Oct. 8, 1929. J. H. JONAS 1,730,771

MATTRESS

Filed Aug. 4, 1924

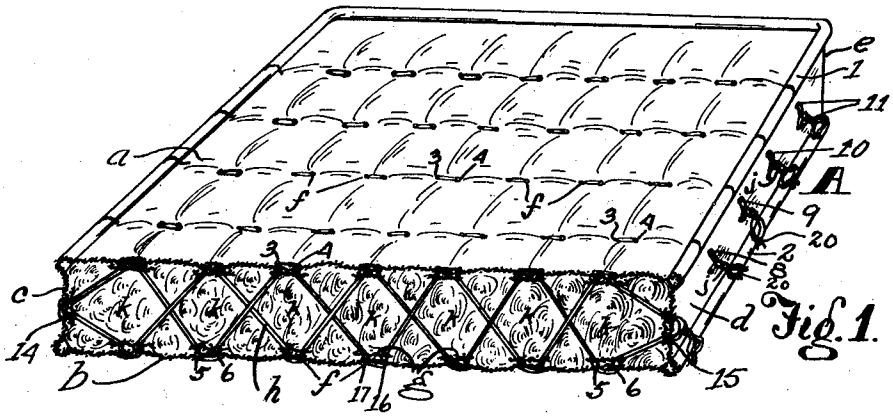


Fig. 1.

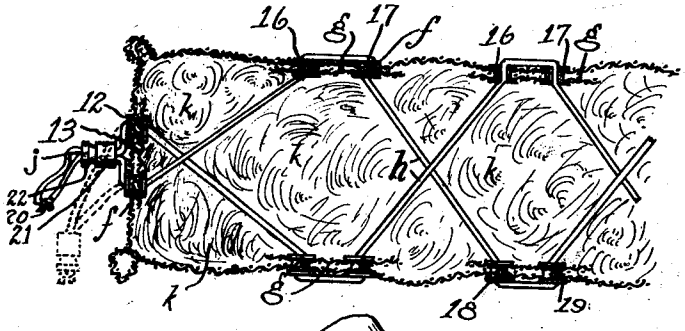


Fig. 2.

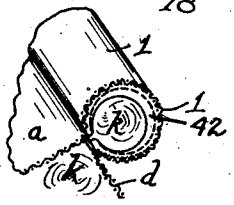


Fig. 5.

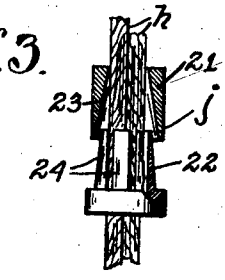


Fig. 3.

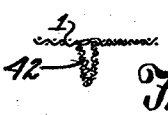


Fig. 6.

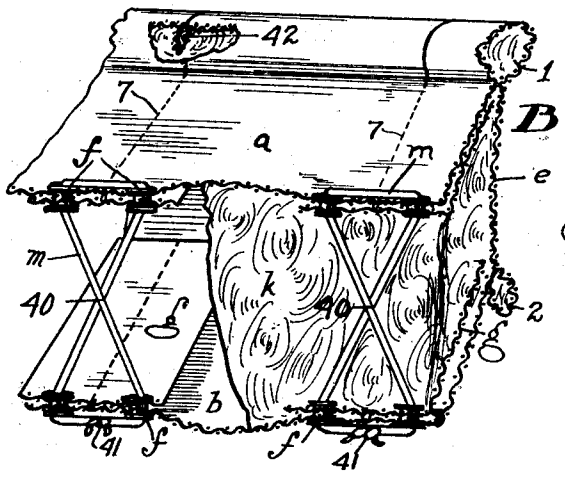


Fig. 4.

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UNITED STATES PATENT OFFICE

JACOB H. JONAS, OF LOS ANGELES, CALIFORNIA

MATTRESS

Application filed August 4, 1924. Serial No. 729,905.

This invention relates to improvements in mattresses, and has for an object the provision of a mattress which is renovatable. Most mattresses to-day that employ tufts with some form of tie between the upper and lower tick members, cannot be renovated successfully by a user but have to be sent to a mattress manufacturer who arranges the tufts and ties and thoroughly beats the mattress allowing it to be exposed to sunshine and air. This operation of course is expensive and requires several days time. The present invention has for an object the provision of a mattress which can be readily renovated in a short period of time by the user of such mattress, and without undue labor.

At the present time so far as the inventor is aware, it is impossible to regulate a mattress as to softness. Many prefer a mattress that is firm, while others require a mattress that is resilient and soft, and to provide a mattress one side of which is firm and the other side resilient, is a difficult task.

The present invention has for a further object the provision of a mattress which can be regulated as to degree of firmness or resiliency or zones thereof can be arranged so that certain zones are resilient and others firm.

The invention has for further objects the provision of a mattress which is inexpensive of manufacture, simple of construction, superior so far as use and service are concerned, and durable in nature.

With the above and other objects in view, the invention consists in the novel and useful provision, formation, construction, association and relative arrangement of parts, members and features, all as shown in certain embodiments in the accompanying drawing, described generally and more particularly pointed out in claims.

In the drawing:

Figure 1 is a cross sectional perspective view showing details of one form of the improved mattress;

Figure 2 is a fragmentary cross sectional view on an enlarged scale of the mattress shown in Figure 1;

Figure 3 is a fragmentary cross sectional view of a clutch member which may be used in practicing the invention;

Figure 4 is a fragmentary perspective view showing a slight modification of the mattress;

Figure 5 is a perspective view partly in section showing the form of the roll edge between the boxing and the ticks; and,

Figure 6 is a fragmentary cross sectional view of the form of the ticks adjacent the edge.

Corresponding parts in all the figures are designated by the same reference characters.

Referring with particularity to the drawing, A and B designate two forms which the invention may assume, and describing the mattress designated A first, the same comprises an upper and a lower tick *a* and *b* and side boxings *c* and *d*, and end boxings *e*, so as to form an enclosed tick. In the showing the top and bottom ticks and the end and side boxings are connected by means of a rolled edge such as shown at 1 and 2. The mattress shown at A is capable of being renovated and in a measure re-aerated. Both the top and bottom ticks are provided with openings such as shown at 3 and 4, for the upper tick, and 5 and 6 for the lower tick; said openings preferably being reinforced by means of eyelets designated generally by *f*, and such openings 3 and 4, and 5 and 6, of which there may be a plurality, are spaced apart as best shown in Figure 2, and pairs of openings in the upper tick are adapted to be in approximate alignment with pairs of openings in the lower tick. If desired, fabric reinforcement of suitable reinforcement of any form such as strips *g* may be placed inside the ticks for the purpose of reinforcing the openings through which the eyelets are passed and so that the eyelets will not tear out from the ticks. The strips *g* may take the form of small squares of fabric, if desired, or like the form shown by B in Figure 4, in case such strips may run either transversely or longitudinally of the ticks and be sewed to said ticks as indicated in Figure 4 at 7. In the construction shown for Figures 1 and 2 the end boxing is likewise provided with spaced openings arranged in pairs as shown at 8, 9, 10 and 11, and likewise it will be noted that

such spaced openings may be reinforced by means of eyelets as shown in Figure 2 at 12, and the boxing in turn reinforced at such eyelet point by means of strips 13. The boxing *c* is similarly formed and reinforced as indicated at 14. The reinforced opening in the boxing *d* as shown at 15 lies in the same plane as certain pairs of the reinforced openings in the top and bottom ticks, as shown generally at 16 and 17, and likewise in the same plane with the reinforced opening in the boxing *c* shown at 14. I take a lacing cord *h*, pass the same through the reinforced openings shown at 14 of the boxing *c* so as to form a bight in such cord and then lace one length up through one eyelet of the tick *a*, as shown in Figure 2 at 16 over the top of the tick *a* and through the next eyelet, as shown at 17 down to the bottom tick member and through the eyelet shown at 18, and thence over the tick and through the eyelet 19 and back to the upper tick, until such length is passed through an eyelet opening in the end boxing *d*. The same procedure would be adopted for the other length of the cord, and it will be seen upon reference to both Figures 1 and 2 that the cords are in criss-cross formation between the upper and lower ticks. The end of such cord is brought outward and tied as shown at 20 and such ends are passed through the clutch member such as shown in Figure 3 and designated by *j*. It will also be noted that when the mattress is laced as shown in Figures 1 and 2 the ends of the lacing *h* are of extended length beyond the end boxing *d*. The clutch member *j* may assume various forms, that in the showing comprising two parts as 21 and 22, the part 21 having a tapered bore 23 and the part 22 having a plurality of spaced gripping fingers 24 adapted to be received within the cone-shaped bore 23 of the part 21. When the gripping fingers are received within the bore they will grip both lengths of the cord *h*. Thus to renovate the mattress it is only necessary to pull outwardly upon the member 22 of the clutch which will release the cords and the tie or knot 20 of such cords cannot slip through the opening in the part 22 of the clutch, and when all of said cords are loosened the mattress may be pounded so that the same may be renovated. Figure 2 shows the cords drawn tightly so as to draw the upper and lower ticks together and compress the filling *k* between such ticks. If for any reason it is desired to have one side of the mattress less firm than the other side, this could be accomplished by loosening certain of the cords, which of course would allow expansion of the filling *k* between the ticks. While in Figure 1 the cords are shown as running transversely of the ticks, still it is obvious that the cords might be run longitudinally of the mattress. The form shown in Fig. 4 is similar to that shown in Fig. 1 with the exception that the cords do not run either transversely or longitudinally of the mattress, but consists of a plurality of independent cords *m*. The eyelets are arranged in the ticks the same as before, that is, in spaced pairs, and the cords *m* are run between such upper and lower ticks and through the eyelets, and crossed as between such upper and lower ticks. The reason for crossing the cords as indicated at 40 is that if for any reason the mattress is rolled the lengths of the cord will compensate for the stretch given the mattress and any break. As before, the cords are tied as shown at 41 and a clutch member similar to that shown in Figure 3 might be included and carried on the cords, if desired. Breakage of the cords is practically impossible and no unsightly tufts to pull out are used, and furthermore, the mattress is inexpensive of manufacture and more durable and satisfactory so far as results are concerned.

The filling of the mattress is not liable to shift in the construction shown, but will retain its general form, whether the mattress is soft or firm on one side or the other, due to the crossed formation of the cords which tend to hold the filling in position.

A further important feature of the present invention resides in the method of joining the boxing to the ticks. It is customary to have what is called a roll edge such as shown at 1 and 2 between the ticks and the boxing, and when the ticks are drawn together by means of lacing or cords *h*, the ticks will have a tufted appearance, as shown in Figure 1. When a mattress presents this tufted appearance a certain length of the goods is used and it is customary to cut the ticks to a larger size so that when tufted the mattress will be of a definite size. However, tufting a mattress would use up cloth in the mattress body without affecting the edge portions, and as a consequence some provision must be made for restricting the size of the edge so as to conform with the general length and size of the tufted portions of the mattress. This is accomplished by sewing a tick so as to have the general appearance as shown in Fig. 6 at 42, this form being sometimes called a dart. This formation is likewise shown in Figure 5, and this drawing together of this portion of the mattress will make all portions thereof the same size and length when the mattress ticks are drawn together by a lacing or cords. Furthermore, this system will aid in maintaining the mattress of a general form, which would not occur if the jointure portions between the ticks and boxing were not shortened. If the edges were left full length the mattress would flatten out and stretch and it would not maintain its regular form.

It is obvious that various changes and modifications may be made in practicing the

invention, in departure from the particular showing of the drawing, without departing from the true spirit of the invention.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

As a new article of manufacture, a mattress having the usual upper and lower tick members and side and end boxing joined thereto, said tick members and boxing being adapted to confine filling, spaced parallel rows of lacing extending transversely between the side boxing and securing the top and bottom ticks, said lacing being criss-crossed between the upper and lower tick members, and means whereby each parallel row of lacing is independently adjustable to regulate compression of the filling between the upper and lower tick members.

In testimony whereof, I have signed my name to this specification.

JACOB H. JONAS.