June 10, 1952 H. H. G. ROW 2,599,723

LEG CONSTRUCTION FOR COILED SPRING BEDS

Filed March 29, 1947 2 SHEETS—SHEET 1

FIG. 1

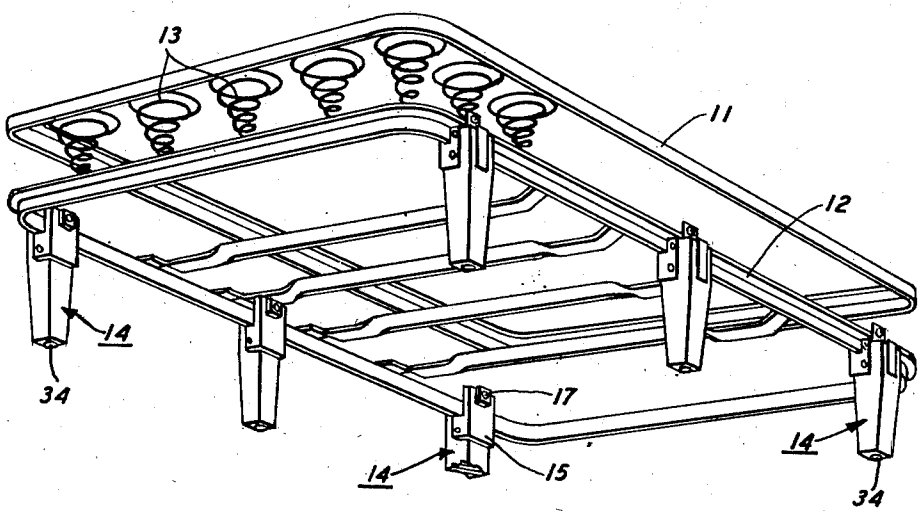
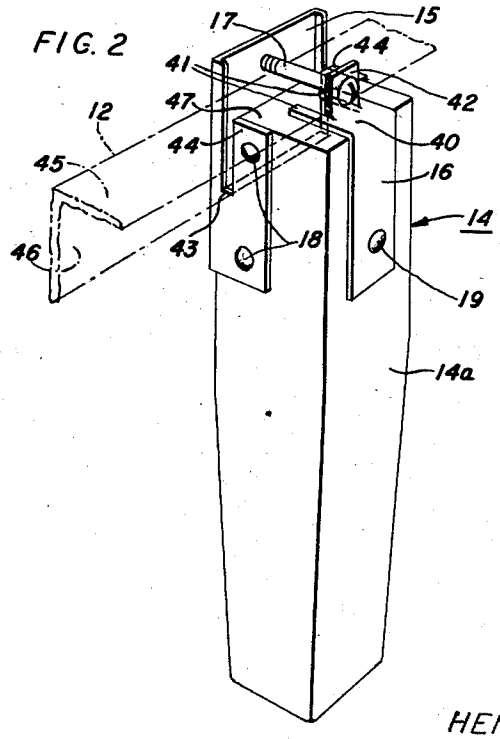


FIG. 2



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2 SHEETS—SHEET 2

FIG. 3

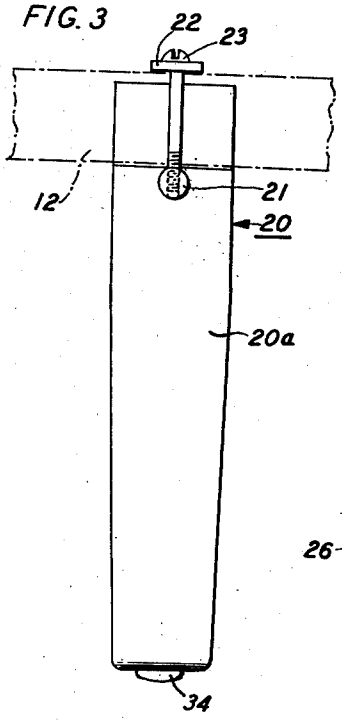


FIG. 4

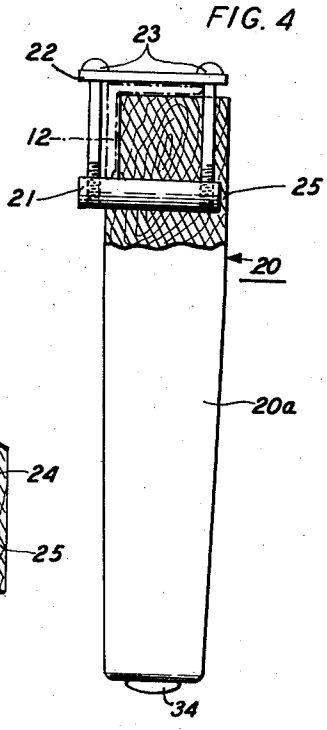


FIG. 5

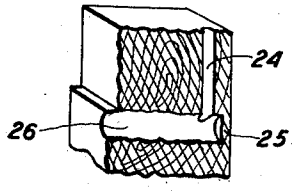


FIG. 6

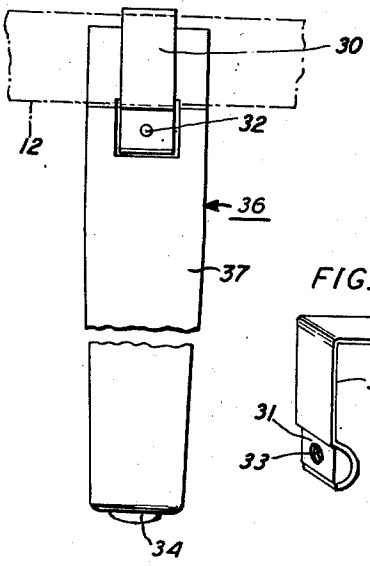


FIG. 8

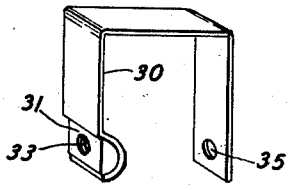
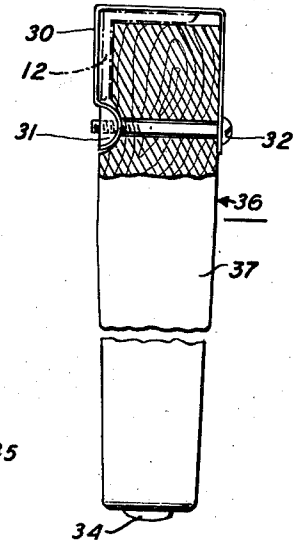


FIG. 7



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Patented June 10, 1952

2,599,723

UNITED STATES PATENT OFFICE

2,599,723

LEG CONSTRUCTION FOR COILED SPRING BEDS

Henry H. G. Row, Baldwin, N. Y.

Application March 29, 1947, Serial No. 738,085

8 Claims. (Cl. 5—310)

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This invention relates to improvements in coiled-spring beds, and more particularly to detachable legs useful in converting a conventional coiled-spring mattress of the open metallic frame type into a knockdown bed.

One object of this invention is to convert a conventional open frame coiled-spring mattress into a bed and back again at will.

Another object is a series of legs adapted for rapid attachment to and detachment from the frame of an open coiled-spring mattress to form a knockdown bed.

Another object is a detachable leg construction of but few and simple parts which is inexpensive to manufacture, light in weight, compact, easy to assemble, dissassemble, attach, detach and manipulate, and which is very efficient and durable in use.

With these and other objects in view, there has been illustrated in the accompanying drawings consisting of two sheets of eight figures, numbered Figs. 1 to 8 inclusive, certain forms in which the invention may be conveniently embodied in practice.

In the drawings:

Fig. 1 is a perspective view of an open frame coiled-spring knockdown bed, showing only so much of the coiled-spring construction as is essential to an understanding of the invention;

Fig. 2 is a perspective view of one of the detachable leg assemblies showing a fragment of the bed frame in dot and dash outline;

Fig. 3 is a front view of a modified construction;

Fig. 4 is an end view partially in section of the modified construction of Fig. 3;

Fig. 5 is a detailed sectional view of the head end of the leg;

Fig. 6 is a front view of another modified form of detachable leg assembly with certain of the parts partially broken away;

Fig. 7 is an end view partially in section of the leg assembly of Fig. 6 showing the head end of the leg partially broken away; and

Fig. 8 is a perspective view of a constructional detail.

Like reference characters designate corresponding parts throughout the several figures of the drawings.

As best disclosed in Figs. 1 and 2, the bed 11 may consist of conventional open coil coiled-spring mattress having the conventional open coil coiled-spring mattress having the conventional angular base frame 12, fashioned out of angle iron or steel supporting a series of spaced

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rows of horizontally spaced coiled-springs 13 attached to the upper angle-shaped frame of the bed 11 to complete a coiled-spring mattress for any conventional type of bed mattress.

At suitably spaced intervals a series of leg assemblies 14, 14 are detachably attached to the base frame 12. As best shown in Fig. 2, each leg assembly 14 may consist of a wooden leg having a slotted guide plate 15 and an angle bracket 16 riveted to the head end of the wooden leg, by means of the rivets 18 and 19 passing through holes drilled in the head end of the leg, through which the rivets 18 and 19 may be inserted and then permanently riveted in one of the oppositely disposed faces of the slotted guide plate 15. The slotted guide plate 15 and the angle bracket 16, are provided with holes arranged in horizontally spaced alignment adapted to receive the shank of a screw bolt 17 which may be secured in place by a suitable nut.

The base frame 12 is of angle iron, and includes an outwardly extending horizontal flange 45, and a depending vertical flange 46. Base frame 12 is adapted to be supported by the upper extremity of the leg 14 and its vertical flange 46 nests in the slot 43 of the slotted guide plate 15, so that when the screw bolt 17 is inserted through both the angle bracket 16 and the slotted guide plate 17, the nut may be screwed upon the bolt to anchor the head end of the leg assembly 14 which now nests in the angle defined by the conjunction of the flanges 45 and 46 of the angle-shaped base frame 12. The outwardly extending horizontal flange 45 and the depending vertical flange 46, in conjunction, define an inverted L-shaped base frame 12.

The upper end of the angle bracket 16 is bent over at right angles to form the horizontally disposed portion 40 and the bifurcated fingers 41, 41, which overlie the top edge face 47 of the wooden leg. The depending vertical flange 46 of the inverted L-shaped base frame 12 nests in the slot 43 in the guide plate 15 and the horizontal flange 45 of base plate 12 lies between the guide plate 15 and the upstanding holed lug 42 of the angle bracket 16. The marginal side edges of the guide plate 15 are inwardly bent at right angles to the rest of the guide plate 15 to form the horizontally spaced, vertically disposed ears 44, 44. The guide plate 15 and the horizontally spaced ears 44, 44 in conjunction define a U-shaped channel wherein the squared head of the wooden leg 14 nests with a snug fit. The inner vertical edge face of the head end of the leg 14 is rabbeted to conform to the shape of

the slots 43, 43 in the guide plate 15, so as to allow the depending vertical flange 46 of base frame 12 to nest between the guide plate 15 and the ears 44, 44 and the rabbeted side wall of the head end of the leg assembly 14. The shank of the screw bolt 17 rests upon the upper face of the outwardly extending horizontal flange 45 of the base frame 12, so that the more the screw bolt 17 is tightened in the threaded opening in the guide plate 15, the more securely the head of the leg assembly nests in the angular wall formed by the conjunction of the horizontal flange 45 and the depending vertical flange 46, of the inverted L-shaped base frame 12, and the more securely the outwardly extending horizontal flange 45 is anchored between the guide plate 15 and the upstanding holed lug 42.

By assembling four or more leg assemblies 14 upon the angle-shaped base frame 12 at spaced intervals so as to distribute the load evenly, the open coiled-spring 11 is converted into a bed, adapted to support the conventional mattress, thus dispensing with the frame assembly of the conventional bed. By removing the leg assemblies 14, the bed may be quickly converted back into a conventional open coiled-spring mattress adapted to be used upon any conventional type of bed frame.

Figs. 3, 4 and 5 show a modified form of detachable leg assembly 20. The head of the leg is rabbeted (Fig. 5) to accommodate the vertical flange 46 of the angle-shaped base frame 12. The leg is also drilled horizontally to form a dowel socket 26 (Fig. 5). Preferably the dowel socket 26 does not pass completely through the leg, but terminates short of the opposite face of the leg to provide a positioning stop 25. A socket 24 is drilled vertically downwards from the top face of the leg 20, in alignment with the dowel socket 26, to form a screw socket 24 which merges at the bottom with the dowel socket 26.

A metal dowel pin 21 drilled and tapped to receive two machine screws 23 is inserted in the dowel socket 26, so that when the dowel pin 21 is inserted in the dowel socket 26 with the end of the dowel pin 21 in abutment with the positioning stop 25, one of its tapped openings may be aligned with the screw socket 24 to receive one of the machine screws 23 which may be passed through one of the holes in the yoke 22 and screwed into the tapped hole in the dowel pin 21. When the angle-shaped base frame 12 is properly seated upon the upper extremity of the leg 20, the yoke 22 may be placed across the horizontal face of the channel iron so that the hole in the inner side of yoke 22 is in alignment with the inner tapped hole of the dowel pin 21, whereupon a machine screw 23 may be inserted through the hole in the yoke 22 and screwed into the tapped opening in the dowel pin 21. When the rabbeted head end of leg 20 nests properly in the angle-shaped base frame 12, and both machine screws 23 are properly tightened in the dowel pin 21, the angle-shaped base frame 12 will be effectively anchored to the head end of the leg assembly 20.

The modified form shown in Figs. 6 and 7 includes a U-shaped clamp 30 adapted to straddle the head end of the leg of the detachable leg assembly 36. The inner face of the head end of the leg 36 may be rabbeted to form a flush seat for the angle-shaped base frame 12 when the latter is seated upon the head end of the leg 36 (see Fig. 7). The head end of the leg 36 may also be provided with a half-round slot extending horizontally across the inner face of the leg to form a seat for the semi-cylindrical tip of the U-shaped clamp 30. A half-round nut 31 female threaded at 33, is adapted to be seated in the semi-cylindrical tip of the U-shaped clamp 30. The nut 31 may be separate from the U-shaped clamp 30, but is preferably spot welded or otherwise permanently seated in the semi-cylindrical tip of the U-shaped clamp 30. The tips of the clamp 30 are provided with horizontally spaced aligned openings 35 adapted to receive a machine screw 32 which may be fastened in the female threaded opening 33 of the half-round nut 31. A hole is also drilled through the head end of the leg 36 to receive a machine screw 32.

Thus, when the angle-shaped base frame 12 is properly seated upon the head end of the leg 36 the head end of leg 36 nests in the angle in the frame 12, and the U-shaped clamp 30 may be inverted over the angle-shaped base frame 12 so that the upright legs of the clamp 30 encompass the oppositely disposed walls of the head end of the leg 36, with the opening 35 and the female threaded opening 33 in alignment with the hole in the head end of the leg 36. The machine screw 32 is then passed through the aligned holes and screwed into the female threaded opening 33 of half-round nut 31 to lock the leg assembly 36 in the angle of the inverted L-shaped channel of the base frame 12.

Since the various detachable leg assesmblies 14, 20 and 36 nest in the angle of the inverted L-shaped channel of the angle-shaped base frame 12, the leg assemblies and the angle-shaped base frame 12 will cooperate when secured together to form a very rigid spring bed 11.

Wooden legs give satisfactory results, but metal legs may be substituted if desired. When wooden legs are used, suitable domes or glides 34 may be attached to the legs in the conventional way. Casters, rollers or other conventional forms of devices may be substituted for the domes 34.

Other modifications of my detachable leg construction will be obvious to those skilled in the art.

What is claimed is:

1. A leg assembly comprising a leg member for supporting an inverted L-shaped frame, said leg member having a horizontally disposed hole therein, a dowel pin positioned in said hole, a yoke overlying the head of the leg member in parallel spaced relation to said dowel pin, and pins passing through the opposite ends of said yoke and detachably secured in the opposite ends of said dowel pin for clamping said frame between said yoke and the head end of said leg member to mount said leg in supporting position relative to said frame.

2. A leg assembly comprising a leg member, a slot extending across one face of said leg member in spaced relation to the upper end thereof, said leg member having a centrally disposed hole formed therein extending at right angles to and merging with said slot, an inverted U shaped resilient clamp overlying the upper end of said leg member in spaced relation thereto, one end of said clamp nesting in said slot, the ends of said clamp having holes therein registering with the centrally disposed hole in said leg member, and a screw bolt passing through said centrally disposed hole in said leg member and through both

holes in said clamp to detachably attach said clamp to said leg member.

3. A bed comprising an open coiled spring mattress, said mattress having a base frame, said base frame being angular in vertical cross section and having an outwardly extending horizontal flange and a depending vertical flange, legs disposed beneath said frame in spaced relation to each other to elevate said mattress at conventional bed level, the upper extremity of each leg being shaped to conform to and nest in the angle defined by the flanges of said base frame, means mounted upon the leg and including a screw bolt for attaching a vertical section of said base frame to the upper extremity of the leg, and said screw bolt being operable under increased tension to rigidly brace the upper extremity of the leg against both flanges and in the angle formed by the conjunction of the said flanges of the base frame.

4. In a knockdown bed construction and in combination a spring mattress having a base frame, said base frame being angle-shaped and having an outwardly extending horizontal flange and a vertical flange depending therefrom, said flanges in conjunction defining an inverted L-shaped channel, legs for elevating said mattress at coventional level to form a bed, each leg being formed from block material, the rear wall of each leg being rabbeted at its upper extremity to receive and form a flush joint with the depending flanged wall of the base frame, each leg nesting within the inverted L-shaped channel so that the top edge face of the leg supports the lateral flange of the base frame, a metal clamp positioned at the upper end of the leg for passing around the outside face of the depending flange, and a screw bolt detachably threadably secured to the leg and operable when under tension to draw said clamp against the flange and effect an interlock between the head end of the leg and both flanged walls of the inverted L-shaped channel.

5. In a knockdown bed construction and in combination a spring mattress having a base frame, said base frame having two flanges converging together and in conjunction defining an inverted L-shaped channel, legs for elevating said mattress at conventional level to form a bed, each leg being formed from a block of wood, the rear wall of each leg being rabbeted at its upper extremity to receive the depending flange of the inverted L-shaped channel, each leg nesting within the inverted L-shaped channel so that the top edge face of the leg supports the lateral flange of the channel and the outer face of the depending flange is substantially flush with the face of the rear wall of the leg, metal clamps, there being one metal clamp associated with the upper end of each leg for embracing the depending flange of the L-shaped channel, and a screw bolt operable to tighten the clamp upon said base frame thereby clamping the upper end of said leg against the flange of the L-shaped channel.

6. A leg assembly for attachment to a frame having a plurality of converging flanges merging together and in conjunction defining an inverted L-shaped channel, comprising a leg member for co-operating with said channel, one wall of said leg member being rabbeted at its upper extremity to receive the depending flange of said channel, said leg member being adapted to nest in said channel underneath its lateral flange so that the top edge face of the leg will support the frame with the depending flange and the rabbet forming a substantially flush joint, a separate clamp mounted upon, and in spaced relation to, the upper end of the leg so as to pass around the outside of the depending flange of said frame, and a screw bolt carried by the leg member operable when under tension to draw said clamp against the outer face of the flange and effect an interlock between the upper extremity of said leg and the inner faces of the converging flanges and anchor the upper extremity of said leg within said L-shaped channel.

7. A leg assembly for attachment to a frame having a plurality of converging flanges merging together and in conjunction defining a inverted L-shaped channel, comprising a leg formed from a block of wood, the rear wall of said leg being rabbeted at its upper extremity to receive the depending flange of the inverted L-shaped channel, the upper extremity of said leg being adapted to nest in said channel so that the top edge face of the leg will form a support for the lateral flange of the inverted L-shaped channel and the outer face of the depending flange will be substantially flush with the face of the rear wall of the leg, a metal clamp mounted upon, and in spaced relation to, the upper end of the leg so as to pass around the outside of the depending flange of said channel, and a screw bolt carried by the leg operable to tighten said clamp against the outer face of said flange and to draw the upper extremity of said leg against the converging flanges to anchor the upper extremity of said leg within said L-shaped channel.

8. A leg assembly comprising a leg member having a pair of oppositely disposed spaced side faces, the edge faces extending between and merging with said side faces forming the inner and the outer edge faces respectively of said leg members, the upper extremity of the inner edge face of the leg member being rabbeted, a slotted guide plate secured to the side faces at the upper end of said leg member in spaced relation to said rabbeted inner edge face, the plate extending above said upper extremity of the leg member to form an anchoring lug, a bracket secured to the outer edge face of the upper end of the leg member and extending above its upper extremity to form a complementary anchoring lug, and a pin detachably secured to said anchoring lugs in spaced relation to the upper extremity of the said leg member.

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