

June 23, 1925.

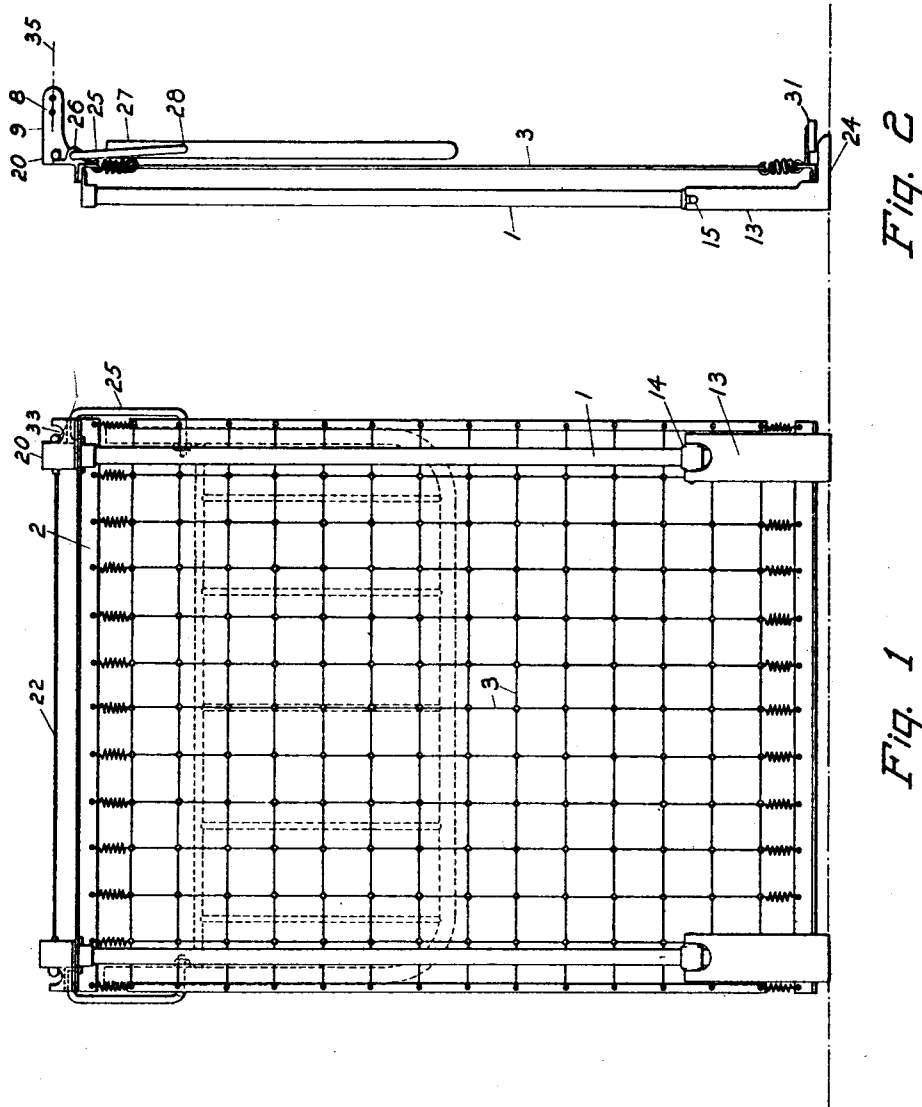
B. L. JONES

1,543,440

WALL BED

Filed Dec. 19, 1922

3 Sheets-Sheet 1



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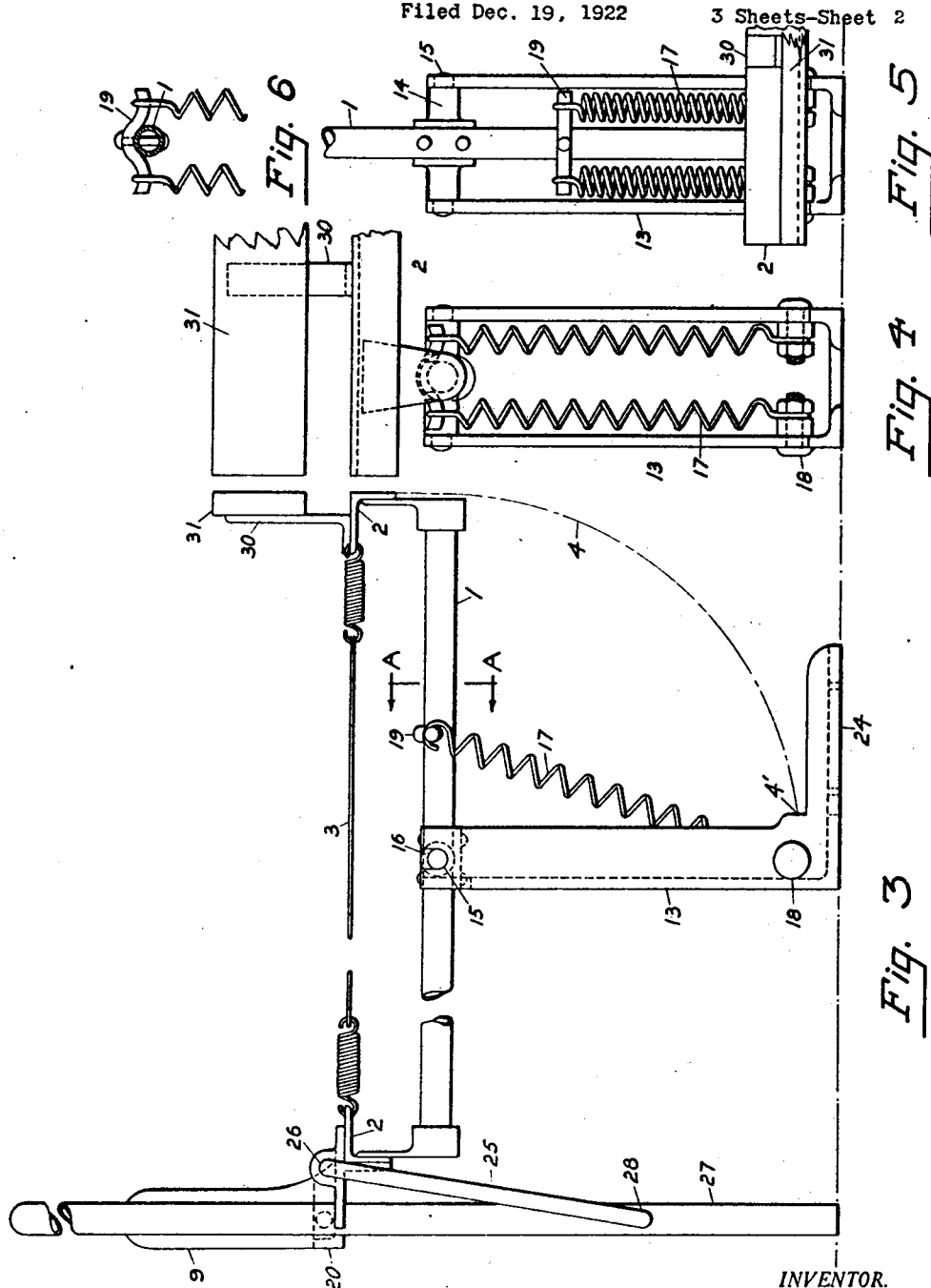
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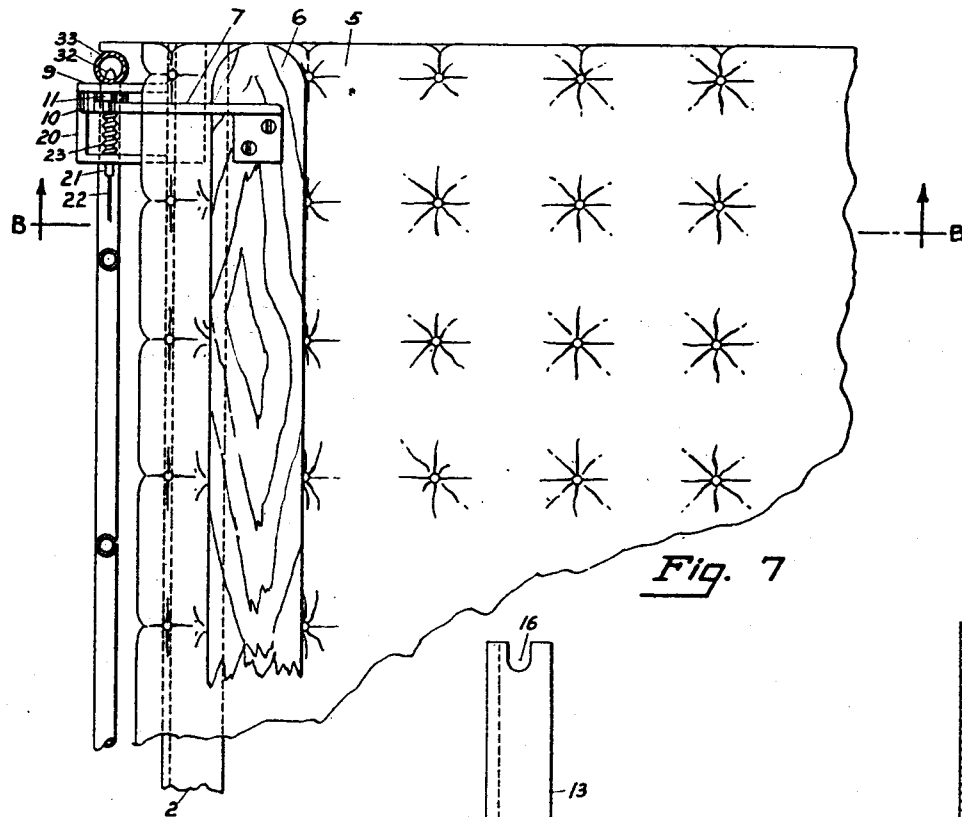


Fig. 7

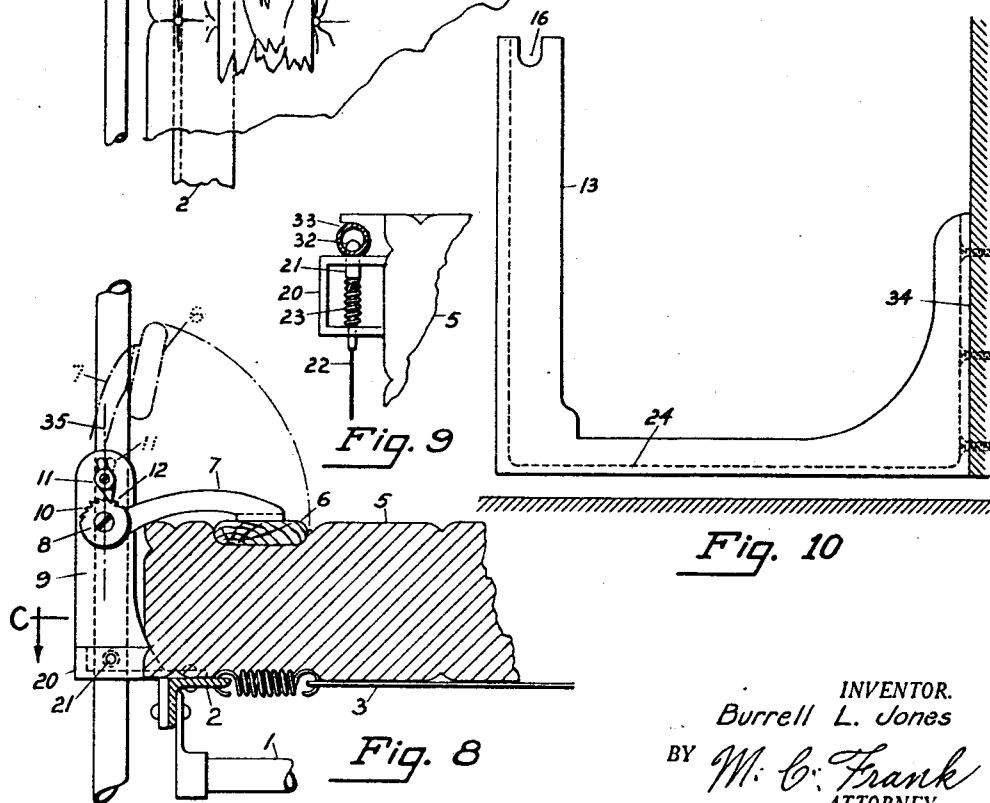


Fig. 9

Fig. 10

Fig. 8

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UNITED STATES PATENT OFFICE.

BURRELL L. JONES, OF OAKLAND, CALIFORNIA.

WALL BED.

Application filed December 19, 1922. Serial No. 607,813.

To all whom it may concern:

Be it known that I, BURRELL L. JONES, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Wall Beds, of which the following is a specification.

The subject matter of this application is parent to my co-pending divisional applications for wall bed structures, filed September 29th, 1923, Serial Number 665,555 and mattress clamps, filed the same date, Serial Number 665,556.

This invention relates to folding or wall beds, and more especially to a bed of this type, which when raised, will occupy a minimum space and present to view none of the counterbalancing-mechanism.

The objects of the invention are, to provide a simple and neat bed-structure in which any standard set of bed-springs may form the springs thereof; to provide but a few parts adapted to be attached to the said springs to form the complete bed-springs; to provide the foot-frame of the bed with but a single link to each leg thereof to accomplish the folding of the said frame on the bed; to provide the bed with a mattress clamp that will hold the mattress when the bed is in an upright position and bind the same against a solid resistance; to adapt the head-legs of the bed to house the counterbalancing-springs and conceal them from view when the bed occupies its raised position; and to avoid the present common use of a cross-bar across the width of the bed to support the counterbalancing-springs.

In addition to the above broader features of the invention, there are certain details of design, whereby compactness, simplicity and durability of structure, as well as positiveness and ease of operation are attained, and which are shown on the accompanying three sheets of drawings and will be set forth hereinafter.

Referring to the drawings:

Fig. 1 is an elevation of the bed-structure in its upright position, showing the underside of the bed-springs and also the head-legs concealing the counterbalancing-springs from view.

Fig. 2 is a view of the same from the side.

Fig. 3 is a side elevation of the bed-structure in its lowered or horizontal position on

an enlarged scale, certain principal parts 55 of the invention being shown.

Fig. 4 is an end view of Fig. 3, showing the counterbalancing-springs housed in a head-leg of the bed, the springs being in maximum tension.

Fig. 5 is a similar view, the bed being swung to its upright position and showing the position the springs assume and which are now in minimum tension.

Fig. 6 is a detail of construction viewed 65 from the line A—A of Fig. 3, showing the connection of the counterbalancing-springs to a side-rail of the bed.

Fig. 7 is a partial plan view of the bed in its lowered position, showing principally 70 the means for clamping the mattress.

Fig. 8 is a sectional elevation along the line B—B of Fig. 7, showing the clamp binding the mattress against a solid resistance, the angle-iron of the bed-springs. 75

Fig. 9 is a detail in plan at the region of line C of Fig. 8, showing the locking means for locking the foot-frame of the bed in its lowered position against movement.

Fig. 10 shows the combined head-leg and 80 housing adapted for securement to a wall, or swinging door or panel.

Referring to the drawings and the figures thereof:—The bed-spring of the bed is composed of the customary side-rails 1 secured 85 to the end bars 2, to which is stretched and supported the woven-wire springs 3. Upon the latter rests the common stuffed or upholstered mattress 5.

The head-legs 13 of the bed are of channel 90 form and have a base 24 adapted for securement to the floor. The side-rails 1 of the bed are secured to saddles 14, which are provided with trunnions 15, bearing in rounded notches 16 in the tops of the legs 95 13. The rails and saddles oscillate in said notches as the bed is turned up or down.

The bed is counterbalanced by springs 17. These springs are pivoted at their lower ends by bolts 18 within the channels of the legs, 100 and at their upper ends by saddles 19 secured to the side-rails 1. Thus when the bed is turned up, the springs 17 are completely housed within the legs 13 and concealed from view thereby, both from the 105 front and side of the bed. In Fig. 3, 4 represents the path the end bar 2 travels as the bed is turned to its upright position

about the trunnions 15, and 4' is a shouldered-stop for the said bar.

30 is an angle-clip secured to bar 2 for supporting the head-board 31, which latter serves as a stop for the mattress 5.

To the angle-iron bar 2 at the foot of the bedspring and at each end thereof, is secured a wall-bracket 20, which is adapted to support the foot-frame of the bed, and the mattress-clamping means, and also the means for locking the foot-frame in a vertical position when the bed is lowered.

Across the bracket and shown clearly in Fig. 9, extends a locking bolt 21 projecting out from each side thereof, and having the end of its shank connected by a wire or cord 22 with the similar shank on the opposite side of the bed. A spring 23 housed between the walls of the bracket surrounds the shank of the bolt and projects the latter, in which position it engages the adjacent bed rail of the foot-frame as at 32, and locks the bed against further up or down movement, in conjunction with the half-round notch 33 in the bracket which serves as a stop-rest for the said rail. A side pull on the wire 22 retracts both bolts and frees the bed, which may then be operated.

At each side of the foot-frame of the bed is a link 25, pivoted and supported in a bearing 26 on the bracket 20, shown more particularly in Fig. 3. The link at its other end is pivotally engaged with the foot-leg 27 of the said foot-frame as indicated at 28. By this construction, the foot-frame of the bed is swung by the link to a position against the mattress and parallel thereto, as shown in Fig. 2.

When the bed is in its horizontal position the mattress 5 may simply lie upon the woven wire 3, but when the bed is to be swung to its upright position, the mattress 5 is locked by a clamp-bar 6, which binds it against the end bar or angle iron 2 of the frame of the woven wire member 3, thus affording a solid resistance against which the mattress is clamped, that will prevent slipping of the mattress even when it becomes matted and old. The bar 6 is secured by arms 7, pivoted at 8 to a wall 9 of the bracket 20 at each side of the bed. The end of the arm 7 about the pivot 8 is provided with fine teeth 10 adapted to be engaged by a pawl 11, whereby, when the bar is pushed down against the mattress it will engage a tooth and clamp firmly in whatever position it reaches. The tooth 12 nearest the arm 7 faces both ways so that by whirling the pawl over on the

other side of the perpendicular center line 35, it will engage the forward side of said tooth, and hold the bar 6 in its out-of-the-way position as shown in dotted lines in Fig. 8.

The foot 24 of the channelled leg 13, may if desired, be secured to the floor, but if the bed is to be attached to a wall or door, or swinging panel, as at 34 Fig. 10, the foot may be extended and secured to said door in any convenient manner, as by an up-turned extension of the foot as shown.

While the drawings illustrate an embodiment of the invention, it is to be understood that in adapting the same to meet different conditions and requirements, various changes in form, proportion and minor details of construction may be resorted to without departing from the nature of the invention and spirit of the claims.

What I claim as new and desire to secure by Letters Patent of the United States is the following:

1. In a wall-bed structure, a pair of legs of channel form having trunnion bearings on the extreme top thereof for supporting one end of the bed when the latter is in a horizontal position, and for supporting the entire bed when the same is in an upright position, each of said legs adapted to support and house a pair of springs, one end of the springs being fixed to the side rails of the bed in advance of said bearings and the opposed end of the springs being secured to the lower end of said legs, the channels of the legs adapted to conceal the springs from view when the bed is in an upright position, the said trunnion bearings being substantially flush with the top surface of the bed side rails when the bed is in a horizontal position, and the bottom surface of said side rails being substantially flush with the front face of the channel legs when the bed is in an upright position.

2. In a wall bed, legs therefor of channel cross-section and counterbalancing springs housed in said channels, the said channels obscuring the springs from view when the bed is in raised position, said springs being disposed in pairs and pivotally connected at their lower ends to said legs and at their upper ends to saddles on the side rails of the bed, the said saddles comprising bars adapted to overlie the side rails and project outwardly therefrom to connect the springs on opposite sides of the side rails.

In testimony whereof I affix my signature.
BURRELL L. JONES.