April 18, 1939. M. BECHIK 2,154,557

MATTRESS HOLDER FOR BEDSPRINGS

Filed Feb. 27, 1937 2 Sheets-Sheet 1

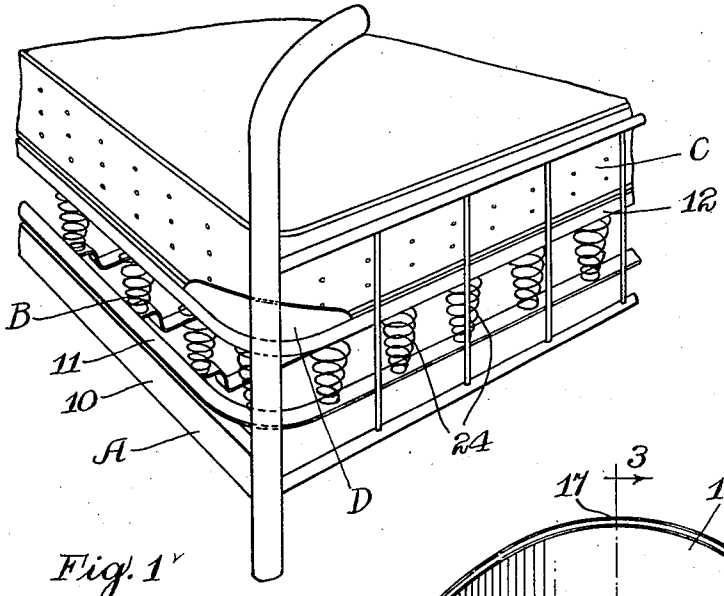


Fig. 1

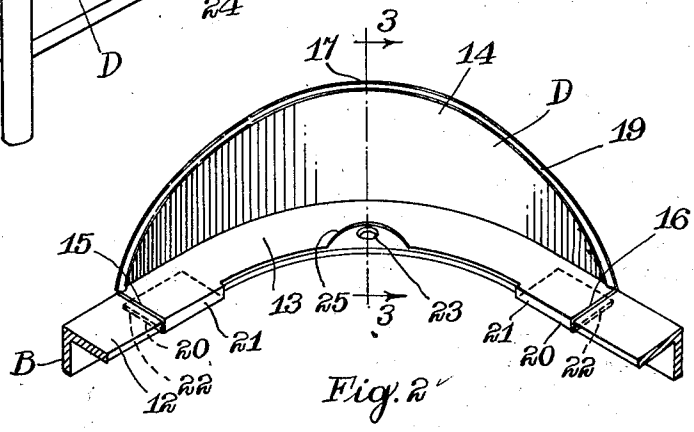


Fig. 2

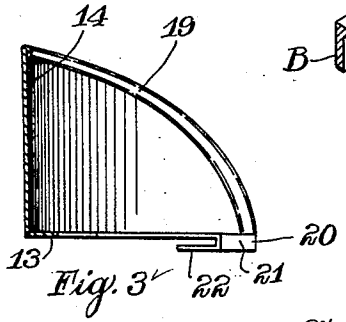


Fig. 3

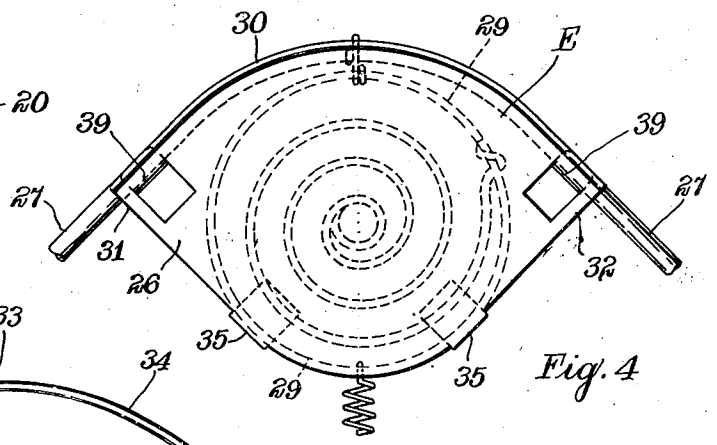


Fig. 4

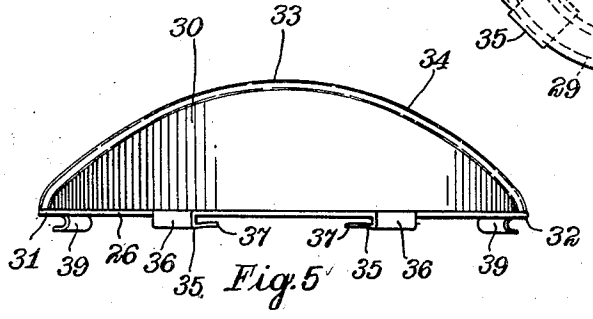


Fig. 5

Inventor
Michael Bechik
By Howard Fischer
Attorney

April 18, 1939. M. BECHIK 2,154,557

MATTRESS HOLDER FOR BEDSPRINGS

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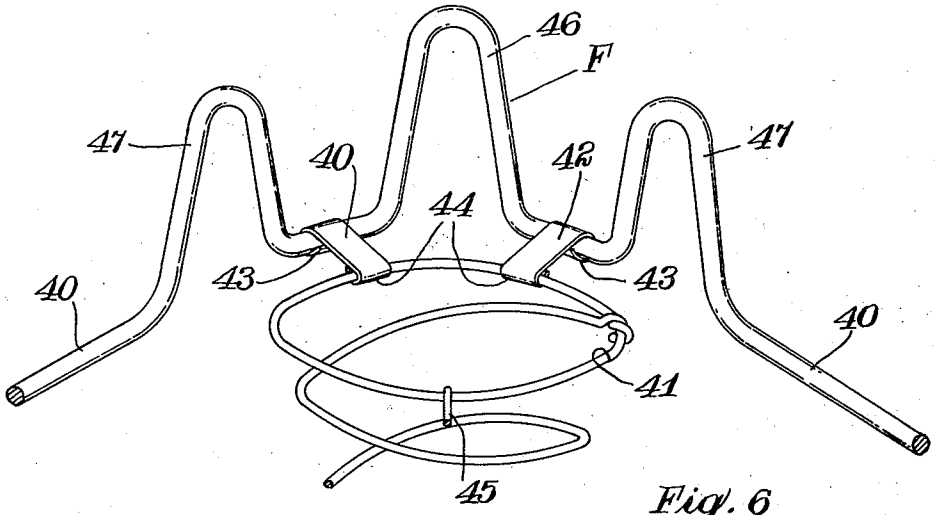


Fig. 6

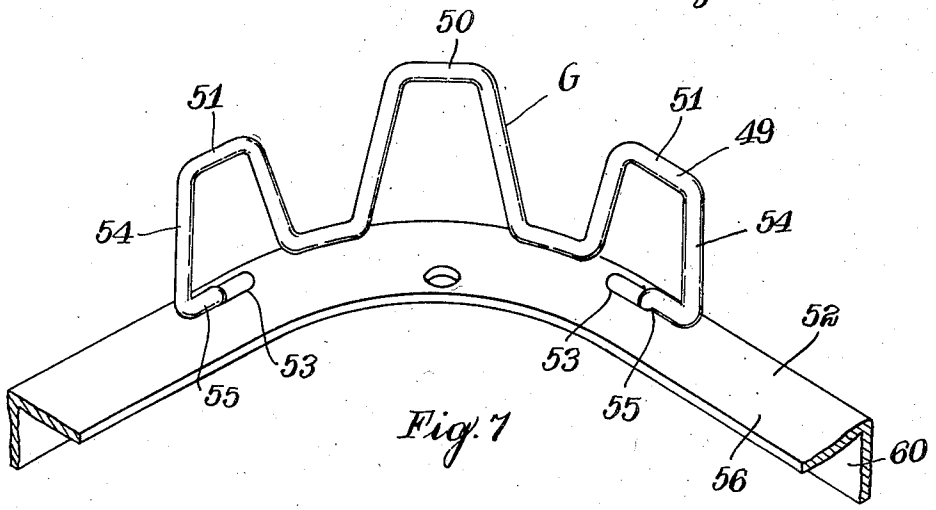


Fig. 7

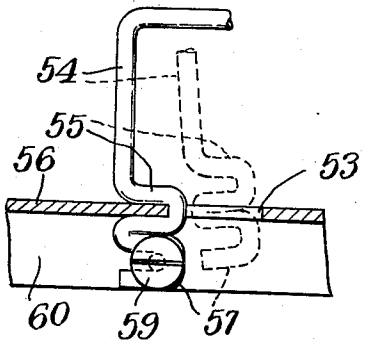


Fig. 8

Inventor
Michael Bechik
By
Attorney

Patented Apr. 18, 1939

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MATTRESS HOLDER FOR BEDSPRINGS

Michael Bechik, St. Paul, Minn.

Application February 27, 1937, Serial No. 128,042

4 Claims. (Cl. 5—322)

My invention relates to an improvement in mattress holder for bed springs or the like. This device is designed particularly for the purpose of holding a mattress in proper position upon the surface of a bed spring.

In present day constructions, it is common practice to provide a bed having a frame construction to support a removable spring and to rest a mattress directly on the surface of this bed spring. As the bed spring is ordinarily somewhat smaller in dimensions than the frame of the bed into which the spring is placed so that the upper surface of the spring may freely flex without contacting the frame of the bed and as the mattress is usually approximately the size of the spring to prevent sagging of the edges of the mattress, the mattress is free to slide toward either end of the bed or to a considerable extent to either side thereof.

This relative movement between the spring and the mattress has a tendency to wear out the surface of the mattress and also to cause the mattress to hang over the edge of the spring on one side or end. When the mattress extends beyond an edge of the spring, the edge of the spring engages into the body of the mattress causing considerable wear on the mattress.

The present invention is designed to hold the mattress securely in place by engaging the edges of the mattress adjacent the corners of the same, preventing the relative movement between the mattress and the spring. This construction avoids the necessity of any undesirable retaining edge on the spring which might accomplish a similar result but which would likely be uncomfortable to a person resting on the edge of the mattress.

It is a feature of my invention to provide a mattress holding means which may, if desired, be attached to a spring already in use so that any spring may be equipped with my detachable means for holding the mattress. It is accordingly possible for any person who has experienced difficulty in holding a mattress in proper position upon a bed spring, to equip the spring with my mattress holding means and to thus avoid future difficulty.

It is a further feature of my device to provide a means adaptable to both the type of spring known as the angle edge type and to the spring known as the wire edge type of spring. The angle edge spring is provided with an angle iron member extending peripherally about the upper surface of the spring, while the wire edge type is provided with a surrounding edge of heavy wire material.

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 portion of a bed illustrating my mattress holding device in position thereupon.

Figure 2 is a perspective view of a corner of an angle edge type of spring disclosing my mattress holder in position thereupon.

Figure 3 is a cross-sectional view on the line 3—3 of Figure 2 showing my mattress holder removed from the spring.

Figure 4 is a top plan view of a slightly different form of mattress holding device particularly designed for use with wire edge type springs.

Figure 5 is a front elevation view of the mattress holding means illustrated in Figure 4.

Figure 6 is a perspective view of a wire edge type of mattress showing the mattress holding means formed directly in the edge of the spring.

Figure 7 is a wire mattress holding means adapted to be attached to an angle edge type of spring.

Figure 8 is a sectional view through the angle edge of a spring disclosing the manner in which the mattress holding means illustrated in Figure 7 is attached thereto.

The bed A illustrated in Figure 1 of the drawings, includes a pair of side rails 10 adapted to support the lower edge 11 of a spring B. The spring B is provided with an upper surface bounded by an angle edge 12 and is used to support a mattress C. A mattress holding means D is secured at each corner of the substantially rectangular upper angle edge 12 of the spring B, and serves to hold the mattress C from slipping upon the surface of the spring B.

The mattress holding means D is illustrated in Figures 2 and 3 of the drawings. This device comprises a flange 13 which is shaped to conform with the surface of a corner of the angle edge 12 of the spring B. The angle edges 12 are ordinarily rounded at the corners somewhat, as illustrated in Figures 1 and 2 of the drawings. Accordingly the flange 13 is similarly rounded or arcuated to follow the contour of the edge 12.

Extending vertically from the outer edge of the flange 13 and formed integrally with the flange 13, I provide an upstanding plate or flange 14. The plate 14 is, of course, rounded to conform with the outer edge of the flange 13, and extends upwardly a variable height designed to avoid corners which might contact and injure the

side walls of the mattress C. As illustrated in Figure 2 of the drawings, the flange 14 is relatively low adjacent the ends 15 and 16 of the holder D, and curve gradually upwardly to the center 17 of the plate 14. In this way, the entire upper edge of the plate or flange 14 is gradually rounded and presents no sharp edges which might engage and injure the walls of the mattress C.

Along the upper edge of the plate or flange 14, I provide a bead 19 which provides the holder D with a rounded upper edge, thereby permitting the mattress wall to flex or to move to some extent adjacent the flange 14 without subsequent injury to the mattress.

Means are provided for securing the holder D to the rail edge 12 of the spring B. This means in the construction of Figure 2 comprises a pair of clips 20 which are formed by bending a short section of the inner edge of the flange 13 downwardly at 21 and then rearwardly parallel to the flange 13. The parallel portions 22 of the clips 20 hold the holder D from upward vertical movement with respect to the edge 12 of the spring B, and the vertical portions 21 of the clips 20 limit the outward movement of the holder D upon the spring B. When the holder D is in place, it is obvious that it can be removed only by sliding the entire holder inwardly toward the center of the spring B. As the mattress C normally engages against the flange 14 of the holder D, such inward movement is not possible when the mattress C is in place upon the spring.

As will be clearly understood by those skilled in the art, the angle edge 12 is provided with apertures 23 formed at spaced points in the angle edge 12 to permit ties of one type or another to connect the edge 12 with the coil springs 24 of the mattress B. Notches 25 are formed in the flange 13 adjacent the apertures 23 to permit the flange 13 to rest closely adjacent the angle edge 12 without interference with any of such ties.

In Figures 4 and 5 of the drawings, I have illustrated a type of holder similar to that illustrated in Figures 1, 2 and 3, but designed for use upon the wire edge type of spring. The holder E illustrated in Figures 4 and 5 comprises a plate 26 designed to overlie the wire edge 27 of the spring and the adjacent coil spring 29. The plate 26 extends inwardly from the edge 27 a distance sufficient to provide a secure bearing on the top surface of the spring and is shaped to conform with the corner described by the wire edge 27. As the edge 27 is ordinarily rounded at the corners, the plate 26 is usually similarly rounded to conform therewith. Attached to the outer edge of the plate 26, I provide an upstanding flange or plate 30 which is rounded as previously described in connection with the holder D. The flange 30 is usually relatively low at the edges 31 and 32 of the plate 26, and increases to a maximum height at the center point 33 of the same. The flange or plate 30 is provided with a rolled edge 34 which prevents damage to the mattress due to relative movement between these edges.

Clips 35 are provided on the edge of the plate 26 which are designed to enclose the upper loop of the spiral spring 29. These clips 35 extend downwardly at 36 and are then bent inwardly to overlie the plate 26 and be positioned substantially parallel thereto as indicated at 37. The top loop of the spiral spring 29 extends between the portion 37 of the clips 35 and the plate 26, and the outward movement of the plate 26 is limited by the downwardly extending edges 36 of the clips 35.

In order to properly engage the wire edge 27 of the spring, I provide clips 39 which are preferably punched out of the material forming the plate 26 and are bent downwardly to extend beneath the wire edge 27. The clips 39 engage about the edge 27 and hold the plate 26 from outward movement. As the mattress overlies the plate 26 and engages against the inner surface of the flange or plate 30, it may be seen that inward movement of the plate 26 is prevented by the mattress itself.

In Figure 6 of the drawings, I disclose a corner of a wire edge type of spring having the mattress holding means formed integrally as a part of the same. In this modification the spring is provided with a wire edge 40 to which the various spiral springs 41 forming the body of the spring are attached. Figure 6 shows a single spiral spring 41 which is connected by strips 42 to the wire edge 40. The strips 42 are looped at 43 about the wire edge 40 and are also looped about the upper coil of the spiral spring 41 as shown at 44. The spring 41 is in this way flexibly secured to the edge 40 and is also connected by means 45 which may be in the form of a helical spring to various other spiral springs such as 41 forming the body of the mattress.

The edge 40 is provided at the extreme corner, with a large loop 46 formed directly in the edge 40, and is also formed with a series of smaller upwardly extending loops or humps 47 extending upwardly to some extent above the upper surface of the spring. The loops or humps 46 and 47 engage the corner of the mattress to hold the mattress in proper position upon the spring. As will be clearly understood, each corner of the rectangular spring is provided with a holding means F as shown in Figure 6 and described above, to prevent the mattress from sliding in any direction upon the upper surface of the spring. It will be clearly understood that one of the humps 47 engages the side wall of the mattress or engages the rounded corner of mattress adjacent the side wall thereof, while the hump 47 on the opposite side of the center loop 46 engages the end wall of the mattress or engages the rounded corner of the mattress adjacent the end wall. Accordingly this type of mattress holding means F as well as previously described types of construction, engages two adjacent side walls of the mattress at each corner of the same, thereby effectively preventing movement of the mattress in any direction.

In Figures 7 and 8, I have disclosed a holder G which is particularly designed for use in connection with angle edge types of springs. This holder G comprises a length of heavy wire 49 or the like, which is bent to form a central hump or loop 50, and a series of smaller humps or loops 51 on either side thereof. The wire 49 rests upon the surface of the angle edge 52 of the spring and extends through slots 53 in the upper edge of the angle edge 52.

I disclose a means of securing the wire 49 to the angle edge 52 of the spring, which enables the holder to be supported by the spring under spring tension created by the resiliency of the material forming the wire 49. The holder G includes a pair of substantially vertically extending end portions 54 bent downwardly from the outer extremities of the loop 51. At the bottom extremity of the vertical members 54, I provide a U-shaped

loop 55 having the closed end thereof toward the corner of the spring. This loop 55 engages the horizontal flange 56 of the angle edge 52, thereby enclosing a portion of this flange 56 adjacent each slot 53. A second U-shaped flange 57 is formed in the wire 49 directly adjacent the loop 55, and a bolt 59 extends within the loop 57 and through the vetically extending flange 60 of the angle edge 52. The bolt 59 clamps the lower extremity of the wire 49 to the angle edge 52 and the spring tension of the wire 49 also acts to hold the loop 55 in engagement with the flange 56. When it is desired to remove the holder G from the spring, it is only necessary to loosen the bolt 59 at either end of the holder G, and to flex the vertically extending portion 54 toward the corner of the mattress so that the loop 55 is disengaged from the flange 56. The wire 49 may then be removed through the slot 53 in the flange 52.

My construction is extremely suitable for supporting mattresses upon springs in such a way that most of the relative movement between the mattress and the spring is avoided. It may, therefore, be seen that my device is particularly of use for supporting mattress such as are used in sectional beds in hospitals or the like, where some means is necessary to hold the mattress in position when a portion of the bed is raised.

It may be seen that my holder not only holds the mattress in place, but also holds the sheets and perhaps other coverings of the bed in proper position and in engagement with the mattress. It has, therefore, been found that with my mattress holding means in position upon a spring, the coverings of the bed will not pull out or off from the bed with ease.

In accordance with the patent statutes, I have described the principles of construction of my mattress holder, and while I have endeavored to disclose the best embodiments thereof I desire to have it understood that these modifications are only illustrative of a way in which my invention may be carried out and 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 mattress holder for bed springs in combination with a rectangular bed spring having vertical coil springs therein, comprising an upwardly extending plate adapted to engage the edge of a mattress, a second plate rigidly connected to said first plate and overlying one of said vertical springs and secured thereto, and means for securing said second mentioned plate to two adjacent edges of the bed spring.

2. A mattress holder in combination with a rectangular bed spring having a marginal rim, comprising an angle member substantially flush with the outer surface of said rim adapted to engage the side wall of a mattress adjacent the corners thereof, and hook means for securing said holder over the inner edge of said rim adjacent each corner of the spring.

3. A holder for a mattress in combination with a bed spring having a peripheral rim, comprising means engageable with the side wall on two adjacent edges of a mattress, means engaging the inner edge of two adjacent sides of said rim securing said mattress engaging means to the spring, and means connecting said edge engaging means and said mattress engaging means overlying the upper surface of said rim to position said mattress engaging means adjacent the outer rim edge.

4. A mattress holder in combination with a bed spring having a peripheral rim and a series of vertical coils, said holder comprising a plate extending upwardly substantially flush with said mattress rim to engage two adjacent edges of a mattress, and a plate secured to said upwardly extending plate, said last named plate overlying said rim and one of said vertical coils, and means securing said plate to said one coil.

MICHAEL BECHIK.