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2,331,142

MATTRESS AND THE LIKE

Filed June 23, 1941

Fig. 1.

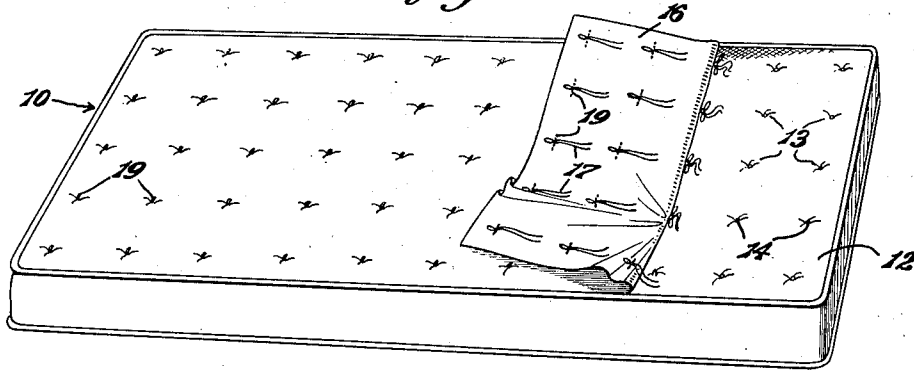


Fig. 2.

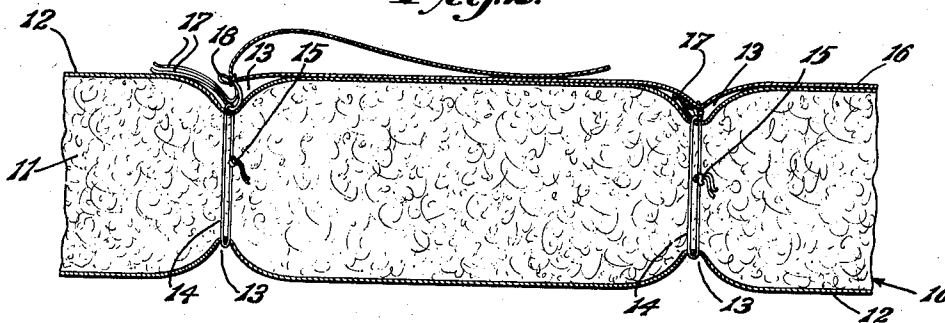


Fig. 3.

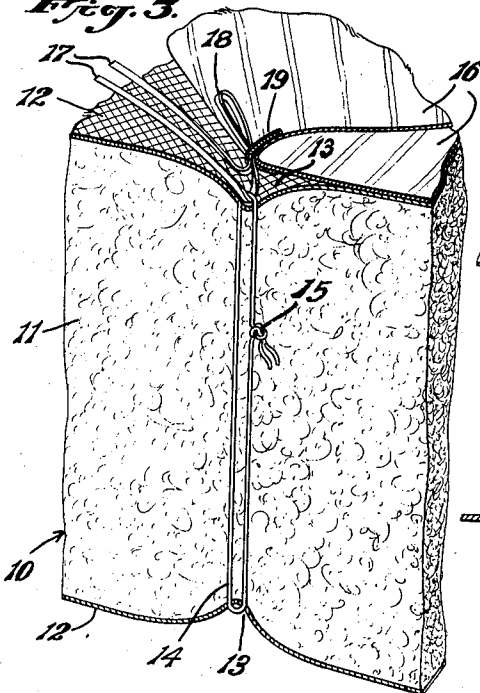


Fig. 4.

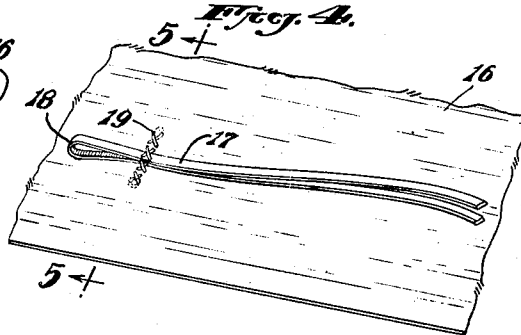
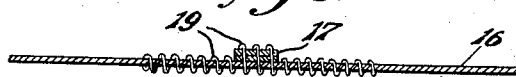


Fig. 5.



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MATTRESS AND THE LIKE

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3 Claims. (Cl. 5—356)

This invention relates to mattresses and the like, and more particularly to the tufting structure and method of tufting for utilization in connection with mattresses and analogous articles of manufacture.

In this art, the prevalent practice of tufting has involved use of tufting cords through the filling in such manner that the cords are exposed in part at one side or the other of the mattress and either for covering the cord portions at the tuft indentures or to distribute the strain over a larger area of the ticking, tufting wads, buttons and the like have been employed. Use of this construction introduces the discomfort of the tufts to the user of the mattress, introduces an element which catches and retains dust and dirt, and necessitates release of all of the tufting cords when recovering the mattress with new ticking.

Other less commonly utilized methods have involved engaging the tufting cords through pleats in the ticking and carrying the upper fold of the ticking over the cord to hide it, but this involves introducing ridges across the mattress due to the pleats and prevents use of figured patterns of ticking since some of the pattern is folded in due to the pleat and spoils the appearance. This construction likewise requires release of all of the tufting cords when applying a new ticking. It likewise introduces a further ill, in that the extra thickness of material of the pleat results in an uneven pull to the tuft depression and a more wrinkled and unskillful appearance to the finish of the mattress.

By either structure, the utilization of heavy cord is objectionable, since the knot will be correspondingly bulky and uncomfortable to the user of the mattress, and involves correspondingly large punctures in the ticking material at points where the strain is most severe and therefore apt to be the starting point for tearing of the ticking. Resultant from these difficulties, manufacturers have generally comprised between the evils of less bulky cords and the stronger but more bulky cords, for the attainment of more comfort to the user, but sacrificing a degree of durability.

Yet another method of tufting has been used occasionally, which has resorted to strips or tapes on the underside of the ticking corresponding to the pleats of the method referred to above. These tapes are attached by rows of stitching entirely across the mattress. While this method does not disrupt the ticking pattern,

the stitching is objectionable in the trade and to users. The tape has the same drawback as the above-described pleated structure in introducing an extra thickness of material and uneven pull on the ticking to the tuft. Although the tape is on the underside, yet the user will find it uncomfortable and it will give much the same sensation of the pleat or of a seam in the material. This method of tufting also provided loops stitched under the tape at the tufting points, and the cords through the mattress were tied to the loops. To recover the mattress, the cords would have to be released, and because of the tightness of the knots, the loops were often cut.

The present invention seeks to overcome these various drawbacks and unsatisfactory features of the prior art to produce a mattress or the like which will be well tailored, attractive, comfortable and sanitary. It is the purpose of the invention to provide strong, permanent tufting cords which are entirely hidden, which can have the tufting cord knots out of proximity to the mattress surface, and which can remain intact when the mattress has its ticking removed and another applied. Other objects are to relieve the ticking of a greater part of the strain of the tufting cords, to enable the ticking to be attached subsequent to application of the tufting cords, to enable use of soft textured tie means between the tufting cords and the ticking; to avoid undue strain on or large punctures in the ticking; to secure simplicity of construction and method of manufacture; and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawing in which like numerals of reference indicate similar parts throughout the several views,

Figure 1 is a perspective view of a mattress or the like with part of the ticking turned back as in process of manufacture;

Figure 2 is a longitudinal section of a portion of a mattress or the like showing one tuft completed at the top of the mattress, and another in process of completion;

Figure 3 is a perspective sectional view on somewhat larger scale than Figure 2 and showing a tuft in process of completion;

Figure 4 is a perspective view of the underneath face of a portion of the ticking showing one of the tie means thereon; and

Figure 5 is a sectional view on line 5—5 of Figure 4.

In the specific embodiment of the invention

illustrated in said drawing, reference numeral 10 designates the mattress in general. Any suitable filling material or stuffing 11 is employed to constitute the body of the mattress. Preferably the filling material is first covered on top and bottom with a lining 12 which may be cheese-cloth or other selected fabric. It is, however, preferably a fabric which is readily stretched smoothly to desired shape or configuration so as to offer no objectionable ridges even though pulled into tuft depressions 13. It should also be of a character enabling the knots of the tufting cords to be pulled through without injury to the material or disturbance of the filling.

Tufting cords 14 of stout character are looped through the top and bottom linings 12 and intervening filling 11, and, with the stuffing compressed, the cords are each tied with knots 15 and the knots pulled to a position within the filling. Release of the pressure on the mattress then results in the cords having a looped length less than the general thickness of the mattress so that at each cord tufting depressions 13 are provided in the top and bottom surfaces of the mattress. Preferably the cords are applied through the mattress at regularly spaced intervals.

Ticking 16 is next applied, and as the mode of application is the same for both top and bottom of the mattress, it is shown for simplicity of illustration as being applied only to the top. After application of ticking to the top, as illustrated, the mattress is turned over, the bottom then being the top, and identical procedure followed for applying that ticking in place.

The ticking 16 is preferably pre-fabricated with a plurality of soft textured tie means 17 applied to the under side of the ticking at the same interval spacing as the tufting cords 14 above described. Thus, when the ticking is applied to the body of the mattress a tie means 17 will be juxtaposed to each cord. The tie means preferred constitutes a relatively short length of soft textured fabric tape doubled midway of its length, as at 18, and stitched near the doubling fold 18 to the ticking. A sewing machine is available on the market which stitches back and forth through a desired length, preferably about half an inch with very close and repeated stitches such as used in finishing buttonholes. Such a machine and stitching is preferably employed. For clarity in the drawing, I have attempted to show only a few stitches 19 although in practice the stitches are close to each other and overlap each other. Since, as stated, the stitching occurs only for a short length, the stitches will be entirely at the bottom of the tuft depression in use, and neither disagreeable to the body of the user of the mattress nor objectionable in appearance. Furthermore since the stitches are substantially flat with respect to or embedded within the ticking material, they form no aid to catching or retention of dust or dirt in the depressions. The stitching is, as to the short length referred to, crosswise of the tape and reinforces the ticking and spreads the area of tension of the tie means over the ticking.

Inasmuch as the tie means are disposed in juxtaposition to the tufting cords, the ticking can be turned back a row at a time, one end of each tie means slipped under the loop of the cord and the two ends of the tie means tied together. Since the structure admits of use of soft and highly flexible tie means, the knots therein are not only small but readily crushed and present no discomfort to the user. The length of tie

means from the stitching securing it to the ticking, to its tied engagement with the tufting cords is very short, practically only part of the knot itself, and therefore not subject to the probability of breaking were its length under strain as long as the tie cord. It is not subjected to as much strain as the tie cord, and for these and other reasons may accordingly be made of less bulky or harsh material. It is readily cut loose when desired to replace the ticking and without disturbing or injury to the tie cords which continue to be available for securing a new ticking thereto by the same procedure as above outlined.

Since the various details of construction as well as the precise steps in the described procedure and method of manufacture are subject to variation and change without departing from the inventive concept or scope of the invention, it is intended that all matter contained in the specification or illustrated in the drawing shall be interpreted as exemplary and not in a limiting sense. It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein shown and described and all statements of the scope of the invention herein set forth as a matter of language which might be said to fall therebetween.

I claim:

1. A mattress or the like comprising a body portion, tufting cords secured in place with respect to said body portion and completely establishing tufting depressions and taking the entire strain maintaining the depressions irrespective of the presence of a ticking on said body portion, a ticking for said body portion, and tie means permanently attached on the ticking, said tie means having ends of which one end of each passes under a tufting cord and of which the two ends of each tie means are tied together above the body portion and beneath the ticking thereby securing the ticking to the body portion with minimum strain on the tie means.

2. A mattress or the like comprising a body portion, tufting cords secured in place with respect to said body portion and completely establishing tufting depressions therein irrespective of the presence of a ticking on said body portion, a ticking for said body portion, tie means permanently attached on the inside of the ticking, and short lengths of stitching constituting the permanent attachment for each tie means through the tie means and ticking, said tie means being tied to the tufting cords and drawing the said stitches into tufting depressions at each tufting cord, whereby the ticking is applied as a single layer and is removable with the body portion remaining intact and tufted.

3. A mattress or the like comprising a body portion, tufting cords of stout material secured in place with respect to said body portion and completely establishing tufting depressions therein irrespective of the presence of a ticking on said body portion, a ticking for said body portion, and tie means permanently attached on the ticking, said means comprising soft textured material, said tie means having ends of which one end of each passes under a tufting cord and of which the two ends of each tie means are tied together above the body portion and beneath the ticking thereby securing the ticking to the body portion with minimum strain on the tie means and removable therefrom with the body portion remaining intact and tufted.

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