July 21, 1936. H. V. RAU 2,048,292

TUFTING DEVICE.

Filed Dec. 18, 1933

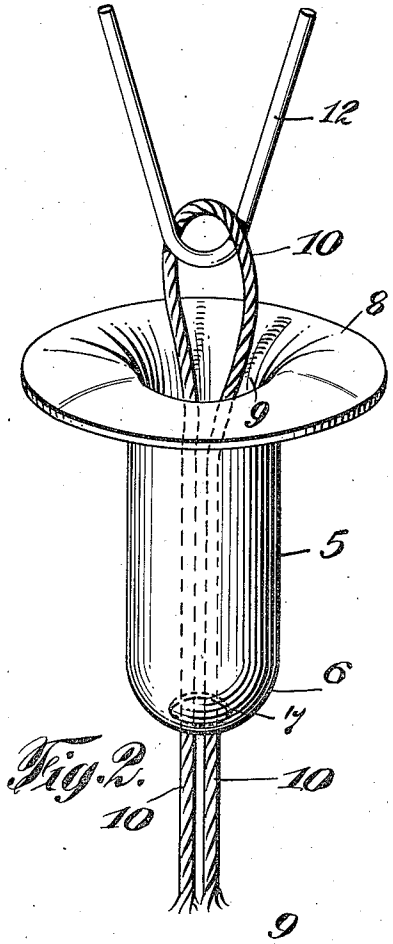


Fig. 2.

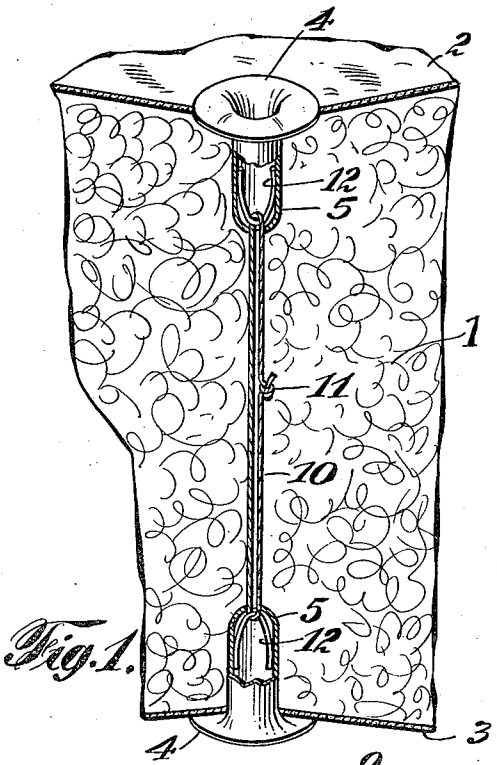


Fig. 1.

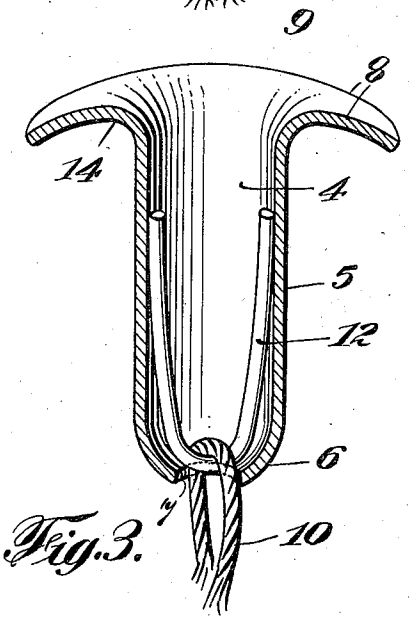


Fig. 3.

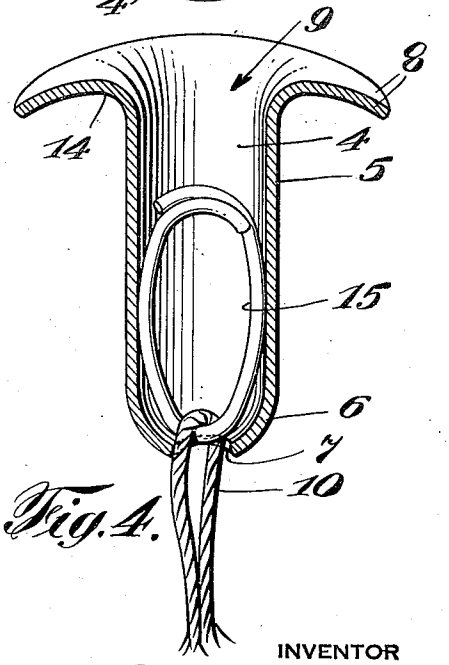


Fig. 4.

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TUFTING DEVICE

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1 Claim. (Cl. 5—356)

The present invention relates broadly to fasteners and more especially to a tufting device for tufting upholstery, cushions, mattresses, and various articles of that character.

The device comprises primarily a pair of tufting members anchored to the ends of a preformed flexible member, preferably a loop of cord.

One of the primary characteristics of the present invention is that the anchorage of the flexible cord to the tufting members is directly in the axial line of the stems of the tufting members so that there is no tendency of tension on the cord or flexible device to tip the tufting members as is the case where the cord is looped around the tufting members.

Another important feature is that the tufting members are provided with hollow stems into which the ends of the flexible member or cord extend, and within which these ends of the flexible member are anchored. No part of the end of the cord is looped around the outside of a tufting member. This obviates any tendency of the movement of the tufting member relative to a mattress or cushion (when the same is in use) to cut and wear the flexible connection.

Another feature of the present invention is that the flexible connection between the tufting devices is attached to or anchored to the tufting members by a straight line connection so no part of the flexible cord is pulled over a thin metal edge which tends to cut the flexible member when the device is in use.

Other and important objects of the present invention will in part be obvious and will in part be pointed out hereinafter in the specification following by reference to the accompanying drawing and wherein like parts are represented by like characters.

It is realized that the present invention may be embodied in structures which differ somewhat from the specific disclosure in the specification and drawing, and, therefore, it is to be understood that the disclosure herewith is illustrative and not in the limiting sense.

Fig. 1 is a sectional view through a small portion of the cushion or mattress illustrating one complete tufting device in operation.

Fig. 2 is an enlarged view illustrating the insertion of the anchoring member in the end of the cord loop extending through a tufting member.

Fig. 3 is a sectional view showing the anchoring member in the bottom of the stem of the tufting member.

Fig. 4 illustrates a variation of the anchoring member.

Referring now to the drawing and more especially to Fig. 1, a mattress or cushion body 1 of soft compressible material such as cotton, wool, hair, or similar products is supported by a covering 2 and 3 of cloth, leather or suitable material. A pair of tufting members 4 extend through openings in the cover material 2 and 3. Each tufting member preferably is formed of drawn metal such as brass and is provided with a hollow stem 5 terminating in a restricted end 6 in which is provided a relatively small opening 7. The outer end of the tufting member is a continuous circular flange 8 through which the opening 9 of the stem 5 leads. A flexible member 10, (preferably, a cord loop formed by tying together the ends of a cord of predetermined length with a knot 11,) extends between and is anchored to, the tufting members 4. The cord 10 is threaded through the opening 7 in one of the tufting members and a looped wire anchor 12 is passed through the end of the loop of the flexible cord 10 as is illustrated in Fig. 2.

A telescoping movement between the tufting member 4 and the cord 10 results in the anchoring wire 12 being drawn into the opening 9 of the hollow stem 5 of the tufting member. The curved portion 14 of the flange 8 facilitates drawing the anchoring member into the mouth of the opening 9 and causing a wedging together of the legs of the anchoring member 12 so that a relatively tight frictional engagement occurs between the inner side wall of the hollow stem and the anchoring member 12. This anchoring member preferably is of spring metal, so there is a constant tendency of the legs of the anchoring member to spring outwardly and to be tightly pressed against the side walls of the hollow stem to hold the anchor within the stem. The flexible cord 10 having been securely anchored to one tufting member, the cord is then threaded through the body 1 of the mattress or cushion which has been compressed so that the other end of the looped cord 10 may be threaded through the opening 7 in the opposing tufting member 4 and an anchoring device 12 may be slipped through the free end of the loop of the cord as illustrated in Fig. 2. When the compression on the body material of the mattress or cushion is relieved, the expansion of this material draws the opposed anchoring member 12 into the bottom of the hollow stem 5 of the top tufting member 4 and the opposed tufting members are securely anchored in place on opposite ends of the flexible tie member 10.

The anchoring member as illustrated in Figs. 1, 2, and 3 is merely a U-shaped piece of string metal. This anchoring member may be of various shapes and forms, and Fig. 4 illustrates a spring wire anchoring member in the form of an elongated key ring or paper clip 15 in which the free ends of the anchoring member overlap, so that when the cord is passed between the ends of the anchoring member, it is substantially locked within the anchoring member. The sides of the anchoring member 15 are normally expanded to a dimension exceeding the internal diameter of the hollow stem 5 and since the anchor is of spring material when the anchor is pulled into the opening 9, the sides of this anchor 15 form and maintain a tight friction fit against the side walls of the hollow stem.

In use of devices of this character, it is a common practice to compress a large area of a mattress or cushion and then thread through the flexible members and anchor the tufting devices to each end thereof, so that the action of releasing the compressed body of the mattress brings into play a large number of tufting devices, which properly hold and support the filling material relative to the cover.

An important distinction between applicant's device and prior art devices resides in the relation of the anchoring member to the tie. In the use of the present invention, the anchor does not act as a snubbing member. Consequently, each member of the tie cord is stressed equally. In prior art anchors, the end of the tie cord is snubbed around the anchor with the result that frequently, the entire stress comes upon one single cord of the tie, often resulting in breakage of the tie.

What I claim is:—

A tufting device comprising a member of sheet metal having an open-ended substantially tubular body portion, the wall of said body portion at one end thereof being flared outwardly to form a continuous flange, the wall of said body portion at the other end thereof being tapered inwardly to provide a restricted opening, and an anchorage member frictionally retained wholly within said body and having a rounded portion thereof extending substantially diametrically across said restricted opening to provide a cross bar around which a flexible tension member passing through said restricted opening is looped with the loop enclosed within said body portion.

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