Feb. 21, 1933. W. G. SCHUBERT 1,898,573

MATTRESS

Filed April 18, 1931

Fig. 1.

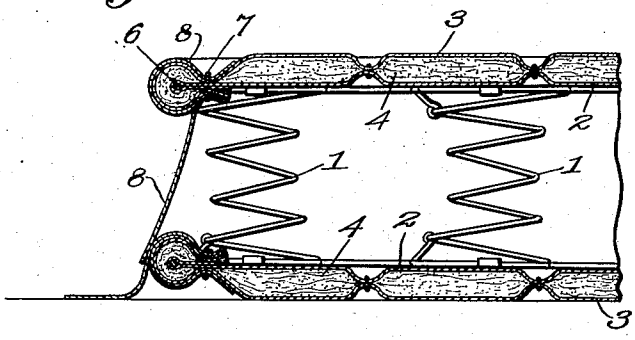


Fig. 2.

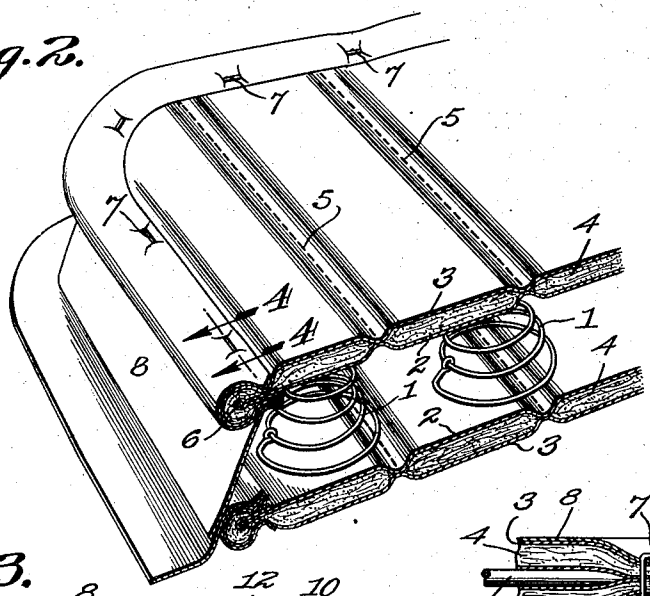


Fig. 4.

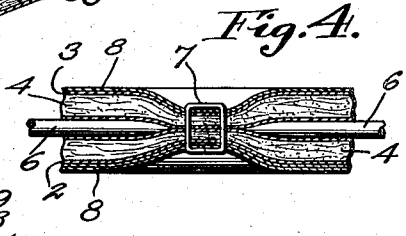
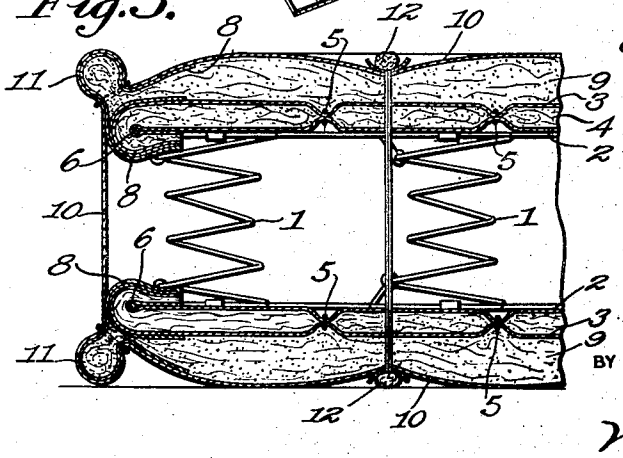


Fig. 3.



INVENTOR

Wilfred G. Schubert

BY

Wood & Wood

ATTORNEYS

Patented Feb. 21, 1933 1,898,573

UNITED STATES PATENT OFFICE

WILFRED G. SCHUBERT, OF CINCINNATI, OHIO, ASSIGNOR TO THE STEARNS & FOSTER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

MATTRESS

Application filed April 18, 1931. Serial No. 531,179.

This invention relates to inner-spring mattresses wherein a conventional set of coil springs is provided with padding and enclosed in a tick.

The object of the invention is to provide a mattress of this type which is stronger and more durable than those heretofore made, which is characterized by a construction which renders the various elements making up the finished mattress more firmly and permanently associated with one another, and which lends itself to processes of fabrication wherein the added strength and durability are imparted to the mattress by operations involving less skilled labor than is usual in the fabrication of mattresses of equal quality.

Another object of the invention is to provide a process of fabricating such mattresses which is at once economical and adapted to provide mattresses of uniform quality by reason of the fact that the amount of work requiring skill incidental to the fabrication is reduced to a minimum.

Other objects and specific advantages will be more fully apparent from a description of the accompanying drawing, in which:

Figure 1 is a fragmentary sectional view through a spring mattress showing the preferred spring covers applied to a spring.

Figure 2 is a fragmentary perspective view with parts in section, showing the mattress, thus far constructed, somewhat in plan to give a more definite idea of the attachment of the welt strip.

Figure 3 is a fragmentary sectional view through a spring mattress taken on a line between staples and showing the construction of a mattress completed in accordance with the present invention.

Figure 4 is a detail sectional view taken on the line 4—4, Figure 2, showing a staple securing the spring cover about the edge of a spring.

In its simplest terms, the invention involves an inner-spring unit, a tick, padding between the inner-spring unit and the tick, and a welt attached to the margin of the inner-spring unit and attached to the tick adjacent to the corners of the tick for the purpose of preventing padding from working over the corners and down the sides of the inner-spring unit and into the box of the mattress. More specifically, the inner-spring unit is preferably covered with a flexible member which may be simply burlap. However, a cushion is disclosed as the selected spring covering to keep the padding or felting from working down into the springs.

The spring cover is preferably attached to the spring unit marginally and the specific means of marginal attachment disclosed herein is deemed to be new and useful in and of itself independently of the rest of the mattress structure.

It is considered preferable practice to attach the spring cover and the welt marginally to the inner-spring unit, place padding over the spring covers and then enclose the assembly in a tick with the welt attached to the tick. This attachment may be accomplished in the sewing of the conventional roll edge, by any sort of a special stitch through the tick and welt, or by lapping the welt over the top of the padding and securing it to the tick by the tufts which pass through the mattress.

One of the virtues attendant to the use of this welt is that it secures the tick itself to the springs and/or spring cover and thereby provides a strong integral structure. Another virtue of the described construction is that it eliminates one of the chief sources of past trouble with mattresses of the inner-spring type which was that when people sat on the edge of the mattress, the felt on top of the inner-spring had a tendency to break and work down into the box of the mattress. As this felt gradually worked away from the top of the mattress, it left a thin spot which caused one to feel the springs, thereby rendering the mattress very uncomfortable. The fabric strip secured between the outer tick and the springs entirely prevents any of the felt from breaking and shifting down into the box of the mattress and consequently obviates the past trouble with mattresses of this type.

In the preferred example illustrated, the

mattress is made as follows: The inner-spring unit 1 is covered on each side with a cushion constituted by burlap 2 on one side, muslin or cheesecloth 3 on the other side, felt 4 in between, and stitched every four inches as at 5. Two of these pads are used as the spring covers and applied to the springs one on each side with the burlap next to the springs. The use of this type of pad as a spring covering prevents the springs either from working through into the felt, or from obtruding into the felt to such a degree that the user of the mattress becomes conscious of the existence or the location of the individual springs.

These spring covers are attached to the springs by lapping them over the marginal rods 6 of the springs and passing staples 7 at spaced intervals through the top of the spring cover and the edge of the spring cover lapped about the marginal rods. This stapling operation for attaching a spring cover to springs is valuable because it avoids hand stitching and because it facilitates the use of a relatively heavy pad as above described as a spring cushion. A heavy cushion of this type would be difficult or tedious to attach to the springs by hand sewing and the stapling method therefore makes possible a superior structure and product independent of the skill and care of the workman.

The staples 7 are likewise used for attaching the fabric strips or welts 8 to the springs, though these strips may alternatively be secured to the spring covers by sewing them directly to the burlap or muslin of the covers, either before or after applying the covers to the springs, or may be constituted by increased dimensions of either of the fabrics making up the spring cover pads.

The springs, spring covers, and strips or welts so constituted and assembled, are then padded with layers of felt 9 and the welts disposed about the edges of the felt padding and then laid over the top of the felt padding. This assembly is then stuffed into a tick 10 according to the conventional step in the fabrication of mattresses.

Next, the mattress is provided with a roll edge 11, in the stitching of which the fabric strip or welt is sewed to the tick and is thereby constituted a corner member between the spring and the tick, insulating the box of the mattress from all ingress of felt. This formation and sewing of the roll edge is preferably a machine operation though it can be accomplished by hand.

The mattress is then provided with tufting 12 as is conventional. In fact, all other steps in the fabrication of the mattress, save those specifically described, may be understood to be of a wholly usual and conventional nature.

Therefore, the invention herein described provides both a mattress which is a strong, durable, integral structure and a process of fabricating the same characterized by less skilled hand work than previously requisite for the fabrication of high quality mattresses.

Having described the invention, I desire to be limited only by the following claims:

1. A spring mattress, comprising, a spring unit having a marginal wire frame for its top and bottom edges, laminated cushion coverings respectively for the top and bottom of the spring unit, each cover being folded about the wire frame and secured thereto by spaced clips, stuffing material upon said coverings, a welt marginally of each covering having an edge lapping the inner side of the cover and clipped therewith to the spring unit and extended to marginally overlie the covering and provide a pocket for said stuffing material, and a tick as an outer cover for the structure, roll-edged with the welting and stuffing, the welt reinforcing the ticking at the edges of the mattress and connecting the ticking to the spring covering to prevent the stuffing working its way to the spring.

2. A spring mattress, comprising, a spring unit having a marginal frame for its top and bottom edges, coverings respectively for the top and bottom of the spring unit, each cover being folded about the wire frame and secured thereto by spaced clips, stuffing material upon said covering, a welt marginally of each covering having an edge on the inner side of the cover and secured therewith to the spring unit and extended to marginally overlie the coverings and provide a pocket for said stuffing material, and a tick or outer cover for the structure, roll-edged with the welting and stuffing, the welt reinforcing the ticking at the edges of the mattress and connecting the ticking to the spring covering to prevent the stuffing working its way to the spring.

3. A spring mattress, comprising, a spring unit having a top and bottom edge framing, a covering respectively for the top and bottom of the spring unit, each marginally hemmed to the framing, a stuffing material upon said covering, a welt secured to the hemming of the covering and extended to marginally overlie the covering and provide a pocket for said stuffing material, and a tick forming an outer covering for the structure, roll-edged with the welting and stuffing, the welt joining the spring unit and covering with the tick at the edges of the mattress.

In witness whereof, I hereunto subscribe my name.

WILFRED G. SCHUBERT.