Sept. 3, 1929. F. KUSTERLE ET AL 1,726,707

ADJUSTABLE ARM SUPPORT FOR BEDSPRINGS

Filed Oct. 24, 1927

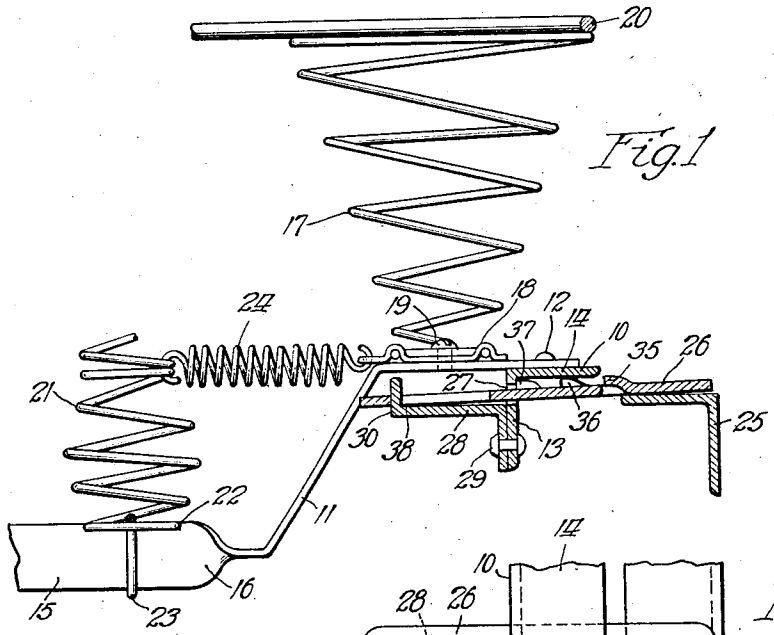


Fig. 1

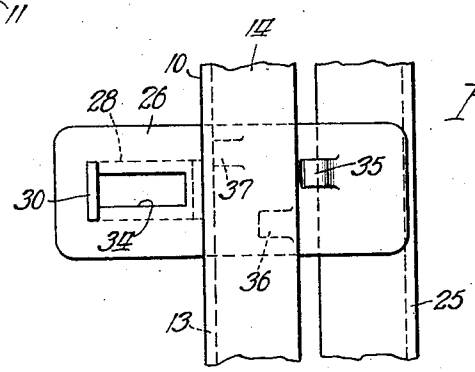


Fig. 2

Fig. 4

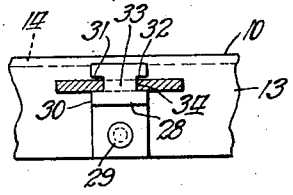
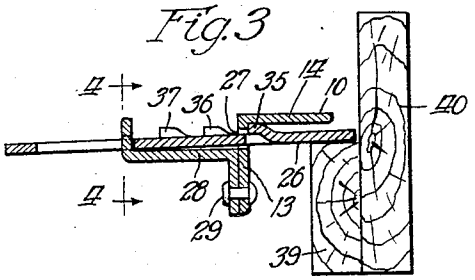


Fig. 3



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Patented Sept. 3, 1929. 1,726,707

UNITED STATES PATENT OFFICE.

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ADJUSTABLE ARM SUPPORT FOR BEDSPRINGS.

Application filed October 24, 1927. Serial No. 228,139.

This invention relates to an adjustable arm support for bed springs, and more particularly to an adjustable support for use in connection with the coil type of bed springs.

Bedsteads such as now commonly found on the market, vary somewhat in width, depending on the type and construction of bedstead. In metal bedsteads, which are often provided with angle iron side rails on which the usual bed spring is mounted, the distance between the angle iron side rails is often somewhat greater than the distance between the bed spring supporting side rails of a wooden bedstead, and it is consequently desirable to provide an adjustable means for permitting mounting of a bed spring in either type of bedstead.

The principal object of the present invention is, therefore, to provide an adjustable supporting means for facilitating mounting of a bed spring on either a metal or wooden bedstead. Other objects are to provide an adjustable supporting means which is provided with means for effectively locking the same in operative or supporting position; to provide locking means which is responsive to or rendered effective by the weight of the bed spring when the latter is mounted on a bedstead; to provide an adjustable support which will be effectively locked in the desired supporting position, but which will be readily adjustable to the desired position without the aid of tools; and in general, to provide an improved support of the class described.

Further objects and advantages of the invention will be understood by reference to the following specification and accompanying drawing in which we have described and illustrated a selected embodiment of the invention in connection with a coiled spring type of bed spring and its manner of use in connection with bedsteads in which the bed spring supporting side rails are differently spaced apart.

In the drawings:

Fig. 1 is a cross section of a portion of a metal bed having an angle iron side rail and showing the manner of mounting a bed spring on the bedstead by means of my improved adjustable support.

Fig. 2 is a plan of a portion of Fig. 1.

Fig. 3 is a section corresponding to a portion of Fig. 1, but showing the manner of mounting a bed spring on a wooden bedstead in which the bed spring supporting side rails are closer together than in the metal bedstead of Fig. 1, and

Fig. 4 is a section on the line 4—4 of Fig. 3.

Referring now to the drawings, we have shown in Fig. 1 a portion of a bed spring including a main frame 10, which extends around the margin of the bed spring and between opposite sides of which, a plurality of spring supports, such as shown at 11, extend. These spring supports are secured to the main frame by suitable means such as rivets, indicated at 12. The main frame preferably consists of an angle iron member having a vertical flange 13 and a horizontal flange 14, and the spring supports preferably consist of strap metal members, each having a portion intermediate the opposite side members disposed with the width of the member lying in a substantially vertical frame as shown at 15, and its end portions twisted, as indicated at 16, so as to be horizontally disposed to facilitate mounting on the horizontal flange of the main frame.

Marginal coil springs such as indicated at 17, are secured in place on the horizontal end portion of the spring support by suitable means such as clips 18, which are secured to the said horizontal end portion by means of rivets, or screws, as indicated at 19. The upper ends of the coil springs 17 are secured to a top border wire 20, in any suitable manner. Intermediate coil springs such as indicated at 21 are seated at their lower ends on the vertically disposed portion 15 of the spring support, and secured thereto by means of tie members 23. The intermediate coil springs 21 are preferably connected in any suitable manner adjacent their top coils to the top coils of adjacent springs. The springs are also connected intermediate their top and bottom coils, by means of helicals, such as shown at 24, to intermediate portions of the adjacent springs or to the main frame of the bed spring, a substantially horizontal coil being preferably provided in each spring for facilitating such intermediate connection.

In Fig. 1, we have have shown the bed spring mounted on an angle iron side rail 25 which constitutes part of a metal bedstead. The means for mounting the bed spring includes an arm 26 which is slidably mounted in an aperture 27 provided in the vertical flange 13 of the main frame of the bed spring. The arm 26 is a loose fit in the aperture 27, and is retained therein by means of a bracket

28, which is secured to the vertical flange of the main frame by suitable means such as riveting, as indicated at 29. The outer end of the bracket is provided with an upwardly extending portion 30 which is provided with notches 31 and 32 in its opposite edges, thereby providing a narrow neck portion 33, which is adapted to slidably fit in a slot 34 provided in the inner end portion of the arm 26. The slotted arm and bracket are assembled by turning the bracket to a position relative to the slot in the arm wherein the end of the bracket may be passed through the slot, and then turning the bracket relative to the arm so as to cause the edges of the arm at said slot, to enter the notches in the bracket. Such position for assembling the parts cannot be obtained when the parts are disposed in operative position relative to the vertical flange and hence, the arm cannot accidentally be removed from the frame.

The arm 26 is provided with a plurality of upwardly projecting stops or abutments 35, 36 and 37, which are preferably formed by punching portions of the arm upwardly, as clearly shown at 35 in Fig. 1, and these stops or abutments are adapted to engage a portion of the vertical flange 13 of the main frame adjacent the top edge of the slot 27, to prevent inward movement or adjustment of the arm when the bed spring is mounted on the side rail of a bedstead. The abutments are spaced longitudinally of the arm, and they are preferably arranged in staggered or offset relation to each other, as clearly shown in Fig. 2.

By an inspection of Fig. 1, it will be readily understood that the weight of the bed spring is transmitted through the arm 26 to the side rail 25 of the bedstead, the arm engaging spaced portions of the bed spring. As shown in Fig. 1, the arm 26 rests at its outer end on the horizontal flange of the side rail 25, and tends to swing downwardly at its inner end about the edge of the side rail as a fulcrum. Such downward pivotal movement of the arm is prevented by engagement of the top of the abutment 36 with the under face of the horizontal flange 14 of the main frame and engagement of the under face of the inner end of the arm 26 with the top face of the bracket member 28, as shown at 38.

The aperture 27 in the vertical flange of the main frame is of sufficient width to permit sliding of the punched out abutments of the arm 26 therethrough, when the arm is to be moved inwardly for mounting the bed spring on a wooden bedstead. It will be readily understood that when the weight of the bed spring causes the arm 26 to swing about the inner edge of the side rail as a fulcrum, the abutment adjacent the outer face of the vertical flange 13 of the main frame will be caused to move upwardly relative to the main frame so that it will engage the face of the vertical flange adjacent the slot, as clearly shown in Fig. 1, where the abutment 37 is shown in such engagement.

When the bed spring is to be mounted on a wooden bedstead in which the supporting side rails are not spaced apart as far as are the side rails in a metal bedstead, the arm 26 is moved inwardly until, for example, as shown in Fig. 3, the abutment 35 is in position to engage the edge portion of the vertical flange 13 adjacent the top edge of the slot 27 to thereby prevent further inward adjustment of the arm. In Fig. 3 the parts of the bed spring are shown in the position in which they appear when mounted on a wooden bedstead, which includes a bed spring supporting rail 39, which is secured to an ornamental side rail 40. By an inspection of Fig. 3, it will be noted that the means for locking the arm 26 against inward movement is responsive to the weight of the bed spring which is effective to move the outer end of the arm 26 upwardly relative to the main frame of the bed spring so that the abutment 35, or abutments 36 or 37, as the case may be, will engage the vertical flange of the main frame, and will not pass through the aperture 27.

We have thus provided an adjustable arm support for bed springs which is simple in construction, which will not readily become inoperative, and which is easily and quickly adjusted and effectively locked in the desired position so that there is no danger of the bed spring slipping off the supporting rail of the bedstead.

The described details are merely illustrative of a single embodiment of the invention, and the scope of the same should be determined by reference to the following claims which should be construed as broadly as possible, consistent with the state of the art.

We claim as our invention:

1. In combination, a bed spring having a main frame member provided with a horizontally extending slot, an arm of less thickness than the width of said slot, slidably mounted therein, and provided with an inwardly facing abutment projecting upwardly from the face of the arm, the combined thickness of said arm and abutment being less than the width of said slot so as to permit the arm and its abutment to slide freely through said slot, thereby permitting adjustment of the outer end portion of the arm inwardly or outwardly of the frame to position for engaging a portion of a bedstead for supporting the bed spring thereon, and said arm being adapted to be moved upwardly in said slot relative to said frame member, when the bed spring is mounted on a bedstead, thereby to render said abutment effective to engage a portion of the frame adjacent the top edge of the aperture for preventing inward movement of the arm.

2. In combination, a bed spring having a main frame provided with a horizontally disposed, relatively long but narrow slot, a relatively wide arm member of less thickness than the width of said slot, slidably mounted therein, and having an inwardly facing abutment punched upwardly from the arm, the combined thickness of said arm and abutbent being less than the width of said slot so as to permit the arm and its abutment to slide freely through said slot, thereby permitting adjustment of the outer end portion of the arm inwardly or outwardly of the frame to position for engaging a portion of a bedstead for supporting the bed spring thereon, said arm being adapted to be moved upwardly in said aperture, by the weight of the bed spring supported thereby when the bed spring is mounted on a bedstead, thereby to render said abutment effective to engage a portion of the frame adjacent the top edge of the slot for preventing inward movement of the arm when the bed spring is so mounted.

3. In combination, a bed spring having an angle iron main frame including a horizontal flange, and a vertical flange portion provided with a horizontally disposed relatively long but narrow slot spaced downwardly from the bottom face of said horizontal flange, an arm member slidably mounted in said slot and provided with an abutment adapted to engage a portion of said vertical flange adjacent the top edge of said slot, the combined thickness of said abutment and arm being less than the width of the slot so as to permit movement of the arm and abutment through the slot, thereby permitting adjustment of the arm inwardly or outwardly of said frame into position for engaging a portion of a bedstead for supporting the bed spring thereon, and said arm being adapted to be moved upwardly in the slot when the bed spring is so mounted on a bedstead, thereby to render the abutment effective to engage said flange portion for preventing inward movement of the arm.

4. In combination, a bed spring having a main frame including a vertical flange portion provided with a horizontally disposed, relatively long but narrow slot, an arm member slidably mounted adjacent its outer end in said slot and provided with an abutment adapted to engage a portion of said flange adjacent the top edge of the slot, the combined thickness of said abutment and arm being less than the width of the slot so as to permit movement of the arm and abutment through the slot, thereby permitting adjustment of the outer end portion of the arm inwardly or outwardly of said frame and into position for engaging a portion of a bedstead to thereby support the bed spring on said bedstead, and said arm being adapted to be moved upwardly in the slot relative to said vertical flange when mounted on a bedstead, thereby rendering the abutment effective to engage said flange portion for preventing inward movement of the arm, and a bracket secured to said vertical flange provided with means for slidably receiving and supporting the inner end portion of the arm, said arm having a slotted portion for receiving a portion of said bracket, and said bracket being insertable into said slot when said bracket and arm are relatively positioned in a position not obtainable when said parts are disposed in operative position relative to said vertical flange.

5. In combination, a bed spring having a main frame provided with a horizontally extending aperture, an arm slidably mounted in said aperture and provided with a plurality of inwardly facing abutments projecting upwardly from the arm, said abutments being spaced from each other longitudinally of the arm, and arranged in offset relation to each other crosswise of the arm, the combined thickness of said arm and abutments being less than the width of said aperture so as to permit the arm and abutments to slide freely through said aperture, thereby permitting adjustment of the outer end portion of the arm inwardly or outwardly of the frame to position for engaging a portion of a bedstead for supporting the bed spring thereon, said arm being adapted to be moved upwardly in said aperture, by the weight of the bed spring supported thereby, when the bed spring is mounted on a bedstead, thereby to render one of said abutments effective to engage a portion of the frame adjacent the top edge of the aperture for preventing inward movement of the arm.

6. In combination, a bed spring having an angle iron main frame, the flanges of which are respectively disposed in horizontal and vertical planes, the vertical flange depending from the inner edge of the horizontal flange and being provided with a horizontally disposed slot spaced from the under face of the horizontal flange, means for mounting the bed spring on a bedstead including an arm slidably mounted in said slot and provided with a plurality of inwardly facing abutments on its upper face, the combined thickness of said arm and abutments being less than the width of said slot, thereby permitting adjustment of the arm and abutments through said slots and also limited vertical movement of the arm in the slot, the outer end portion of said arm being adapted to engage a portion of a bedstead for supporting the bed spring thereon, and another portion of said arm being thereby incidentally caused to engage the under face of said horizontal flange at a point spaced outwardly from the vertical flange, one of said abutments being also incidentally rendered effective to engage a portion of said vertical flange adjacent the top edge of the slot for preventing inward movement of the arm when the bed spring is

so supported, said arm being adapted to be slid inwardly to a position for similarly supporting the bed spring on a bedstead in which the bed spring supports are closer together, and another of said abutments being similarly rendered effective to engage said frame portion for preventing additional inward movement of the arm when the bed spring is so mounted.

7. In combination, a bed spring having an angle iron main frame, the flanges of which are respectively disposed in horizontal and vertical planes, the vertical flange being provided with a horizontally disposed slot, means for mounting the bed spring on a bedstead including an arm provided with an inwardly facing abutment on its upper face and having its inner end portion provided with a slot, said arm being slidably mounted adjacent its outer end portion in the slot in said vertical flange and the thickness of said arm being less than the width of said slot so as to permit limited vertical movement of the arm therein, and a bracket secured to said main frame, extending inwardly therefrom and having a vertically disposed portion of greater width than the width of the slot in said arm but less than the length of said slot, said vertical portion being notched at oppositely disposed points to receive edge portions of said arm adjacent said slot for slidably supporting the inner end portion of the arm, the outer end portion of said arm being adapted to engage a portion of a bedstead for supporting the bed spring thereon and the arm being thereby incidentally moved upwardly in the slot to render the abutment effective to engage a portion of said frame for preventing inward movement of the arm when the bed spring is so supported, said arm being adapted to be slid inwardly to position for similarly supporting the bed spring on a bedstead in which the bed spring supports are closer together.

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