March 5, 1940. M. MARSACK 2,192,234

MATTRESS

Filed Nov. 15, 1937 4 Sheets-Sheet 1

Fig. 1

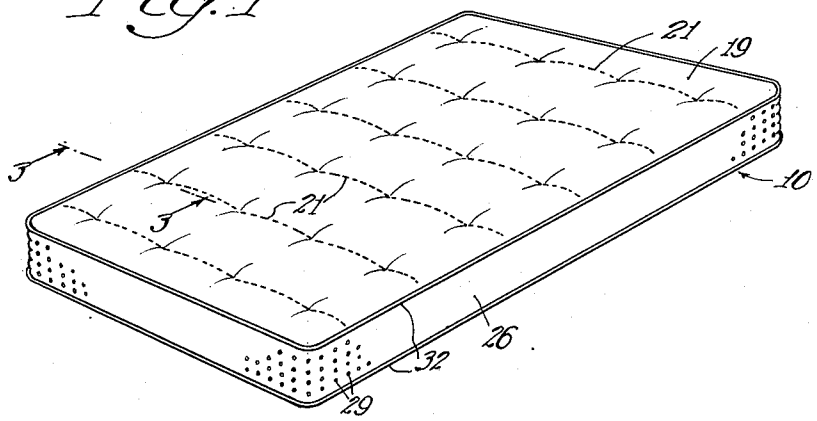
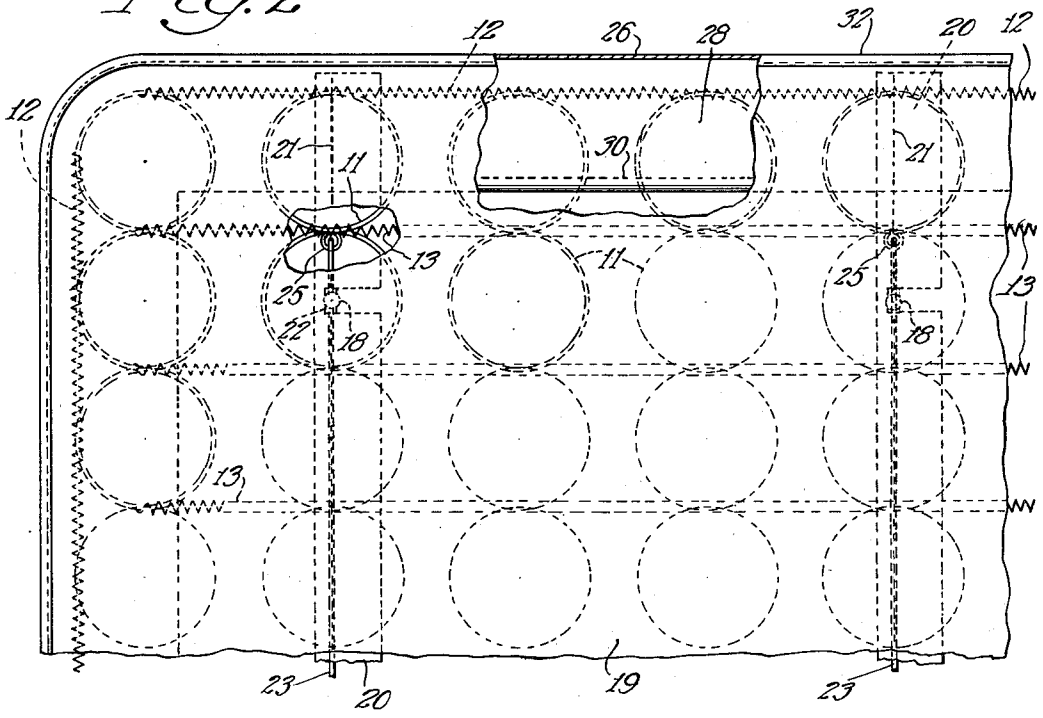



Fig. 2




Inventor:
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By: Still and Still

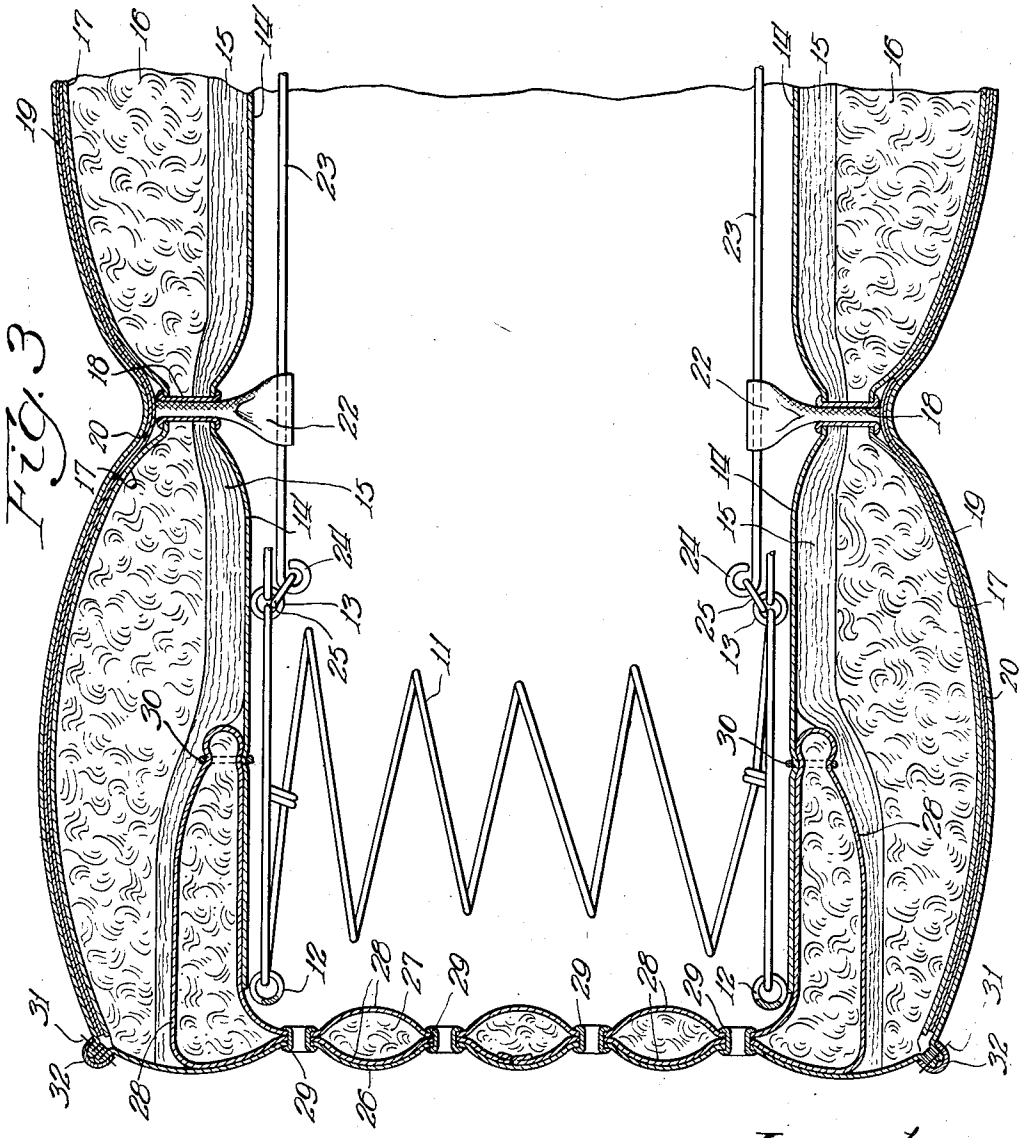
Witness:
V. Siljander

March 5, 1940. M. MARSACK 2,192,234

MATTRESS

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Fig. 3



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March 5, 1940. M. MARSACK 2,192,234

MATTRESS

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Fig. 4

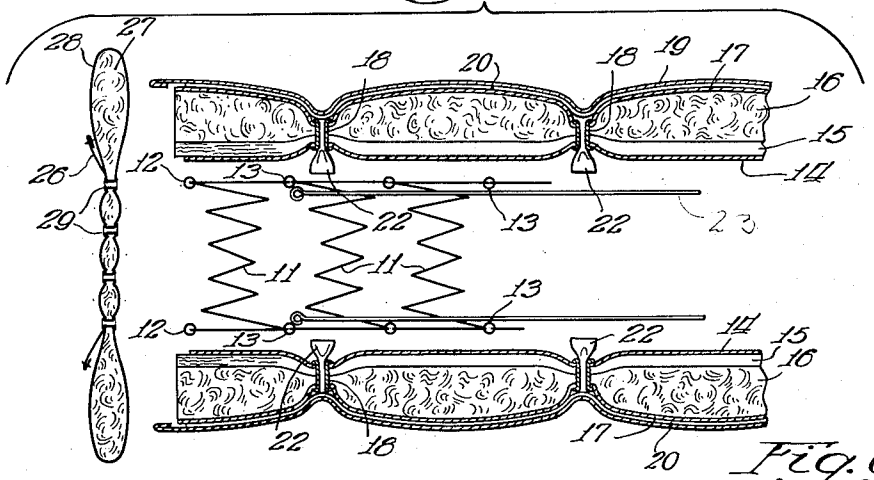



Fig. 6

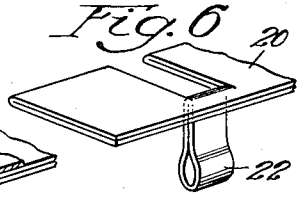



Fig. 5

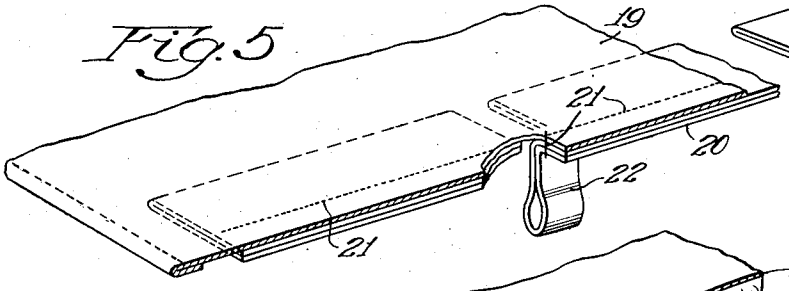



Fig. 7

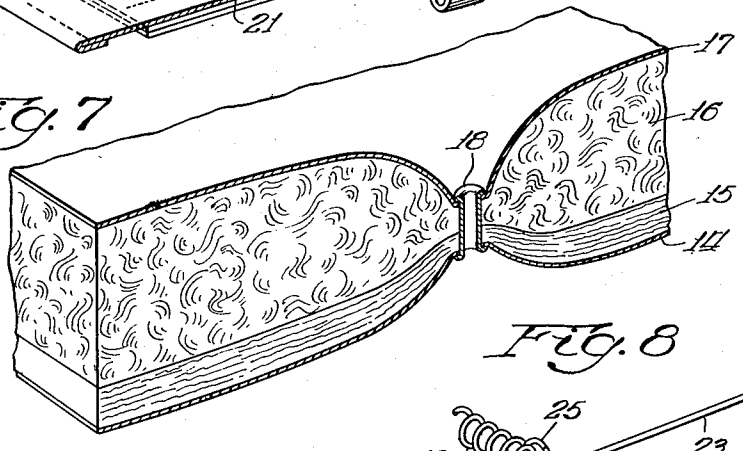
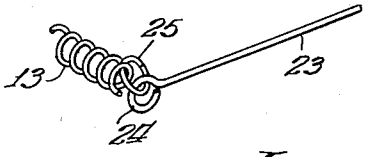



Fig. 8




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MATTRESS

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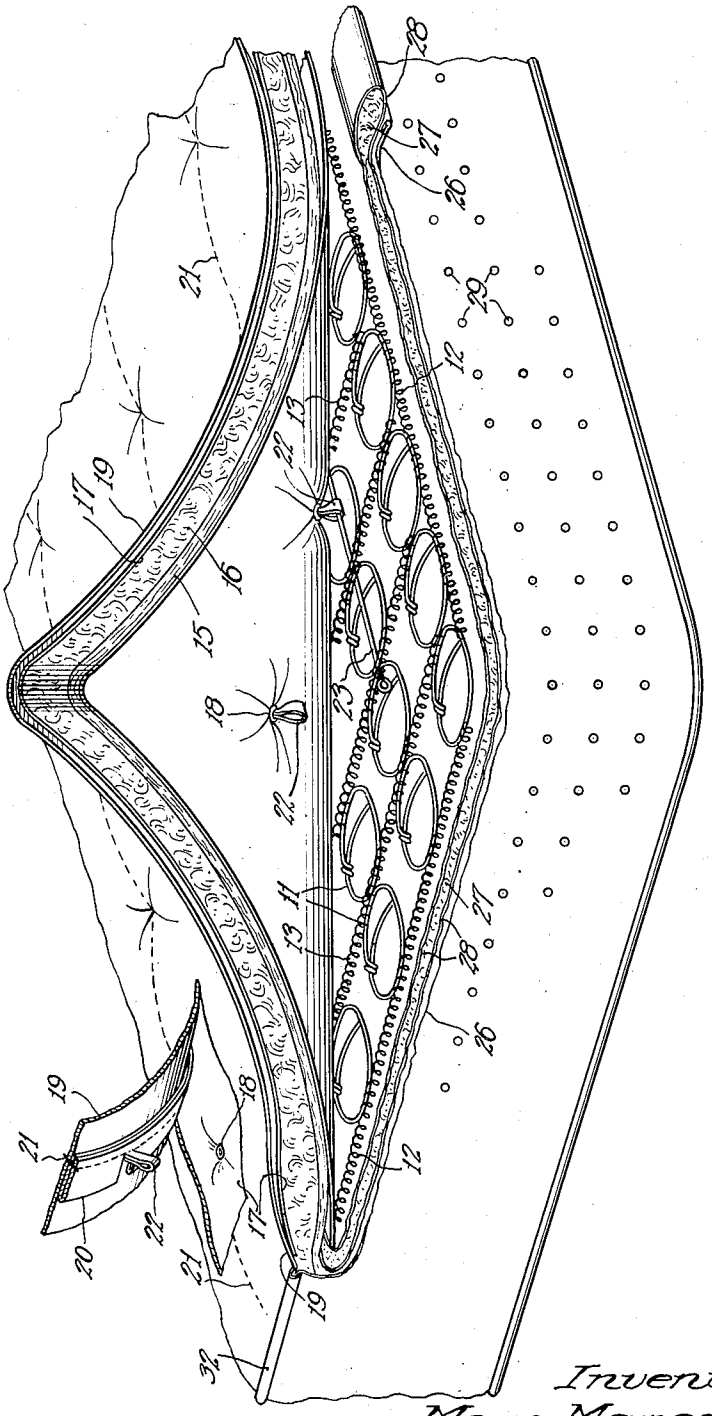


Fig. 9

Witness:
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Patented Mar. 5, 1940 2,192,234

# UNITED STATES PATENT OFFICE

2,192,234

## MATTRESS

Max Marsack, Milwaukee, Wis., assignor, by mesne assignments, to Marsack Patents Corporation, Milwaukee, Wis., a corporation of Delaware

Application November 15, 1937, Serial No. 174,680

4 Claims. (Cl. 5—351)

The invention relates to mattresses of the class comprising an inner spring construction enclosed by an edge boxing and by top and bottom cover sheets and filling material, and more particularly it relates to improved means for fastening the cover sheets and filling material together and to the edge boxing.

An object of the invention is the provision of an improved method of and means for connecting the cover sheets and filling material together to form pre-built pads and to prevent bunching of the filling material.

Another object of the invention is the provision of a novel pad adapted as a cover for mattresses, said pad comprising filling material interposed between and connected with fabric sheets by means producing a quilted effect and providing open spaces for the reception of concealed tufting members connected with an overlying fabric sheet.

A further object of the invention is the provision of improved tufting members and means for anchoring the same to prevent movement of the covering material of a mattress relative to the spring construction.

A further object of the invention is the provision of improvements in the construction and arrangement of the edge boxing relative to the marginal edges of the top and bottom covering material of a mattress, and novel means for fastening the edge boxing of the mattress to the covering material whereby the mattress is reinforced and strengthened adjacent its border to maintain verticality of the boxing and provide a trim and substantially square edge.

A still further object of the invention is the production of a mattress of the kind described which may be readily manufactured with a maximum of machine work and a minimum of hand labor, thereby reducing the manufacturing cost, speeding up production, and permitting an increased factory output without increasing manufacturing facilities.

Still another object of the invention is the production of a mattress in which the edge boxing and the top and bottom covering materials are respectively pre-built prior to assembling the mattress whereby hand work in the final construction or assembly of the mattress is substantially eliminated and such as is required is all concealed and consequently may be done without the care or nicety of detail required where the hand work is exposed and mattresses so constructed will be substantially uniform in appearance.

Many other objects and advantages of the construction and methods of assembly herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction arrangement, and combination of parts herein shown and described and more particularly pointed out in the claims.

Referring now to the drawings:

Fig. 1 is a perspective view of a mattress embodying the principles of the invention;

Fig. 2 is a plan and partial sectional view of a fragmentary portion of a mattress showing the details of the construction;

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 1 and drawn to a larger scale;

Fig. 4 is a sectional view of the boxing and of a portion of the top and bottom pads together with an elevational view of the spring construction positioned between the pads, all being shown in contiguous but disassembled relation;

Fig. 5 is a perspective view of a portion of a fabric cover sheet and a flexible strip embodying certain of the principles of the invention connected therewith;

Fig. 6 is a perspective view of a portion of the strip shown in Fig. 5;

Fig. 7 is a perspective view in section of a portion of one of the pads shown in Figs. 3 and 4;

Fig. 8 is a perspective view of one of a plurality of helicals connecting the coils of the spring construction and one of a plurality of rods connected with and reinforcing the coils, the rods also providing anchors for concealed tuftings extending through the top and bottom pads; and

Fig. 9 is a perspective view of one corner of a mattress embodying the principles of the invention, a portion of the top pad being shown as disconnected from the boxing and elevated to disclose two of the tufting members, one of said tufting members being disconnected and the other connected with a reinforcing rod.

Referring now more particularly to the drawings, the numeral 10 generally designates a completed mattress embodying the principles of the invention and comprising an inner spring construction consisting of a plurality of vertical coils 11 arranged in transversely and longitudinally extending rows as best shown in Figs. 2 and 9. The top and bottom ends of the border coils 11 are connected by marginal helicals 12 extending around the spring construction and are also connected by intermediate helicals 13 extending longitudinally of the mattress to connect each of the coils comprising a longitudinal row with the con-

tiguous coils comprising adjacent longitudinal rows. While the intermediate coils are illustrated as arranged in contiguity in the transverse rows, and in spaced apart relation in the longitudinal rows, they may, if desired, be spaced apart in the transverse rows and positioned in contiguity in the longitudinal rows with the connecting helicals 13 extending transversely to the mattress.

The top and the bottom body portions of the mattress are each shown as comprising a prebuilt pad consisting of a fabric lining sheet 14, a layer 15 of sisal or similar material contiguous to the lining sheet, a layer of padding or filling material 16, and a fabric sheet 17, all fastened together preferably by a plurality of eyelets 18 arranged in transverse rows and preferably also in longitudinal rows. The eyelets 18 connect the lining sheet and outer fabric sheet 17 and thereby compress the layers of sisal 15 and filling material 16 to provide depressed areas surrounding and converging toward the eyelets.

Fabric sheets 19, providing covers for the prebuilt pads, have fabric strips 20 extending across their inner face to provide concealed tufting members adapted to prevent shifting of the cover sheets and pads relative to one another or to the spring construction. The strips 20 are preferably folded along a median line and fastened to the cover sheets 19 by a line of stitches 21 extending through the strips adjacent their edges. The strips 20 are so positioned on the fabric sheets 19 that they respectively cover the transverse rows of eyelets 18 when the sheets are positioned on the pads. The folded edges of the strips 20 are partially severed at intervals along closely spaced lines to provide relatively narrow loops 22 forming tufting members having the same spacing as the underlying eyelets 18. The loops 22 provided by each strip 20 are tucked through the corresponding eyelets 18 with their inner folded ends aligned and adapted to receive an anchor rod 23 having its ends turned to form eyes or substantially closed loops 24. The rods 23 are positioned inside of and adjacent to the end portions of the vertical coils 11 with the ends of the rods fastened to adjacent helicals 13 by means of a metal tie or hog ring 25 as best shown in Figs. 3 and 8.

The loops 22 are preferably of such a length that insertion therethrough of the rods 23 may be accomplished only when the pads are positioned in contact with the spring construction as shown in Fig. 3 and with the loops drawn taut, in which position the rods are successively passed through the aligned loops comprising a row, and then fastened at one or both ends to the helicals 13 by rings 25 to prevent longitudinal movement of the rods.

The pull of the loops 22 on the rods 23 tends to maintain the ends of the coils 11 in alignment and to distribute concentrated loads over an area supported by a plurality of coils. The taut connection of the loops 22 with the cover sheets 19 maintains the sheets in contact with the eyelets 18 and in close fitting uniform contact with the sheets 17 of the pads to provide smooth billowing surfaces for the body of the mattress. The loops 22 fastened to the cover sheets 19 by lines of stitches 21 and to the rods 23 as described to provide concealed tuftings, also prevent shifting of the pads relative to the spring construction.

The pads having been anchored to the reinforcing rods 23 as described, the mattress is completed by enclosing its edges with a boxing strip. The edge boxing comprises an outer fabric sheet 26 of a width substantially equal to the depth of the completed mattress, a layer of filling material 27 having a width substantially in excess of the depth of the spring construction, and a fabric sheet 28 forming a casing for the filling material. The boxing materials are connected by any suitable means such as eyelets 29 to produce a quilted effect. Eyelets are preferred to stitches as connections for the boxing materials since they provide ventilators, and when arranged in rows as shown, they add to the ornateness of the finished mattress.

The edges of the filling material 27 encased by the sheet 28 are inturned and fastened to the lining sheets 15 by stitches 30 or by metal ties if preferred. As the stitching of the boxing to the lining sheets 14 proceeds, the adjoining portions of the pad are turned back and when the stitching is completed, the borders of the pads rest upon the lateral or extended edge portion of the boxing with the border coils of the spring construction tending to maintain the eyeletted portion of the boxing in taut vertical position. The marginal edges of the cover sheets 19 are connected with the adjacent edges of the outer boxing sheet 26 by lines of stitches 31 extending through the sheets and through a tape 32 folded to provide a finished edge.

A mattress embodying the described novel features including the separate cover sheets having concealed tuftings connected therewith, top and bottom cover pads, and an inner spring construction having rods connected therewith to reinforce the spring construction and provide anchorage for the top and bottom pads and covers, all substantially pre-built by machine work before assembly and constructed to require only a minimum of hand work, is assembled as follows:

The spring construction, having been prepared and consisting of vertical coils 11 connected with marginal helicals 12 and intermediate helicals 13, is positioned on a table or bench and a pad comprising an inner lining sheet 14, sisal 15, filling material 16, and a top sheet 17, is positioned thereon. The pads are adapted to be assembled and completely pre-built by the use of an eyeletting machine. The fabric cover sheet 19, having the strips 21 stitched to its inner face and each providing a plurality of loops 22, is positioned on the pad with the loops inserted through the eyelets 18. The cover sheet may be positioned on the pad either before or after the pad is placed on the spring construction. The reinforcing rods 23 are then successively inserted through the ends of the coils 11 and through the loops 22, the pad and cover sheet 19 being simultaneously pressed down to bring the open ends of the loops 22 into alignment with the rod. After insertion of the rods 23 through the rows of the loops 22, the ends 24 of the rods are connected to the adjacent helicals 13 by means of partially open rings 25. The rings 25 are then closed by forcing the ends together, using pliers or any suitable instrument to close the rings.

The spring construction, having the pad and cover sheet 19 fastened thereto as described is turned over and another pad and cover sheet 19 are similarly fastened to the other side. The mattress is then completed by enclosing the edge of the spring construction with a continuous boxing strip of suitable length pre-built of materials arranged and assembled as above described. The top edge of the boxing other than the outer fabric sheet 26 is inturned and tucked between

the adjacent lining sheet 14 and sisal 15 and fastened all around by stitches 30, the adjacent rows of eyelets 18 and inserted loops 22 being at a sufficient distance from the edge of the pad to permit of folding it back to permit stitching the boxing to the lining sheet 14, as shown. The adjacent edges of the cover sheet 19 and the boxing sheet 26 are then connected by stitches 31 extending through the edges of the sheets and the tape 32, the stitching being preferably done by a machine to form a finished seam. The mattress is then turned over and the adjacent edge of the boxing filling material 27 and casing sheet 28 are fastened to the contiguous lining sheet 14 by stitches 30 and the margins of the cover sheet 19 to the boxing sheet 26 in the same manner as described for the other side of the mattress. The connection of the boxing with the lining sheets 14 may be completed on both sides if desired before connecting the cover sheets 19 with the boxing sheet 26.

Thus it will be seen that the invention provides improvements in the top and bottom pads and cover sheets of a mattress and improved means for connecting the cover sheets with the pads to provide anchorage for the pads and to reinforce the spring construction, and edge boxing to distribute loads and prevent distortion of the body and of the boxing. A mattress providing the described improvements is adapted to be readily manufactured with a maximum of machine work and a minimum of hand labor whereby the cost of the mattress is substantially reduced and an increased factory output is obtained without increasing the manufacturing facilities.

The above construction also provides a tufted mattress in which the tufting means is attached to the spring construction rather than extending from one face of the mattress to the other, thus allowing full spring action in contrast to the old method of placing the spring under compression.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

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

1. A spring assembly covering of the kind described and in combination, comprising a cover pad made up of a plurality of plies of material secured together by a plurality of eyelets extending through the pad, a cover overlying the pad, a double fabric strip extending inwardly from and secured to said cover, said strip overlying said eyelets and having a pair of cuts therein adjacent each eyelet, the tie formed by the material between a respective pair of cuts extending through said eyelets, and means connecting said ties with the spring construction.

2. A spring assembly covering of the kind described and in combination, comprising a cover pad made up of a plurality of plies of material secured together by a plurality of eyelets arranged in rows and extending through the pad, a cover sheet for the pad having a plurality of fabric strips connected to its inner face and respectively overlying said rows of eyelets, a plurality of rods connected with the spring construction in contiguity to said rows of eyelets, said fabric strips each having a plurality of pairs of cuts therein, the material between respective cuts of each pair providing ties, the number and spacing of said ties corresponding to the number and spacing of the eyelets in a contiguous row, said ties extending through said eyelets with their inner ends looped about the rods to maintain said cover sheet in taut close fitting contact with the pad.

3. In a mattress of the kind described, including an inner spring construction and a fabric cover therefor, a pad positioned between the cover and the spring construction, said pad consisting of inner and outer fabric sheets and an interposed layer of filling material connected by a plurality of eyelets arranged in rows, a plurality of strips of flexible material respectively extending along said rows of eyelets and fastened to the cover sheet, said strips each having a plurality of pairs of cuts therein, the material between the respective cuts of each pair providing a plurality of ties projecting through the eyelets comprising a row, and a plurality of rods each engaged by a row of said ties, and engageable with the spring construction intermediate said ties.

4. The method of constructing a mattress, which consists in providing a resilient core, prebuilding a cover pad made up of a plurality of plies of material secured together by a plurality of eyelets extending through the pad, providing a cover sheet for the pad having ties connected with its inner face in spaced apart position corresponding to the spacing of the eyelets and inserting the ties through said eyelets, then connecting the ties with the spring construction in a manner to draw the cover sheet to a close fit with the pad, providing a boxing and enclosing the resilient core therewith, then securing the boxing to the marginal edges of the cover sheet and subsequently securing the lower edge of the boxing.

MAX MARSACK.