Feb. 26, 1952 W. F. CASTER 2,587,112

BOX SPRING HANDLE

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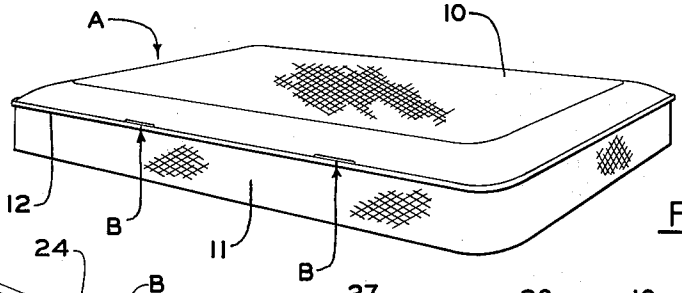


Fig. 1

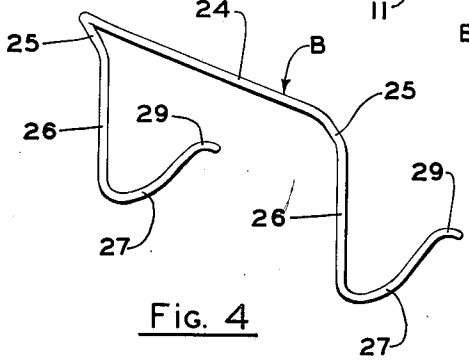


Fig. 4

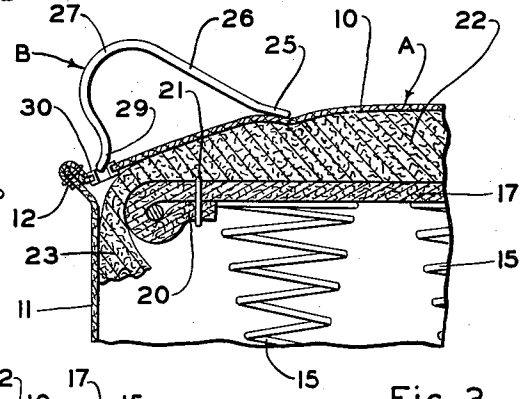


Fig. 3

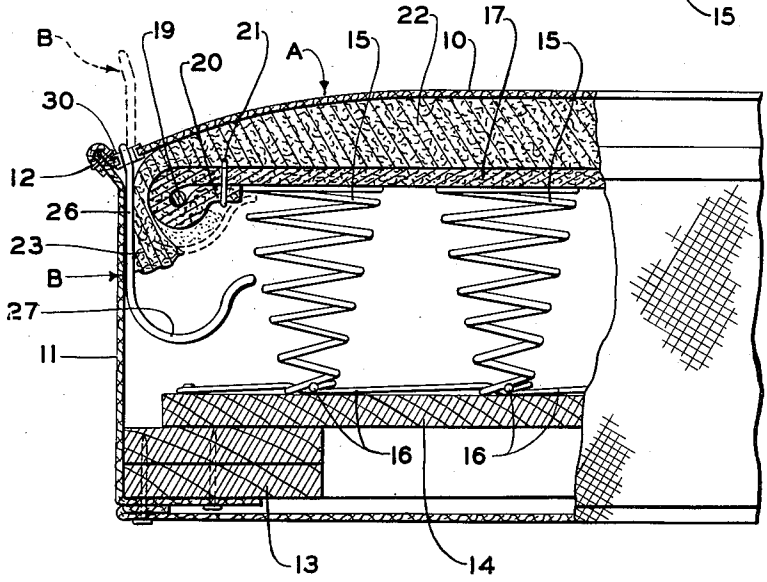


Fig. 2

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BOX SPRING HANDLE

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7 Claims. (Cl. 5—345)

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My invention relates to an improvement in box spring handle wherein it is desired to provide a simple and effective handle for use on box springs for lifting and handling the same.

Various types of box spring handles have been previously constructed. Many of these handles comprise loops of fabric or cord secured in some manner to the frame at the bottom of the box spring. Such handles usually extend over the outer surface of the box spring side wall to a point intermediate the top and bottom edges thereof. These handles usually are not extremely strong in construction and sometimes pull off or become otherwise disengaged from the box spring. Furthermore, if the handles extend but slightly over the frame in which the box spring is supported, difficulty is sometimes experienced in grasping the handles.

A feature of the present invention lies in the provision of a box spring handle which engages the spring frame at the top of the spring and lifts the box spring from this point. As a result the handles are always easily accessible for use and can not easily become disengaged from the box spring structure.

A feature of the present invention lies in the provision of a handle having a hand engaging portion which overlies a portion of the upper surface of the box spring covering near the edge thereof and which also includes a pair of spaced hook members designed to hook beneath the spring frame at the upper extremity of the spring. The handles are formed of heavy wire rod and are capable of withstanding any strain which they are called upon to support. As a result the handle can not be accidentally pulled out of the box spring in use.

An added feature of the present invention lies in the provision of a box spring handle which is retractable into the spring structure. The handles extend through the upper surface of the box spring adjacent the seam connecting the upper box spring covering to the side wall. The hook ends of the handle extend into the spring structure in parallel relation. The weight of the handle normally causes the handle to drop until the hand engaging portion lies flush against the upper surface of the mattress covering adjacent the side wall seam. By grasping this hand engaging portion and pulling the same upwardly, the depending hook portions slide upwardly until the hook ends engage beneath the spring frame. Thus the handles are normally out of operative position, but are drawn into frame engaging position as they are raised.

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An added feature of the present invention lies in the simplicity with which the box spring handles may be secured in place. In forming the box spring, two spaced grommets or eyelets are provided in the upper covering adjacent the side wall seam where each handle is to be located. After the box spring has been completed, the handles may be secured in place by threading the hook ends thereof through the eyelets or grommets and slightly distorting the box spring padding and covering. Once the handles are in place they are held by gravity in inoperative position. When raised the hook ends engage beneath the upper frame of the box spring so that the lift upon the handle is transmitted directly to this spring frame. Without distorting the padding and covering the handles can not be removed from the box spring, thereby preventing danger of accidental disengagement.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of my specification:

Figure 1 is a perspective view of a box spring showing a pair of spaced handles on one edge thereof.

Figure 2 is an elevation view partly in section through a box spring showing the relationship of the handle with the inner structure of the box spring.

Figure 3 is a sectional view similar to a portion of Figure 2 and showing the position of the handles during insertion thereof.

Figure 4 is a perspective view of one of the handles removed from the box spring.

Figure 1 illustrates in perspective a box spring A having a top covering member 10 and an encircling side wall covering 11. The side wall 11 is connected to the top covering 10 along an edge seam 12.

A pair of handles B are shown extending through the top covering member 10 adjacent the seam 12. These handles B are preferably provided in pairs, one pair of handles being located in spaced relation along each of the two opposite longitudinal edges of the box spring. The handles are ordinarily located at a predetermined space from the longitudinal center of the box spring so that the spring may be easily lifted and at the same time will not interfere with the coils of the spring itself.

As best illustrated in Figures 2 and 3 of the drawings the box spring A includes a generally rectangular lower frame 13 having a series of

spaced transversely extending frame members 14 extending between opposite sides thereof. Each of the frame members 14 is designed to support a series of spaced coil springs 15. The coil springs 15 may be of any desired shape or size but are ordinarily tapered springs having their largest diameter end uppermost and their smaller diameter end against the cross members 14. Suitable means such as ties 16 or other suitable means are provided for holding the various springs in proper relation.

A covering pad of sisal 17 extends over the upper ends of the springs 15. This pad of sisal is folded at its longitudinal edges to extend about the top rectangular spring frame 19 to which the upper ends of the springs 15 are connected. The rectangular frame 19 extends about the periphery of the spring structure and acts as a means of connecting the various springs and holding them in proper relation. The edge of the sisal pad 17 is wrapped about the frame member 19 to provide a folded edge 20 underlying a portion of the sisal pad inwardly of the spring frame 19. Staples 21 or other suitable fastening means extend through the folded edge 20 of the sisal pad and through the body of the pad to hold the edge folded about the spring frame.

A padding of cotton or the like is usually provided over the sisal pad 17. This padding 22 also acts as a covering for the springs and as a cushion between the top covering of the box spring and the coil springs enclosed therein. This cotton pad 22 covers the sisal pad 17 to a considerable thickness and usually extends over the folded edge of the sisal to hang along the box spring side wall 11 at the upper extremity thereof. This edge of the pad is indicated by the numeral 23.

The handles B include a hand engaging portion 24 designed to overlie a portion of the box spring top covering 10 and is connected by bent or off-set parallel portions 25 to hook shanks 26. Rounded hook portions 27 are provided at the lower ends of the shanks 26 and these founded portions terminate in outwardly directed ends 29.

In the manufacturing of the box spring A, grommets or eyelets 30 are provided through the top spring covering 10 near the seam 12. These eyelets 30 are arranged in pairs and are spaced apart a distance proper to accommodate the hook shank of the handle B. Unlike many types of box spring handles the handles need not be attached until the box spring is otherwise completed.

The handles B are added to the box spring in the manner indicated in Figure 3 of the drawings. The outwardly directed ends 29 of the hook portions 27 are inserted into the spaced grommets 30 while the hand engaging portion 24 is pressed against the top covering 10. Insertion of these ends 29 into the grommets tends to flex the top covering so that the openings in the grommets follow the direction of the portion of the hook shanks engaged therein. As the ends 29 are forced downwardly, these ends pass between the pad edge 23 and the side wall 11 as will be obvious from Figure 3.

As the hook shanks are inserted into the grommets 30 the rounded portion of these shanks enters the grommets and the lower ends of these shanks turn inwardly toward the interior of the box spring. When the rounded hook portions 27 are entirely enclosed within the box spring, the straight shank portions 26 are substantially vertical. The handles may then be dropped into

place, the weight thereof dropping the handles until the hand engaging portions 24 thereof rest upon the upper surface of the box spring housing.

The handles B normally remain in the lowered position illustrated in full lines in Figure 2 of the drawings. When it is desired to lift the mattress, the hand engaging portion 24 is engaged and the handle lifted. The downwardly hanging edge 23 of the padding 22 is curved inwardly by the hook portions 27 until the hook portions engage beneath the folded edge 20 of the sisal pad encircling the top spring frame 19. Further upward movement of the handle is cushioned by the padding edge 23 and the sisal edge 20, but will act through this padding to raise the spring frame 19 and consequently the entire box spring.

I have found that my handles B are difficult to remove when once in place, thus obviating the danger of accidental disengagement. By making the wire rod of which the handle is formed of proper thickness and size the hook ends of the handle will support the weight of the box spring. The hook portions 27 are preferably of sufficiently great radius to fit over the padding encircling the spring frame and to provide a bearing of considerable size which will not have the tendency to dig into this padding and unduly disturb the same.

In accordance with the patent statutes, I have described the principles of construction and operation of my box spring handles, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A box spring handle for use in conjunction with a box spring having a substantially rectangular frame and a spring structure enclosed thereby, and a covering extending over the top and side wall thereof, the handle comprising a shank designed to overlie a portion of the covering, and a pair of hook ends on the shank, said hook ends being normally spaced from, and engageable with, the spring frame.

2. A box spring handle for a spring structure including a generally rectangular spring frame and springs attached thereto, and a covering extending over the top and side wall of said frame and spring structure, the handle including a hand grip portion designed to overlie a portion of the exterior surface of the covering, a pair of generally parallel hook shanks secured to opposite ends of said hand grip portion, and means carried by the covering embracing said hook shanks for guiding the same, the hook shanks being normally spaced from the frame and designed to hook against said frame when pull is exerted against said handle.

3. A box spring handle for a box spring having a spring structure, a spring frame encircling this structure, a top covering, a side wall covering connected to the top covering along a marginal seam, and a handle for the box spring, the handle including a portion designed to overlie a portion of the box spring covering adjacent said seam, said handle including a center hand grip portion and generally parallel hook ends on opposite ends of said hand grip portion, said hook ends being normally spaced from the rectangular spring frame and engageable there-

with upon movement of the handle to transmit pull thereto.

4. The structure described in claim 3 in which the hook ends of the handle extend through the top covering of the box spring.

5. A box spring handle for a box spring having a substantially rectangular spring frame and a box spring structure enclosed thereby, and a top and side wall covering for said box spring connected along an edge seam, and a pair of spaced grommets in said covering adjacent said seam, the handle including a hand grip portion and substantially parallel hook ends thereon at opposite ends thereof, the hand grip portion of said handle normally resting upon the exterior surface of the covering between said grommets when the handle is not in use, the hook ends on said handle being releasably engageable with the spring frame to transmit a pulling force thereto.

6. A box spring handle for a box spring having a substantially rectangular spring frame and a box spring structure enclosed thereby, and a top and side wall covering for said box spring connected along an edge seam, and a pair of spaced grommets in said covering adjacent said seam, the handle including a hand grip portion and substantially parallel hook ends thereon at opposite ends thereof, the hand grip portion of said handle normally resting upon the exterior surface of the covering between said grommets when the handle is not in use and supporting the hook ends beneath the spring frame, the hook ends of the handle being normally spaced from the spring frame when the hand grip portion of the handle is moved away from the box spring covering.

7. A box spring handle for a box spring having a substantially rectangular spring frame and a box spring structure enclosed thereby, and a top and side wall covering for said box spring connected along an edge seam, and a pair of spaced grommets in the top covering adjacent said seam, the handle including a hand grip portion and substantially parallel hook ends thereon at opposite ends thereof, the hand grip portion of said handle normally resting upon the exterior surface of the covering between said grommets when the handle is not in use and supporting the hook ends beneath the spring frame, the hook ends on said handle engaging the spring frame to transmit a pulling force thereto.

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