Nov. 22, 1932. J. M. OLDHAM 1,888,357

MATTRESS FILLER OR CUSHION UNIT

Filed Aug. 16, 1930

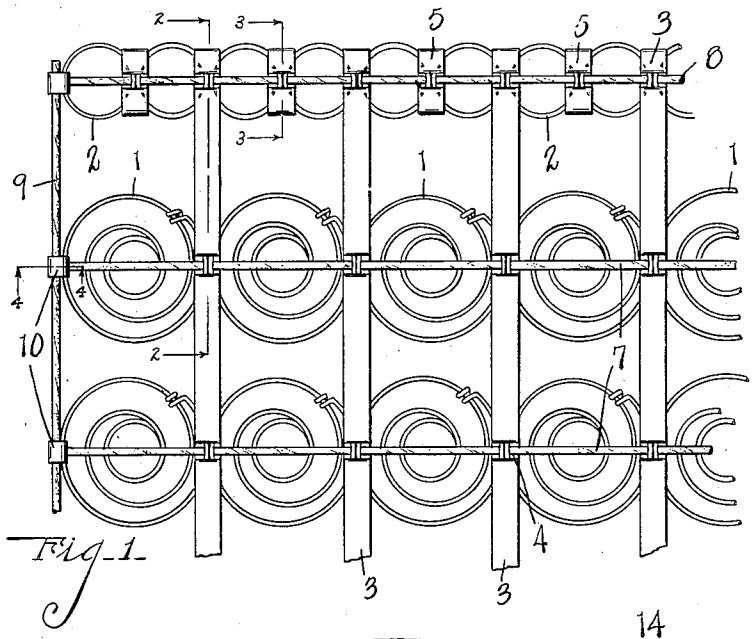


Fig. 1.

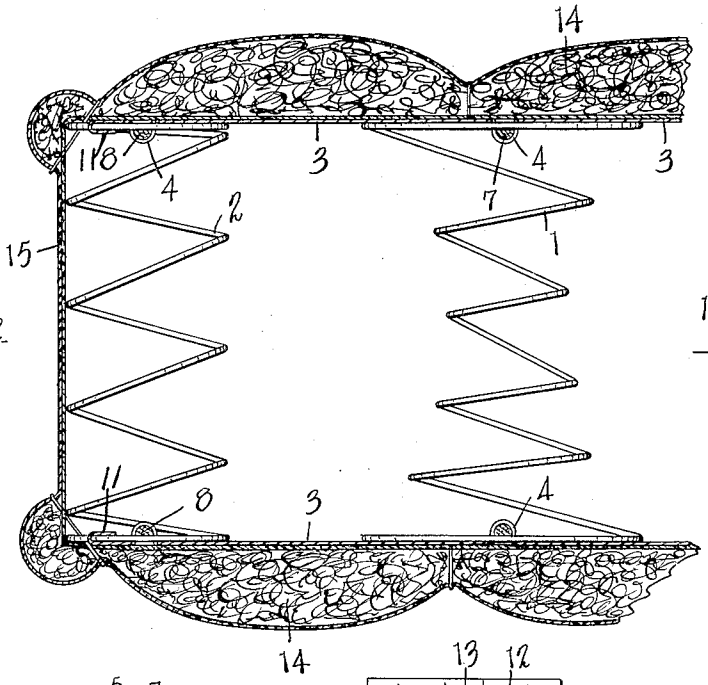


Fig. 2.

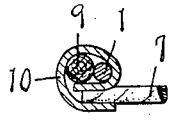


Fig. 4.

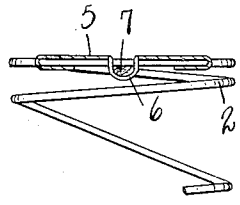


Fig. 3.

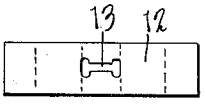


Fig. 5.

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UNITED STATES PATENT OFFICE

JOHN M. OLDHAM, OF DETROIT, MICHIGAN, ASSIGNOR TO L. A. YOUNG SPRING & WIRE CORPORATION, OF DETROIT, MICHIGAN

MATTRESS FILLER OR CUSHION UNIT

Application filed August 16, 1930. Serial No. 475,702.

This invention relates to improvements in spring structures especially designed for use as mattress fillers or cushion units.

The main object of this invention is to provide a structure of this character in which the springs are effectively supported in their relation to each other and at the same time in a manner that permits full resilience.

A further object is to provide a structure of this character with a border portion which effectively supports the upholstery covering, that is, prevents inward collapsing or buckling when the edge of the mattress is depressed.

A still further object is to provide a mattress filler or cushion unit which is substantially noiseless and at the same time is very economical.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of my invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary plan view of my improved mattress filler.

Fig. 2 is a fragmentary view partially in vertical section on line 2—2 of Fig. 1 of a mattress with my improved filler therein.

Fig. 3 is an enlarged fragmentary view partially in section on line 3—3 of Fig. 1.

Fig. 4 is an enlarged detail view partially in section on line 4—4 of Fig. 1.

Fig. 5 is a plan view of one of the clips in the flat.

My improved spring structure or mattress filler unit comprises a plurality of body springs 1 of the helically coiled hour-glass type arranged in rows. A row of border springs 2 is provided at each side, these border springs being cylindrical; that is, the coils are of uniform diameter from end to end, and the coils are of substantially one-half the diameter of the main body springs so there is a pair of border springs to each row of body springs.

I provide cross strips 3 of thin flexible metal having offsets 4 therein slotted to receive the end coils of adjacent springs of adjacent rows as clearly shown in the drawing. The border springs alined with these strips are also engaged in the offsets.

Clips 5 having slotted offsets 6 therein corresponding to the offsets 4 of the strips 3 are provided for each pair of border springs.

Tie strands 7 preferably formed of twisted paper are threaded through the offsets of the cross strips between the bights of the offsets and the portions of the coils engaged in the slots of the offsets, thus locking the cross strips and the springs together. The border or outer side tie strands 8 also engage the clips 5 in the same manner.

End border strands 9 preferably of the same material, hard twisted paper, are secured to the end springs by means of clips 10 which also engage the ends of the tie strands as shown in Fig. 4. The ends of the cross strips are folded over the border springs as shown at 11, the ends of the clips 5 also being folded over the end coils of the springs.

The blank 12 from which the clips are formed is shown in Fig. 5. The slots 13 of the clips and also the slots of the tie strip offsets are preferably I shape.

This spring filler is arranged in a mattress shown at 14, Fig. 2, and it will be noted that the side walls 15 of the mattress are supported by the border springs so that they cannot collapse inwardly. By employing the paper or fibrous strands for the tie members the elements are connected so that the structure is substantially noiseless. Further, a suitable supporting surface is provided by this arrangement, and the structures may be produced very economically.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent is:

1. A spring mattress filler or cushion unit consisting of helically coiled hour-glass shaped body springs arranged in rows, a plurality of cylindrically coiled side border springs, the diameter of the coils of the border springs being substantially one-half the diameter of the end coils of the body springs there being a pair of border springs to each transverse row of body springs, thin metal cross strips having slotted offsets with which the end coils of springs of adjacent rows are engaged, the ends of the said cross strips being folded over the end coils of adjacent border springs, clips having slotted offsets with which the end coils of the pairs of border springs are engaged, the ends of said clips being folded over the end coils of the springs, and tie strands of twisted paper threaded through the alined offsets of said cross strips between the bights of the offsets and the portions of the springs engaged with the offsets, the outer tie strands also engaging said clips.

2. A spring mattress filler or cushion unit consisting of helically coiled hour-glass shaped body springs arranged in transverse rows, a plurality of cylindrically coiled side border springs disposed at the ends of each of said rows, thin cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, clips having slotted offsets therein with which adjacent border springs are engaged intermediate said cross strips, and tie strands threaded through the alined offsets of said cross strips and clips between the bights of the offsets and the portions of the springs engaged with the offsets.

3. A spring mattress filler or cushion unit consisting of helically coiled hour-glass shaped body springs arranged in transverse rows, a plurality of cylindrically coiled side border springs disposed at the ends of each of said rows, thin metal cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, clips having slotted offsets therein with which adjacent border springs are engaged intermediate said cross strips, tie strands of twisted paper exclusively threaded through the alined offsets of said cross strips and clips between the bights of the offsets and the portions of the springs engaged with the offsets, and end border strands of twisted paper exclusively, and clips securing said border strands to the end springs, said last named clips engaging the ends of said tie strands.

4. A spring mattress filler or cushion unit consisting of helically coiled body springs arranged in longitudinal and transverse rows, a plurality of cylindrically coiled side border springs disposed only at the ends of the transverse rows, the diameter of the coils of the border springs being such that there is a plurality of border springs to each transverse row of body springs, thin metal cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, the ends of the said cross strips being folded over the end coils of the adjacent border springs, clips having slotted offsets with which the end coils of the pairs of border springs are engaged the ends of said clips being folded over the end coils of the springs, and tie strands threaded through the alined offsets of said cross strips between the bights of the offsets and the portions of the springs engaged with the offsets, the outer tie strands also engaging said clips.

5. A spring mattress filler or cushion unit consisting of helically coiled body springs arranged in longitudinal and transverse rows, a plurality of cylindrical coiled side border springs disposed only at the ends of the transverse rows, the diameter of the coils of the border springs being such that there is a plurality of border springs to each transverse row of body springs, thin metal cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, clips having slotted offsets with which the end coils of the pairs of border springs are engaged, and tie strands threaded through the alined offsets of said cross strips between the bights of the offsets and the portions of the springs engaged with the offsets, the outer tie strands also engaging said clips.

6. A spring mattress filler or cushion unit consisting of helically coiled body springs arranged in longitudinal and transverse rows, a plurality of cylindrical coiled side border springs disposed only at the ends of the transverse rows, the diameter of the coils of the border springs being such that there is a plurality of border springs to each transverse row of body springs, thin cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, clips having slotted offsets therein with which adjacent border springs are engaged intermediate said cross strips, and tie strands threaded through the alined offsets of said cross strips and clips between the bights of the offsets and the portions of the springs engaged with the offsets.

7. A spring mattress filler or cushion unit consisting of helically coiled body springs arranged in longitudinal and transverse rows, a plurality of cylindrically coiled side border springs disposed only at the ends of the transverse rows, the diameter of the coils of the border springs being such that there is a plurality of border springs to each transverse row of body springs, thin metal cross strips having slotted offsets with which the end coils of springs of adjacent transverse rows are engaged, clips having slotted off-

sets therein with which adjacent border springs are engaged intermediate said cross strips, tie strands threaded through the alined offsets of said cross strips and clips between the bights of the offsets and the portions of the springs engaged with the offsets, end border strands, and clips securing said border strands to the end springs, said last named clips engaging the ends of said tie strands.

In witness whereof I have hereunto set my hand.

JOHN M. OLDHAM.