April 22, 1930.

L. A. SUEKOFF

1,755,713

SPRING FILLED MATTRESS

Filed Nov. 7, 1928

2 Sheets-Sheet 1

Fig. 1.

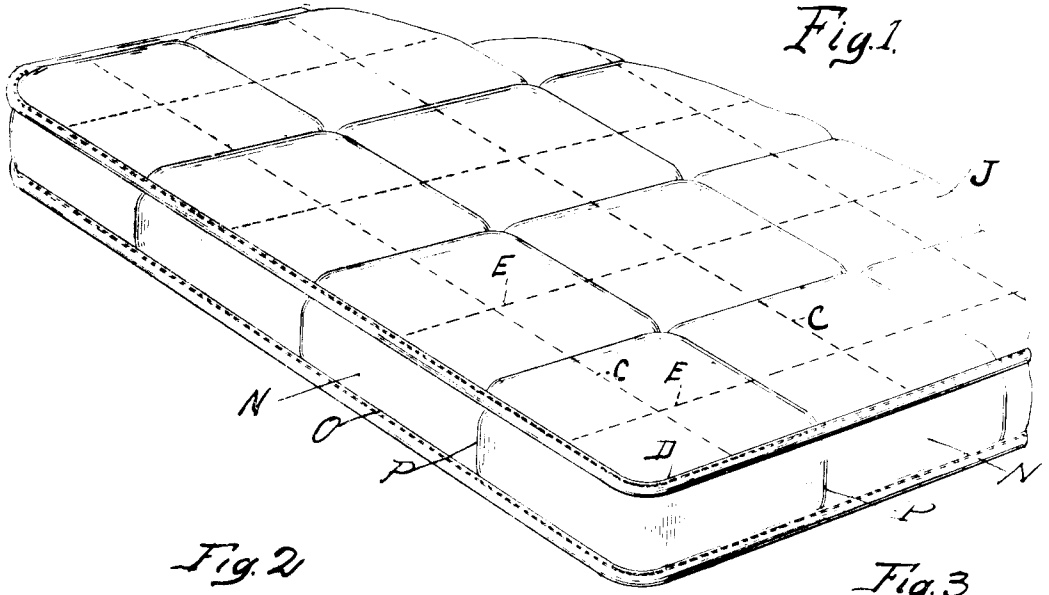


Fig. 2.

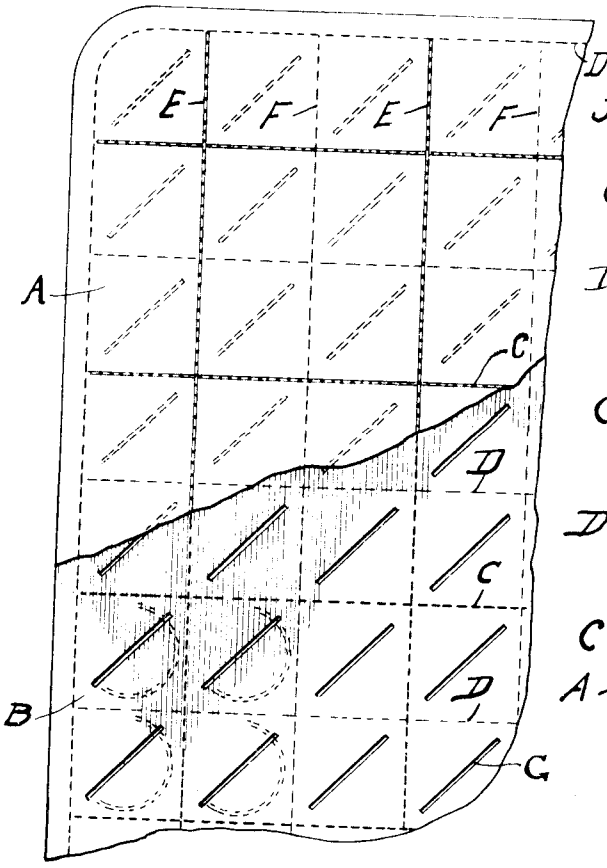
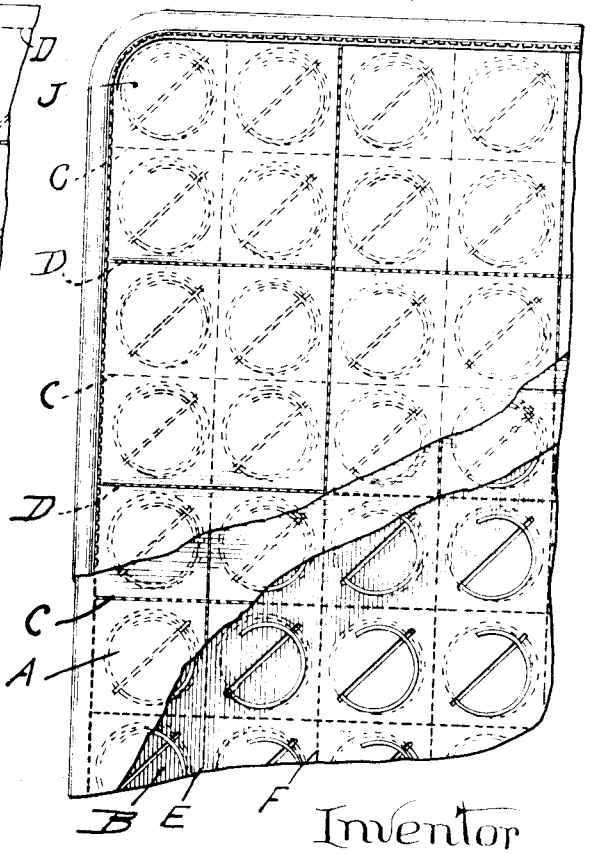


Fig. 3.



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2 Sheets-Sheet 2

Fig. 4.

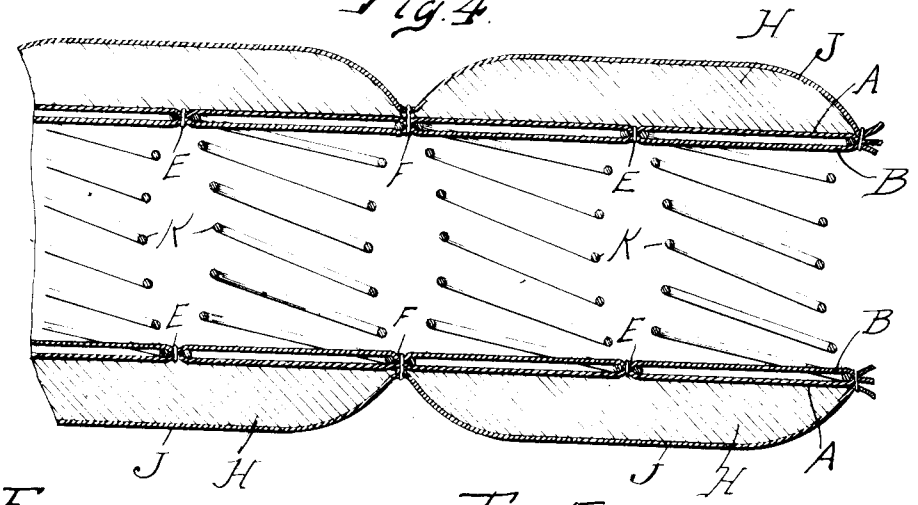


Fig. 7.

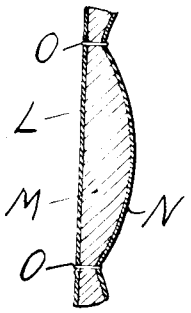


Fig. 5.

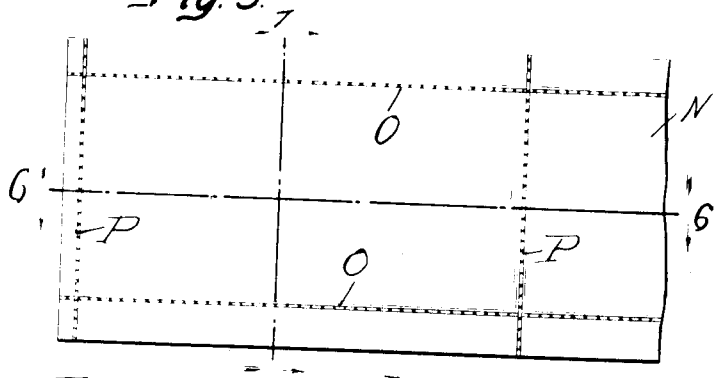


Fig. 6.

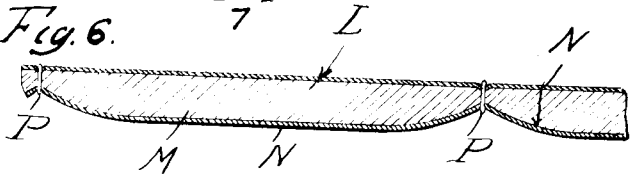
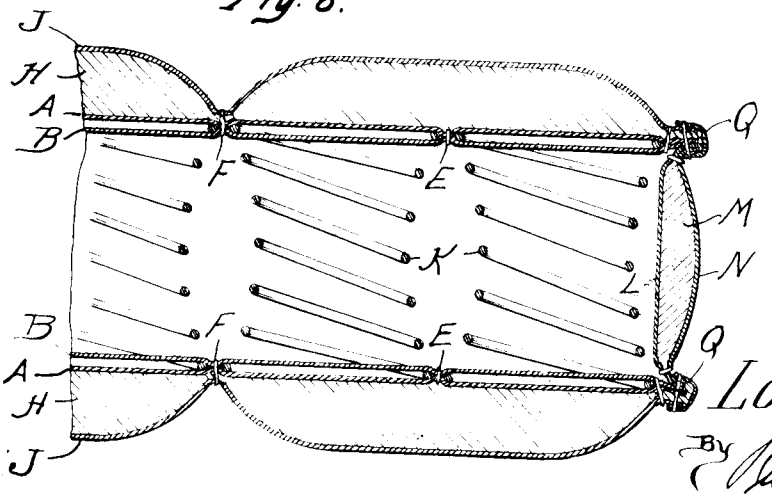


Fig. 8.



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Patented Apr. 22, 1930 1,755,713

UNITED STATES PATENT OFFICE

LOUIS A. SUEKOFF, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO FRED A. NACHMAN, OF CHICAGO, ILLINOIS

SPRING-FILLED MATTRESS

Application filed November 7, 1928. Serial No. 317,816.

This invention has for its object to provide a novel mattress of the springfilled type which is simple, can be produced at low cost and in which tufting of the mattress after otherwise completing the same is obviated, a further object of the invention being to provide quilted top and bottom walls of such mattresses which are so constructed and arranged as to enable a peripheral quilted wall, (commonly termed "boxing") to be stitched to the edges of said top and bottom walls by machine stitching after the mattress springs have been interposed between said top and bottom walls, to thus produce a finished mattress at a minimum cost of labor.

In the mattress making art, a very considerable portion of the cost of the finished product is the labor, as skilled mechanics are required for certain of the operations. My invention is directed to eliminate the necessity of employing skilled labor as the only manual operations required to be performed in the construction of the mattress of my invention may be easily and efficiently performed by unskilled labor as will appear from the following specification.

In the accompanying drawings, I have illustrated the mattress of my invention and the successive conditions of the materials of which the mattress is constructed and the successive steps involved in gradually associating said materials until the finished mattress is produced.

In the drawings:

Fig. 1 is a fragmentary perspective view of a mattress constructed in accordance with this invention.

Fig. 2 is a fragmentary plan view of a portion of a mattress.

Fig. 3 is a fragmentary plan view of a completed mattress.

Fig. 4 is a fragmentary vertical section of a partially completed mattress constructed in accordance with the invention, the boxing strip being omitted.

Fig. 5 is a view in elevation of a padded boxing strip adapted for incorporation into the complete structure.

Figs. 6 and 7 are sections on the lines 6—6 and 7—7, respectively, of Fig. 5.

Fig. 8 is a fragmentary sectional view of the completed mattress.

As the construction of the mattress of my invention will be most readily comprehended by describing first the successive steps of the method of making the same, the latter is herein fully described.

The method of manufacturing springfilled mattresses in accordance with my invention, consists in first laying upon a plain strip A of a suitable fabric such as burlap, cotton duck, etc., a strip B which preferably is provided with suitable lines C and D imprinted thereon in any suitable manner to extend longitudinally and lines E and F extending transversely of the lines C and D to divide the surface thereof into small square areas of equal size. In each of these areas there is provided an opening such as a slit or slot G extending preferably diagonally of the square and of suitable length to permit insertion of the end coil of a spring therethrough. It will be noted that the lines C and D alternate with each other and that the lines E and F alternate with each other.

The two strips or sheets A and B, which are slightly longer and wider than the top or bottom wall of the mattress core to be composed in part therefrom, are then stitched together by certain lines of stitching which follow the imprinted lines above mentioned. For example, the initial lines of stitching will follow the lines C and E, respectively, the total number of lines C and D being odd as is also the total number of lines E and F, the outermost lines D and E being nearest adjacent the side edges and ends, respectively, of the fabric sheets A and B. Thus the lines of stitching C and E may be said to border areas, each of which comprises four of the slitted or slotted square areas each of which is bordered by lines C, D, E, and F, it being apparent, of course, that along the side and end edges of the sheets the initial lines of stitching which are indicated by the same reference characters C and E as would indicate the imprinted lines followed thereby, border three sides only of areas, each of which contains two of the small squares and at the

corners of the sheets border only two sides of single small square areas.

The stitching is effected preferably by a gang sewing-machine.

The sheets A and B, after being thus stitched together by the stitchings C and E, are then inverted so that sheet A is above sheet B. Then upon sheet A is disposed a layer H of padding material such as cotton, hair, etc., and upon this layer H there is laid a sheet of ticking J. The latter and the layer H are then stitched to the sheets A and B by lines of stitching D and F which alternate with the lines of stitching C and E to thereby complete the slitted or slotted small square pockets which were originally defined by the lines C, D, E and F, imprinted upon the sheet or strip B so that the said lines of stitching D and F serve two functions, viz: to complete the stitching together of the fabrics A and B and to secure the padding and ticking to the same and form what, in the upholstery art, are known as "biscuits," each of which is equal in area to four of the square pockets over the entire area of the top and bottom walls of the mattress.

The padding and ticking are preferably of length and width slightly greater than that of the sheets A and B and are stitched along their edges to the latter and, preferably, also to a boxing strip which forms the peripheral walls of the mattress. This stitching of the several layers to the boxing strip is, of course, effected after springs K have been mounted between two of the padded stitched top and bottom wall structures by inserting the end coils of said springs into opposed square pockets bordered by the several lines of stitching C, D, E, and F.

The surplus material at the side and end edges of the top and bottom wall structures may be fashioned to form a roll edge and suitably stitched to a plain or padded boxing strip, it being obvious that a skilled mattress maker will treat these edge portions according to his own ideas of a neat ultimate finish.

I prefer, however, to employ for boxing, a padded strip of material such as is shown in Figs. 5, 6, and 7, which consists of an inner layer L of fabric, an intermediate layer M of padding and an outer ticking N, the latter and the elements L and M being secured together by lines of stitching O and P, respectively, the lines of stitching O being spaced from and extending parallel with the longitudinal edges of the structure so as to leave enough of the fabrics and padding along the side edges to form, conjointly with the similar edge portions of the top and bottom wall structures, the roll edge Q shown in Fig. 8, the exact manner of effecting the stitching together of the fabrics B and L and of the tickings J and N being unimportant and selective by the mattress maker.

The resulting mattress presents a structure wherein the quilted top and bottom walls are directly associated with the means for engaging the interposed springs in that the latter are completed by the lines of stitching which complete the quilting of said walls, said lines of stitching thus performing two functions and obviating the extra stitching which would otherwise be required to complete the spring engaging portions of said walls.

Obviously the relation of the lines of stitching which form the biscuits of the top and bottom wall structures with respect to the number of small squares or spring-end pockets may be varied, it being found in practice, however, that if the biscuits are of the same size as said small squares or pockets, the paddling will be so compressed as to produce an uncomfortably hard surface so that it is more desirable to have said biscuits each of a size or area to cover a plurality of said small squares or pockets.

I claim as my invention:

1. A mattress comprising top and bottom wall structures each consisting of two layers of fabric secured together by sets of parallel lines of stitching extending respectively longitudinally and transversely of each other and bordering substantially equal square areas, there being openings in one of said fabric layers in each of the said square areas constituting the mouths of pockets formed between said layers, each of said wall structures including a layer of padding and a cover fabric therefor disposed upon that first-named fabric layer which is devoid of openings, some of the lines of stitching of at least one of the above sets and including the outermost of said lines of stitching extending through the layer of padding and cover fabric, springs interposed between said top and bottom wall structures and having their end coils engaged in said pockets, and a boxing strip secured to the peripheral edges of said top and bottom wall structures.

2. A mattress comprising top and bottom wall structures each consisting of two layers of fabric secured together by sets of parallel lines of stitching extending respectively longitudinally and transversely of each other and bordering substantially equal square areas, each of said sets of lines of stitching consisting of an odd number, there being openings in one of said fabric layers in each of said square areas constituting the mouths of pockets formed between said layers, each of said wall structures including a layer of padding and a cover fabric therefor disposed upon that first-named fabric layer which is devoid of openings, some of said lines of stitching of at least one of the above sets and including the outermost and certain intermediate lines of said set, extending through the layer of padding and cover fabric, springs interposed between said top and bottom wall structures and having their end coils engaged

in said pockets, and a boxing strip secured to the peripheral edges of said top and bottom wall structures.

3. A mattress comprising rows of coiled springs, top and bottom wall fabrics each consisting of an inner fabric sheet having openings corresponding in number with the said springs, a second layer of fabric resting upon the first-mentioned layer, a layer of padding disposed upon the last-mentioned fabric, a cover fabric for the padding, and two sets of parallel lines of stitching extending relatively transversely of each other, certain of the lines of stitching of each set extending only through the two first-mentioned fabric layers and the remainder of said lines of stitching and including the outermost lines of stitching thereof extending through the said layers and the padding and cover-fabric, said respective sets of lines of stitching bordering substantially equal square areas and forming corresponding flat pockets between the first-mentioned fabric layers, the openings aforesaid constituting mouths for all of said pockets, said springs having their end coils engaged in said pockets, and a peripheral wall associated with said top and bottom wall structures.

4. A mattress comprising top and bottom walls having opposed face portions equipped with spring retaining means, springs interposed between said top and bottom walls and engaged with said spring retaining means, padding and ticking constituting the outer portions of said top and bottom walls and secured to the said opposed face portions by lines of stitching extending longitudinally and transversely, respectively, of said walls, some of said respective lines of stitching extending through and constituting parts of said spring retaining means, and a boxing strip secured along its top and bottom edges to the peripheral edges of said top and bottom walls.

5. As a subcombination in a mattress, a core spring assembly including a top wall structure consisting of two sheets of fabric secured together by sets of parallel stitch-chains extending substantially transversely of each other and bordering substantially equal rectangular areas, each of the latter being subdivided into a plurality of equal smaller substantially square areas, a layer of padding material disposed upon one of said sheets of fabric and secured thereto by stitch-chains alternated with the first-mentioned stitch-chains and passing entirely through said padding and said sheets of fabric, said second-named stitch-chains cooperating with the first-mentioned stitch-chains to form square, flat pockets between said sheets, there being an opening in the exposed fabric sheet for each of said pockets, and a spring for each of said pockets having an end coil engaged and confined therein.

6. As a subcombination in a mattress, a core spring assembly including a top wall structure comprising two sheets of fabric placed one upon the other, a layer of padding disposed upon one of said sheets, said sheets secured together by stitch-chains extending substantially transversely of each other and relatively arranged to define square areas, some of said stitch-chains extending only through said sheets and others thereof extending through said sheets and said layer of padding to thereby secure the latter to said sheets, there being an opening in each of said square areas of that sheet of fabric not covered by said padding, and springs each having an end coil passed through one of said openings and engaged between said fabric sheets.

LOUIS A. SUEKOFF.