Oct. 7, 1930. R. F. RUTHERFORD ET AL 1,777,769

MATTRESS TUFTING DEVICE

Filed Aug. 9, 1929

Fig. 1.

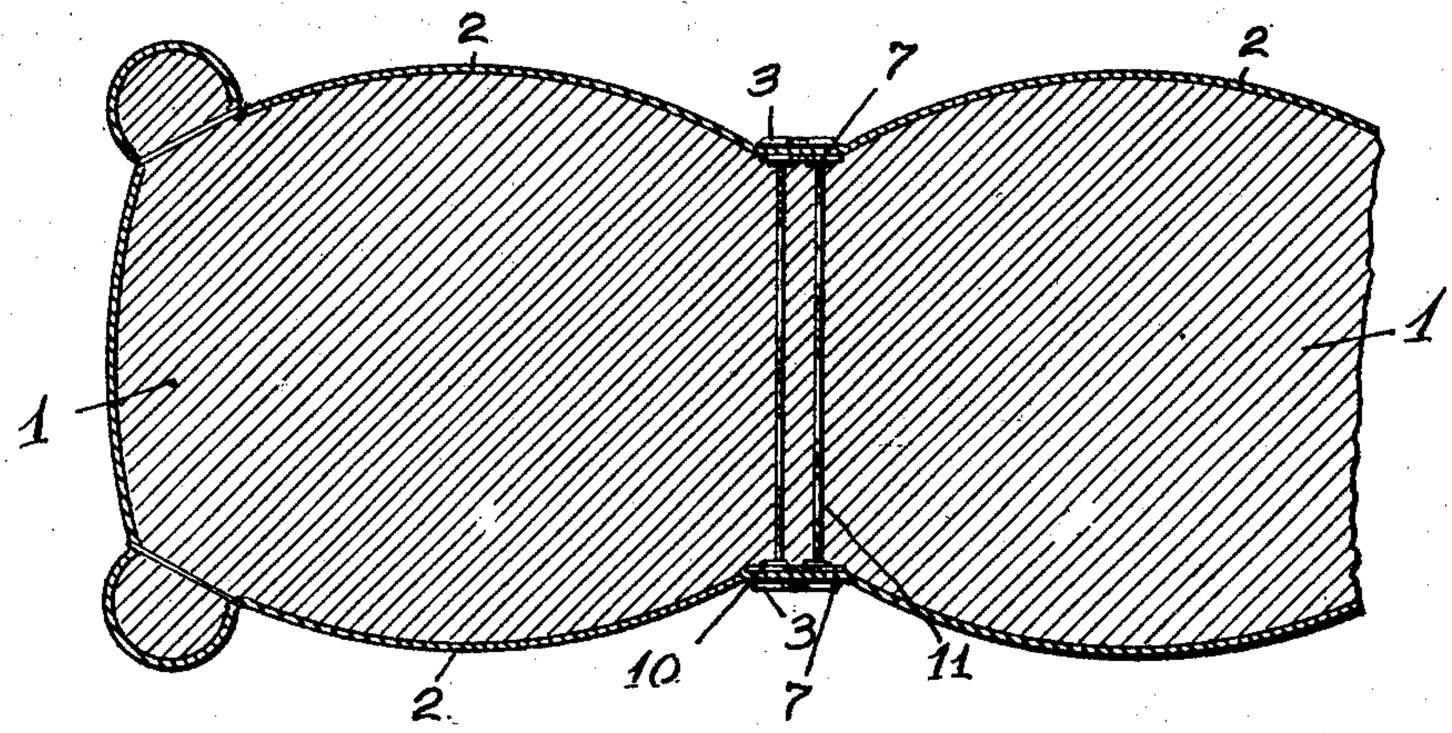


Fig. 2.

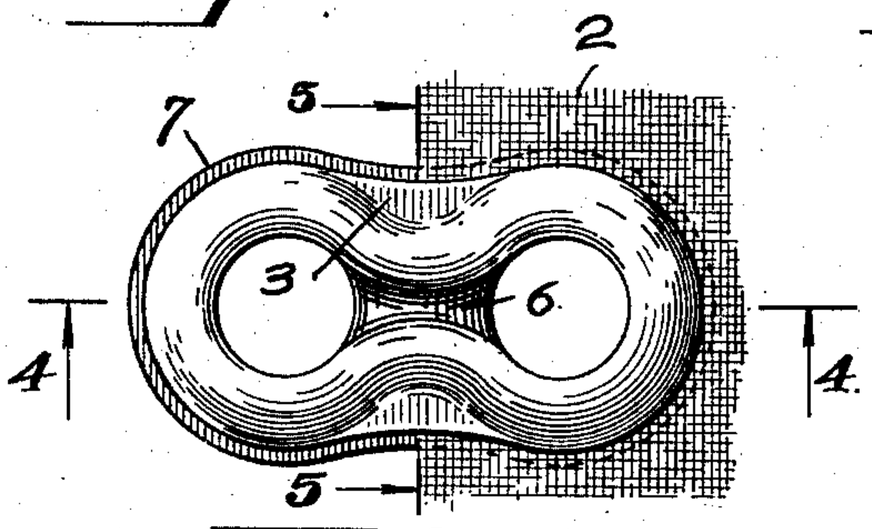


Fig. 3.

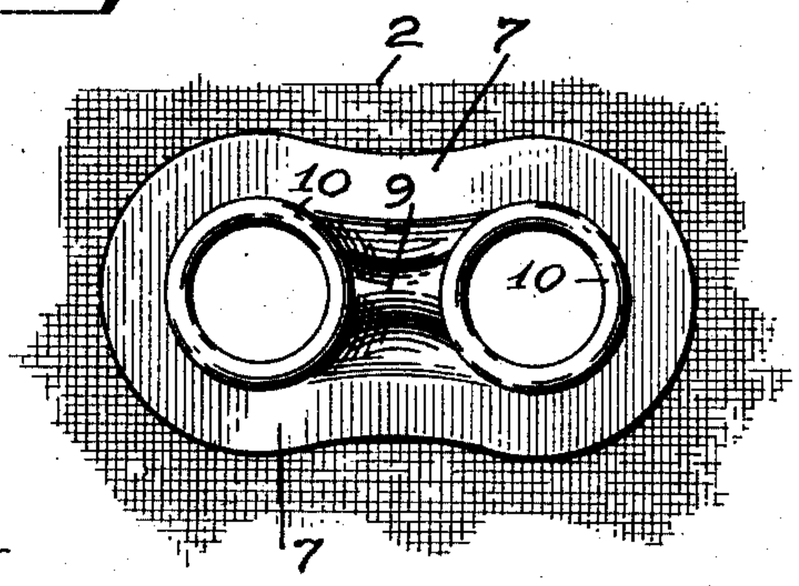


Fig. 4.

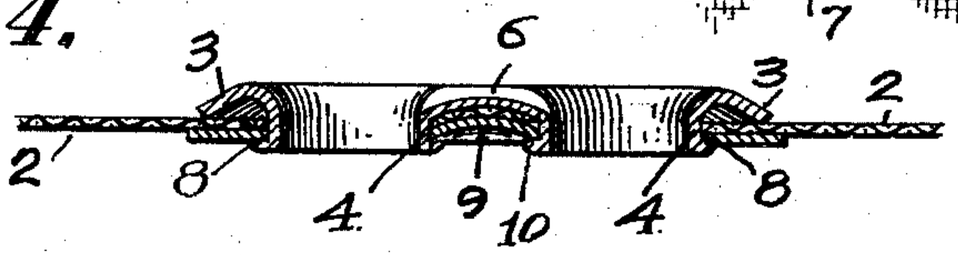
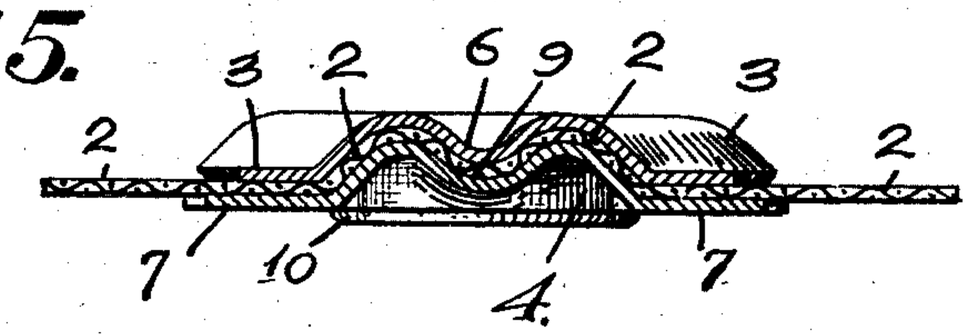


Fig. 5.



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UNITED STATES PATENT OFFICE

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MATTRESS-TUFTING DEVICE

Application filed August 9, 1929. Serial No. 384,551.

Our invention relates to improvements in tufting devices for mattresses, upholstering, and the like, wherein a double gromet is provided with spaced parallel sleeve portions extending through a mattress ticking or other covering material, a retaining member being secured against the inner side of the material by riveting the ends of the sleeve portions of the said member to clamp the covering material between said member and the flange of the gromet and to reinforce the gromet and hold said sleeve portions in rigidly spaced relation.

The present invention consists of improvements upon our earlier invention disclosed in our former application, Serial No. 287,968, filed June 25, 1928, the primary object being to provide an improved and more efficient device of the character described.

Another object is to provide an improved device which will effectually clamp the ticking of a mattress to prevent the gromets from being torn from the fabric.

A further object is to provide an improved device which will hold the sleeve portions of a double gromet in rigidly spaced relation and which will effectively reinforce and strengthen the gromet flange.

A still further object is to provide an improved mattress tufting device which is simple and easily applied and which will effectually prevent loosening of mattress tufts and thereby prolong the life of a mattress.

We accomplish these and other objects by means of the improved device disclosed in the drawings forming a part of the present application wherein like characters of reference are used to designate similar parts throughout the specification and drawings and in which—

Fig. 1 is a broken sectional view of a portion of a mattress disclosing our improved tufting device applied thereto;

Fig. 2 is a plan view of a gromet as applied to a mattress ticking;

Fig. 3 is a view of the inner side of the gromet and retaining member as applied upon a ticking;

Fig. 4 is a longitudinal section taken upon the line 4—4 of Fig. 2 in the direction indicated; and

Fig. 5 is a transverse section, drawn upon a larger scale and taken upon the line 5—5 of Fig. 2 in the direction indicated.

Referring to the drawings, the numeral 1 is used to designate in general a mattress having the usual ticking 2. Our improved tufting device, as applied thereto, consists of a double gromet comprising a flange 3 provided with a pair of spaced parallel sleeve portions 4. The sleeve portions 4 are arranged to extend through the ticking 2 and the flange 2 to seat upon the outer surface of the ticking. A groove 6 is impressed into the flange 3 to extend between the openings of the sleeve portions 4 at their juncture with the flange, and forming an inwardly disposed rib extending between said sleeve portions.

The flange portion 3 of the gromet is shaped to incline downwardly from the upper ends of the sleeve portions 4 whereby an arch-like construction is obtained to afford increased strength and to cause the edges of the flanges to press into the adjacent ticking 2 and thereby prevent foreign matter from working under or catching upon the edges of the flange.

A retaining member 7 has a pair of apertures 8 formed in spaced relation therein to engage the inner ends of the sleeve portions 4 of each gromet. The member 7 consists of a metal plate having a groove 9 indented therein to extend between the apertures 8 and forming a rib adapted to match with the rib formed in the flange 3 by the groove 6.

In applying our improved tufting device to the ticking of a mattress 1, the sleeve portions 4 of gromets are inserted through the fabric at desired points. Retaining members 7 are then moved to engage the inwardly extending ends of the sleeve portions 4 of each gromet, with the groove 9 disposed to receive the rib formed by the groove 6, the ends of the sleeve portions 4 then being riveted, as at 10, against the member 7 to clamp the fabric of the tick 2 against said rib. As the ends of the sleeve portions 4 are riveted to clamp the member 7 against the ticking,

the edges of the flange 3 are pressed against the outer surface of the ticking, thereby affording a firm grip upon the ticking and effectually preventing relative movement between the ticking and the gromet. The flange 3 and the member 7 cooperate to prevent the gromet from being torn from the fabric, and the matching ribs afford a firm grip upon the fabric and strengthen the flange 3 and member 7 to resist bending and rigidly hold the sleeves in spaced relation.

The gromets are applied at matching points upon the ticking extending across the upper and lower surfaces of the mattress, and the sleeve portions 4 are spaced to receive the needles of the usual tufting machine whereby the strands of a tufting loop 11 are extended through matching gromets to tuft the mattress. The strands are received within the grooves 6 of the flanges whereby said strands are prevented from extending outwardly beyond the surface of the flange, and thereby effectually preventing wear upon said strands.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A mattress tufting device comprising a gromet having a flange portion to seat upon the outer side of a mattress tick, and having a pair of spaced parallel sleeve portions to extend through the tick and receive the strands of a tufting loop; and a retaining member having spaced apertures to engage the ends of the sleeve portions upon the inner side of the tick, said member being secured by riveting the ends of the sleeve portions thereagainst, and said member having a rib extending between the apertures to clamp the tick against the flange.

2. A mattress tufting device comprising a gromet having a flange portion to seat upon the outer side of a mattress tick, and provided with a pair of spaced parallel sleeve portions to extend through the tick and receive the strands of a tufting loop, said flange having a groove impressed in its outer surface between the sleeve openings to receive the loop and to form an inwardly disposed rib; and a retaining member having spaced apertures to engage the ends of the sleeve portions upon the inner side of the tick and having a rib extending between the apertures to match with the flange rib, said member being secured to clamp the tick between said matching ribs by riveting the ends of the sleeve portions against the retaining member.

3. The combination with the ticking of a mattress, of a double gromet provided with a flange seating upon the outer side of the ticking and having a pair of spaced parallel sleeves extending through the ticking to receive the strands of a tufting loop; a retaining and reinforcing member apertured to engage the inner ends of the sleeves and to seat against the inner side of the ticking, said member matching with the gromet flange and spanning the space between the sleeves, and the ends of the sleeves being riveted to secure said member in clamping relation to the ticking.

4. The combination with the ticking of a mattress, of a double gromet provided with a flange seating upon the outer side of the ticking and having a pair of spaced parallel sleeves extending through the ticking, and also having a groove indented into the outer surface of the flange between the sleeves to receive the strands of a tufting loop, and forming an inwardly disposed rib; and a securing member apertured to engage the inner ends of the sleeves and having a groove indented to form a rib matching with the rib of the flange, said member seating against the inner side of the ticking, the ends of the sleeve being riveted to secure said member with the ticking clamped between the matching ribs of the flange and securing member.

5. A mattress tufting device comprising a gromet having a flange portion and provided with a pair of spaced parallel sleeve portions to extend through a tick and receive the strands of a tufting loop, the edges of the flange portion being inclined toward the free ends of the sleeves to provide a rigid arch construction and to prevent entry of foreign material between said edges and the ticking.

6. A mattress tufting device comprising a gromet having a flange portion and provided with a pair of spaced parallel sleeve portions to extend through a tick and receive the strands of a tufting loop, the edges of the flange portion being inclined toward the free ends of the sleeves to provide a rigid arch construction and to prevent entry of foreign material between said edges and the ticking, said flange also having a groove impressed therein and extending between the openings of the sleeves to receive the tufting loop below the plane of the upper edges of the sleeve.

In witness whereof, we hereunto set our signatures.

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WILLIAM HOOD.