Oct. 2, 1962 J. R. STECKART 3,056,146

INNER SPRING STRUCTURE HAVING ONE OR MORE YIELDABLE CORNERS

Filed June 9, 1959

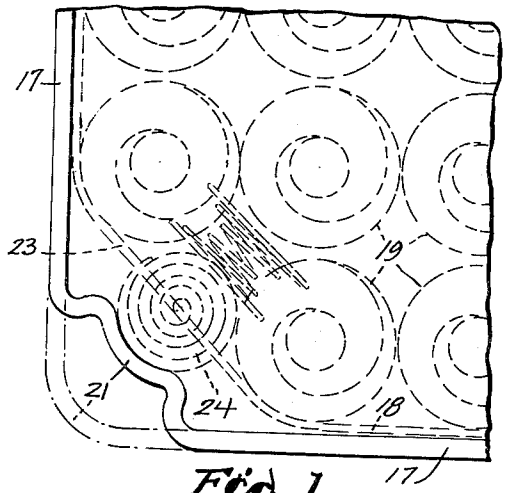


Fig. 1

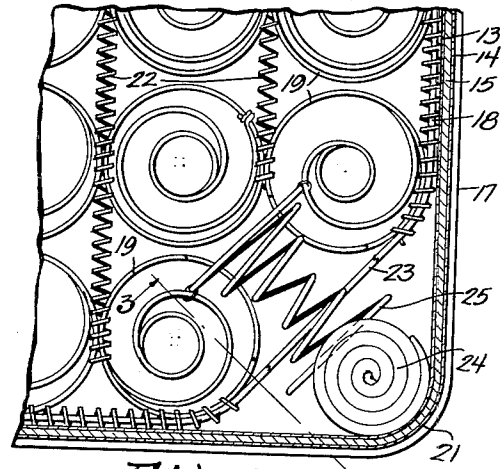


Fig. 2

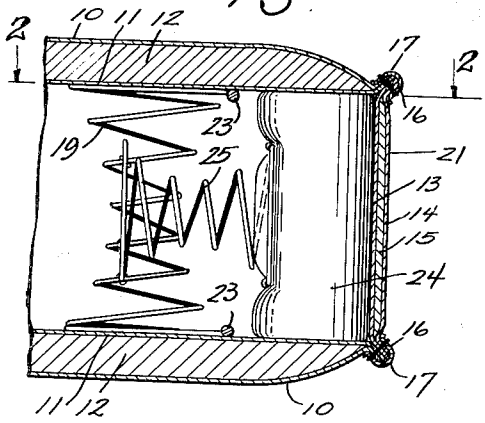


Fig. 3

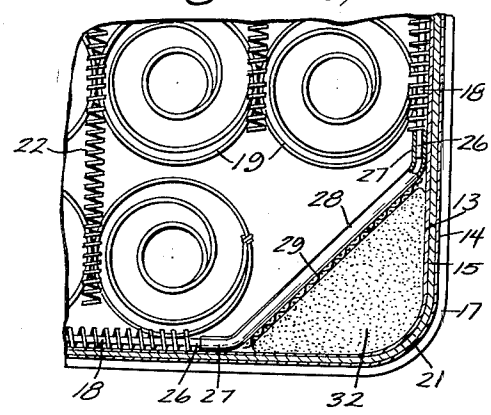


Fig. 4

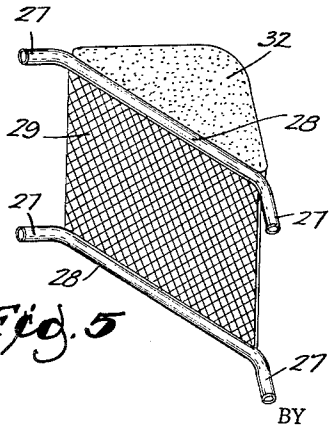


Fig. 5

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INNER SPRING STRUCTURE HAVING ONE OR MORE YIELDABLE CORNERS

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This invention relates to an inner spring structure having a yieldable corner.

It is quite difficult to make up a bed having an inner spring mattress over which a contour sheet must be stretched. Ordinarily the housewife has to lift the corners of the mattress and attempt to flex an entire quarter section of the mattress to provide enough slack in the otherwise quite rigid inner spring structure to permit the corner of the contour sheet to be stretched over the mattress corner. After the sheet envelopes the mattress corner, it is dropped in the course of which the mattress fills out the sheet. The manual effort required for this process has militated against the sale of contour sheets, notwithstanding their other advantages.

In mattresses fabricated according to the present invention, the otherwise relatively rigid inner spring frame at the corners of the mattress is relieved and replaced by a resiliently yieldable filler which readily yields under pressure during the application of the contour sheet to the mattress. Thus the sheet is easily applied to the mattress because the corners yield to provide the slack necessary to stretch the contour sheet therearound. As soon as the pressure is relieved, the filler resiliently expands to neatly fill out the corner.

Accordingly, it is a relatively simple matter to make up a bed having a mattress embodying the present invention and the strength, rigidity and quality of the mattress is in no way impaired.

Other features, advantages and objects of the invention will appear from the following disclosure in which:

FIG. 1 is a fragmentary plan view of one corner of a mattress embodying the present invention showing the corner depressed.

FIG. 2 is a fragmentary horizontal cross section taken through one embodiment of the present invention and approximately along the line 2—2 of FIG. 3.

FIG. 3 is a vertical cross section taken through one embodiment of the present invention and approximately along the line 3—3 of FIG. 2.

FIG. 4 is a fragmentary horizontal cross section similar to FIG. 2 but of a different embodiment of the invention.

FIG. 5 is a perspective view of a foam rubber filler adapted for incorporation in the inner spring mattress as shown in FIG. 4.

A conventional inner spring mattress includes on its top and bottom surfaces the spaced fabric covering sheets **10**, **11** between which intervenes filler material such as quilted pad **12**. The sides of the mattress are similarly provided with spaced fabric plies **13**, **14** between which there is a filler pad **15**. These plies are brought together at the corners of the mattress and are sewn together through a binding tape **16** which covers the raw edges of the sheets **10**, **11**, **13** and **14** to form a welt **17**.

Within the mattress there is an inner spring structure including an inner spring frame having otherwise continuous interconnected side and end rods **18** and a series of coil springs **19** and interconnecting springs **22**. In conventional mattresses the rods **18** ordinarily extend continuously completely around the corners of the mattress to constitute the rigid corner aforesaid which makes it difficult to apply the contour sheet thereover.

According to the present invention the rods **18** are relieved in the corner portions of the mattress and in-

stead of extending to the corner, the rods are interconnected by diagonal or oblique portions **23** spaced substantially inwardly of the corner **21**. The intersection of the rectilinear portions **18** of the rods and the diagonal portions **23** may desirably be about 10 to 12 inches from the corner **21** of the mattress. The coil spring which ordinarily is disposed at the corner of the mattress is eliminated in favor of a yieldable filler.

In the embodiment of the invention shown in FIGS. 1, 2 and 3, the filler may consist of a cotton pad **24** which is spirally wound and which has an axial extent substantially filling the space between the fabric plies **11**. The pad **24** is resiliently and yieldably supported for inward movement by coil spring **25** which has one end coil in abutment with the pad **24** and the opposite end coil fastened to selected coils of coil springs **19**. Accordingly, the corner of the mattress is free to yield resiliently inwardly as is illustrated in FIG. 1 in which the spring **25** has been compressed to provide slack in the mattress to facilitate encasing a contour sheet over the mattress.

In FIGS. 4 and 5 another embodiment of the invention is illustrated in which the rods **18** are simply cut off at their end portions **26** about 10 to 12 inches from the corner **21** of the mattress. Over these exposed rod ends **26** are engaged the tubular end portions **27** of diagonal frame members **28** to which a backing web **29** is connected. The backing web **29** supports a block **32** of foam rubber or like yieldable resilient filler material which functions in substantially the same way as the combination pad **24** and spring **25** of the embodiment shown in FIGS. 1 through 3.

In both disclosed embodiments the inner spring frame is just as strong as it was prior to the modification, but the corners of the mattress are now yieldable to facilitate application thereto of contour sheets.

I claim:

1. An innerspring structure adapted to be encased by a contour covering, said structure having side and end portions including relatively rigid members forming an unyielding frame for said innersprings, said members being relieved at least at one corner of the structure, said structure having innersprings except at any relieved corner, and a resiliently yieldable filler in any such corner substantially in place of any omitted corner innerspring and which will yield under pressure during the course of encasing the structure with a contour covering and will resiliently project to fill the corresponding corner of the covering after the covering is in place.

2. The device of claim 1 in which said structure further comprises a fabric covering enclosing said frame, said yieldable filler comprising a pad in any such corner and within said covering, and a spring abutting said pad, but yieldable inwardly as pressure is placed on said pad.

3. The device of claim 1 in which said structure is provided with a fabric covering enclosing said frame, said yieldable filler comprising a pad of foam rubber in said any such corner and enclosed by said covering.

4. The device of claim 3 in which said rigid frame forming members comprise rods which terminate short of the corner, and a backing frame for said foam rubber pad and comprising tubular members which engage over the exposed ends of said rods and a backing web spanning between said tubular members for the support of said pad.

5. An inner spring structure adapted to be encased by a contour covering, said structure comprising an unyielding inner spring frame and a fabric covering, said frame including side and end rods, said rods being connected on a diagonal at at least one corner of the structure, said structure having innersprings except at any relieved corner, and a resiliently yieldable filler in any such

corner outwardly beyond said diagonal rods and adapted to yield under pressure in the course of encasing the mattress with a contour covering and to rigidly project to fill a corresponding corner of the covering after the covering has encased the structure.

6. The device of claim 5 in which the yieldable filler comprises a pad and a spring normally biasing said pad against the fabric at such corner.

7. The device of claim 5 in which the yieldable filler comprises a block of foam rubber substantially filling such corner.

References Cited in the file of this patent

UNITED STATES PATENTS

2,398,237	Marsack	Apr. 9, 1946
2,927,330	Koenigsberg	Mar. 8, 1960

FOREIGN PATENTS

343,410	Great Britain	Feb. 19, 1931
703,026	Germany	Feb. 27, 1941
639,765	Great Britain	July 5, 1950