLSTERY BUTTONS

Abstract: The device for attaching upholstery buttons is a device adapted for fastening an upholstery button to an upholstered article. The device is a substantially planar member, such as a disc, having first and second diametrically opposed notches formed peripherally therein. A slit is formed through the disc and extends between the first notch and the center of the disc. Twine is drawn through a loop on the rear face of the button, forming tag ends equal in length, which are drawn through the upholstery fabric and padding. The tag ends are drawn through the slit, the twine is tensioned to draw the button against the fabric, the tag ends wrapped around the disc in alignment with the notches, and pulled through the slit to fasten the button.
DEVICE AND METHOD FOR ATTACHING UPHOLSTERY BUTTONS

TECHNICAL FIELD

The present invention relates to upholstery decorations and fasteners, and more particularly to a device and method for attaching upholstery buttons to an upholstered article.

BACKGROUND ART

Upholstery systems for foam upholstering typically include a button, which, for mounting purposes, is provided on its rear face with a hook or a loop. A length of tape, twine, string or a small chain is drawn through the loop and is then pushed or pulled through the foam material of the cushion with the aid of a needle, and a second button or other retainer is then fastened on the free ends of the twine.

In order to replace upholstery buttons once removed after a protective cover has been refitted, not only is a suitable tool required to reinstall the buttons, but the user must also be a skilled craftsman.

A piece of cotton is often applied to the rear surface of the foam material, and the free ends of the twine are tied to the piece of cotton, forming several knots. Either with the second button or the piece of cotton, it is often quite difficult to tie the free ends to the additional retainer, thus requiring a great deal of time and effort. Further, once secured, as noted above, the line must then be severed, as untying would be exceptionally difficult.

Instead of diametrically opposed notches, the device be a planar member, preferably a disc, having a notch with a slit extending from the notch toward a central point of the planar member, and a slot extending into the planar member diametrically opposite the notch, the slot defining a hook member. The slot may extend into the planar member in a direction substantially normal to the slit. Additionally, and of great importance, such methods are quite time consuming for the user, and may also cause the user discomfort, particularly in his or her hands.

Thus, a device for attaching upholstery buttons solving the aforementioned problems is desired.
DISCLOSURE OF INVENTION

The device for attaching upholstery buttons is a device adapted for attachment on a rear face of a piece of padding to be upholstered, with the device allowing for the releasable locking of a piece of twine thereto. The device is a substantially circular and planar disc or other planar member having first and second diametrically opposed notches formed peripherally therein. A slit is formed through the substantially circular and planar disc and extends between the first notch and a substantially central point of the substantially circular and planar disc.

In use, a fabric layer is sandwiched between a front surface of the piece of padding and a button to be secured thereto. A passage is formed through the piece of padding. The passage extends between the front face and the rear face of the padding. The passage is positioned concentrically with the button. Similarly, an opening is formed through the fabric layer, with the opening being formed concentrically with the button.

A length of twine is positioned through a loop on the rear face of the button so that the twine forms a pair of tag ends having substantially equal lengths. The tag ends of the twine are drawn through the fabric layer and the passage formed through the padding. The tag ends are drawn through a needle, which is then drawn through the padding and the fabric layer, forming the passages therethrough. The substantially circular and planar disc is then positioned against the rear face of the padding.

The tag ends of the length of twine are first inserted into the first notch and then slid through the slit towards the substantially central point. The tag ends of the length of twine are then wrapped over a rear face of the substantially circular and planar disc between the substantially central point thereof and the second notch.

The tag ends are next wrapped over the front face of the disc so that the tag ends extend between the second notch and the first notch and are then slid from the first notch through the slit to the substantially central point to lock the button, the fabric layer and the disc to the padding. The length of twine may be unwound from the substantially circular and planar disc in order to remove or replace the button, or, alternatively, to adjust the depth on the upholstered item prior to being installed.

These and other features of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS
Fig. 1 is a plan view of the device for attaching upholstery buttons according to the present invention.

Figs. 2, 3, 4, 5, 6, 7 and 8 show successive steps of a method for using the device of Fig. 1 to attach an upholstery button to an upholstered article.

Fig. 9 is a plan view of an alternative embodiment of the device for attaching upholstery buttons according to the present invention.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

BEST MODES FOR CARRYING OUT THE INVENTION

The device 10 is a fastener used to secure an upholstery button to an upholstered article. In the drawings, upholstery padding is shown as being an exemplary piece of foam F. It should be understood that device 10 may be used with any suitable padding material, or indeed, to secure a button to any article, whether upholstered or not. Similarly, button B and fabric layer L are also shown for exemplary purposes only. Twine T is also shown for exemplary purposes only, and it should be understood that device 10 may be used with any suitable type of string or elongated flexible member.

As best shown in Fig. 1, the device 10 is a substantially circular and planar disc 12, which may be formed from any suitable material, such as plastic. Although a disc is preferred, any planar member having opposed edges may be used in lieu thereof. The disc 12 has first and second diametrically opposed notches 16, 18, respectively, formed peripherally therein. A slit 14 is formed linearly through the substantially circular and planar disc 12 and extends between the first notch 16 and a substantially central point 20 of the disc 12. Exemplary dimensions include a diameter of approximately one and one-quarter inches (about 31.75 mm) and a thickness of approximately 1/16 of an inch (about 1.6 mm). Preferably, at least the upper notch 16 is rounded about its edges in order to ease engagement with twine T, as will be described in greater detail below. Exemplary dimensions of slit 14 include a width of approximately 1/32 of an inch (about 0.8 mm).

In use, as shown in Fig. 2, a fabric layer L is sandwiched between a front face of the padding (shown as exemplary foam F) and a button B to be attached thereto. A passage P is formed through the padding F. The passage P extends between the front face and the rear face of the padding F. The passage P is positioned concentrically with the button B. Similarly, an opening O is formed through the fabric layer L concentric with the button B.
As shown in Fig. 3, a length of twine T is drawn through a loop S on the rear face of the button B so that a pair of tag ends having substantially equal lengths extend therefrom. The tag ends of twine T are drawn through the opening O in fabric layer L and the passage P formed through the padding F. The disc 12 is then positioned against the rear face of the padding F, as shown in Fig. 4. The tag ends T are drawn through a needle, which is then drawn through the padding F and the fabric layer L, forming the passage P and the opening O therethrough. In Figs. 4-8, the tag ends of twine T are shown as a single strand for clarity in the drawings, although it should be understood that the tag ends are twisted or otherwise held together so that both tag ends are manipulated and locked about device 10 in Figs. 4-8.

The tag ends of twine T are first inserted into the first notch 16 (shown in Fig. 4) and then slid through the slit 14 towards the substantially central point 20, as shown in Fig. 5. The twine is tensioned, drawing the disc against the rear face of the padding F and the button B against the front face of the fabric layer L or upholstered article. As shown in Fig. 6, the tag ends are then wrapped over a rear face 22 of the disc 12 between the substantially central point 20 and the second notch 18.

The tag ends are next wrapped over a front face 24 of the disc 12, as shown in Fig. 7, with the front face 24 of the disc facing the rear face of the padding F so that the tag ends extend between the second notch 18 and the first notch 16 and are sandwiched between the disc 12 and the padding F. The tag ends of the twine T may be wrapped around the disc 12 several times, if desired, using the opposing notches 16 and 18 for alignment.

The tag ends of the twine T are then slid from the first notch 16 through the slit 14 to the substantially central point 20 to lock the button, the fabric layer and the disc 12 to the padding F, as shown in Fig. 8. The length of twine T may be unwound from the substantially circular and planar disc 12 in order to remove or replace the button B.

Fig. 9 illustrates an alternative embodiment 100 of the device for attaching upholstery buttons. Device 100 is similar in design to device 10 of Fig. 1, including a substantially circular and planar disc 112, which is formed and dimensioned similarly to that described above with regard to device 10. The disc 112 has a notch 116 formed therein, similar to notch 16. A slit 114 is formed through the substantially circular and planar disc 112 and extends between the notch 116 and a substantially central point 120 of the disc 112. As shown, slit 114 preferably has a substantially V-shaped contour and is wider than slit 14 of device 10. Notch 18 of device 10 is replaced by a slot 118 extending into the disc 112 substantially normal to slit 114, forming a hook. Slot 118 is formed diametrically opposed from notch 116, and with rounded edges.
The method of using device 100 is similar to that described above for device 10 in Figs. 2-8. However, the steps shown in Figs. 6 and 7 are modified so that the twine T is received within slot 118, which acts as a hook to retain the twine T therein, rather than in notch 18.

It is to be understood that the present invention is not limited to the embodiments described above, but encompasses any and all embodiments within the scope of the following claims.
CLAIMS

1. A device for attaching upholstery buttons, comprising a substantially planar member having first and second diametrically opposed notches formed peripherally therein and a slit extending between the first notch and a substantially central point of the planar member, the planar member being adapted for positioning against a rear face of upholstery padding for receiving and locking of twine thereto, the twine extending from a front face of the upholstery through the padding.

2. The device for attaching upholstery buttons as recited in claim 1, wherein said substantially planar member comprises a disc.

3. A method for attaching upholstery buttons to upholstery, comprising the steps of:
   (a) drawing a length of twine through a loop on a rear face of an upholstery button so that a pair of tag ends having substantially equal lengths extend therefrom;
   (b) positioning the upholstery button against a layer of upholstery fabric having upholstery padding behind the upholstery fabric;
   (c) drawing the tag ends of the twine through the fabric layer and the padding with a needle;
   (d) placing a disc against the padding opposite the upholstery button, the disc having diametrically opposed notches and a radially extending slit defined therein, the slit extending from one of the notches towards the center of the disc;
   (e) inserting the tag ends of the twine into the slit and drawing the tag ends towards the center of the disc;
   (f) tensioning the twine to draw the button against the upholstery fabric;
   (g) wrapping the tag ends around the disc, the tag ends being aligned with and extending through the opposing notches;
   (h) wrapping the tag ends over a front face of the disc, the front face being positioned adjacent the padding, the tag ends extending between the notches; and
   (i) sliding the pair of tag ends through the slit towards the center of the disc to fasten the button to the upholstery.
4. The method for attaching upholstery buttons as recited in claim 3, wherein steps (g) and (h) are repeated at least once prior to performing step (i).

5. A device for attaching upholstery buttons, comprising a substantially planar member having a notch formed therein, a slit extending between the notch and a substantially central point of the planar member, and a slot formed in the disc diametrically opposite the notch, the slot extending in a direction substantially normal to the slit, the slot defining a hook, the planar member being adapted for positioning against a rear face of upholstery padding for receiving and locking of twine thereto, the twine extending from a front face of the upholstery through the padding.

6. The device for attaching upholstery buttons as recited in claim 5, wherein said substantially planar member comprises a disc.

7. The device for attaching upholstery buttons as recited in claim 5, wherein the notch has rounded corners.

8. The device for attaching upholstery buttons as recited in claim 5, wherein the slit is substantially V-shaped.
FIG. 1
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

A44B 99/00(2010.01), A44B 1/00(2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC A44B 99/00, A44B 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keyword : disc, button*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<td>A</td>
<td>US 6389652 B1 (WILLIAMS, R. J.) 21 May 2002 See abstract; figures 1-7; columns 3-5 and claim 1.</td>
<td>1-8</td>
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<tr>
<td>A</td>
<td>JP 16-174239 A (JURAKUEN CO., LTD.) 24 June 2004 See abstract; pages 2-6; figures 1-4 and claims 1-7.</td>
<td>1-8</td>
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<td>A</td>
<td>US 5428872 A (PAPAZIAN, Z. &amp; PAPAZIAN, R.) 4 July 1995 See abstract; figures 1-3 and claim 1.</td>
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<td>A</td>
<td>US 6199247 B1 (TSAI, K. Y.) 13 March 2001 See abstract; figures 1-3 and claim 1.</td>
<td>1-8</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

- Special categories of cited documents:
  "A" document defining the general state of the art which is not considered to be of particular relevance
  "E" earlier application or patent but published on or after the international filing date
  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
  "O" document referring to an oral disclosure, use, exhibition or other means
  "P" document published prior to the international filing date but later than the priority date claimed
  "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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  "&" document member of the same patent family

Date of the actual completion of the international search
23 JULY 2009 (23.07.2009)

Date of mailing of the international search report
24 JULY 2009 (24.07.2009)

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seogu, Daejeon 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer
KIM Dae Young
Telephone No. 82-42-481-8403

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