(No Model.) 2 Sheets—Sheet 1.

L. A. AUERBACH.

FOLDING BED.

No. 562,269. Patented June 16, 1896.

Fig. 2.

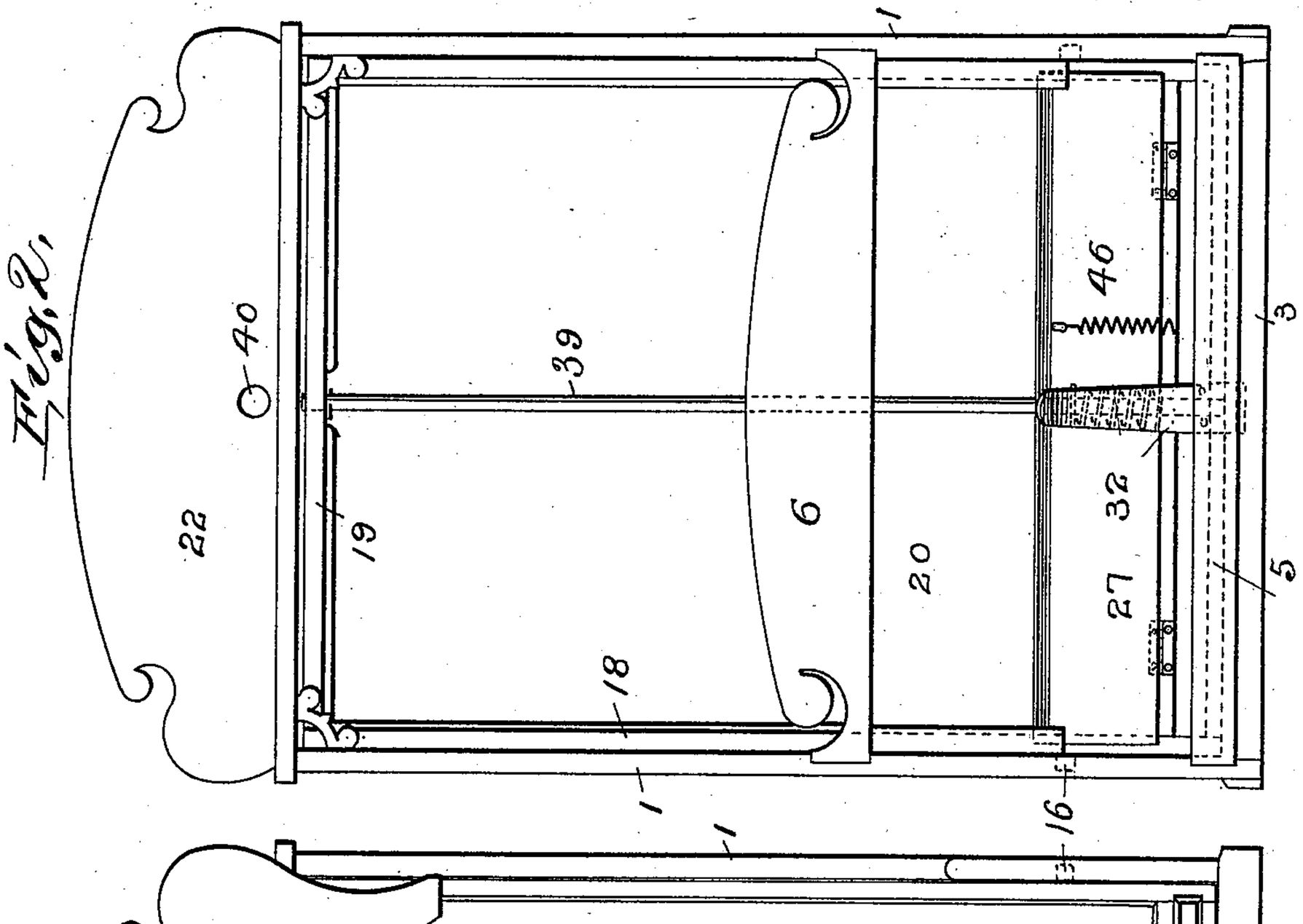
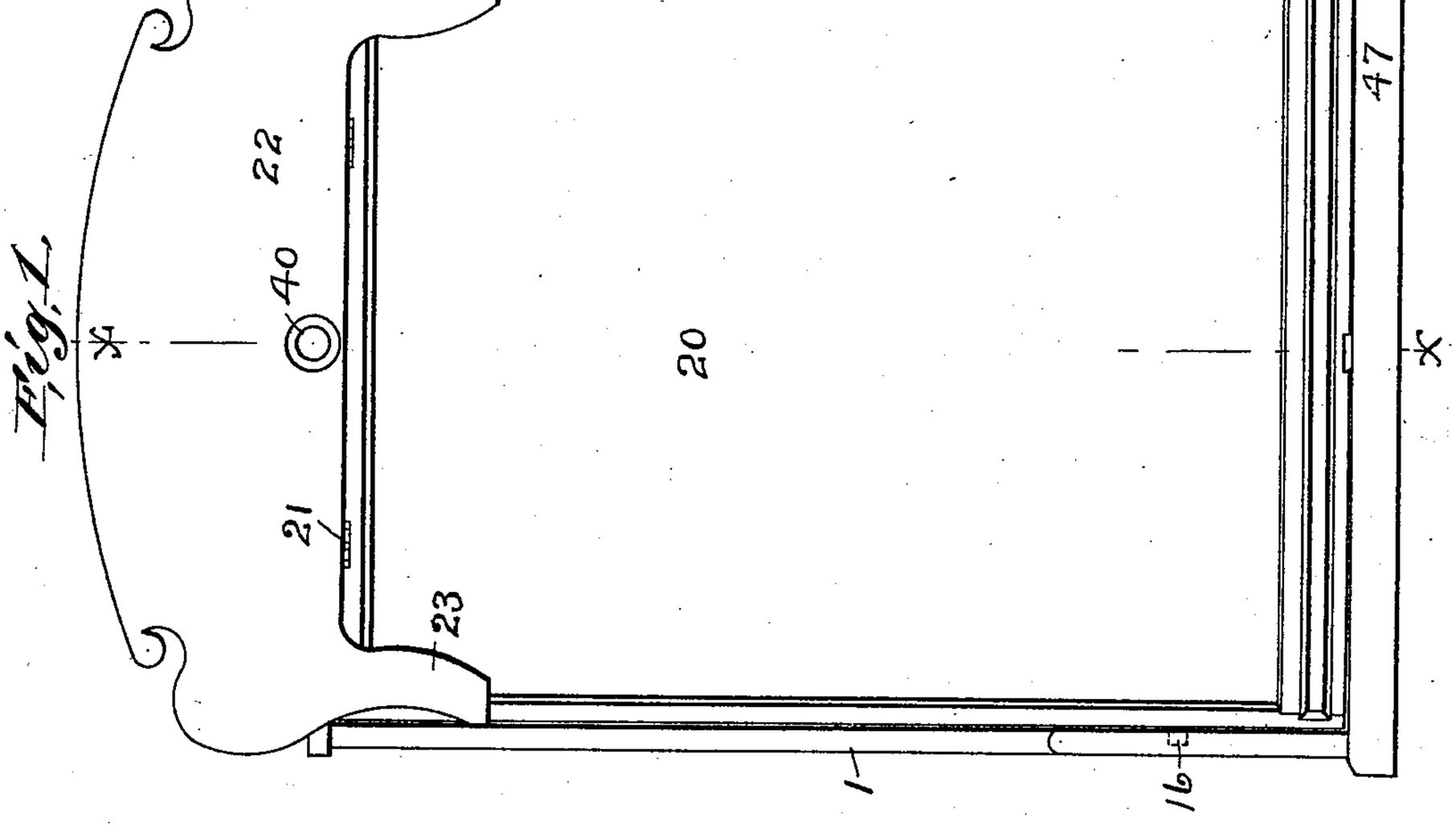


Fig. 1.



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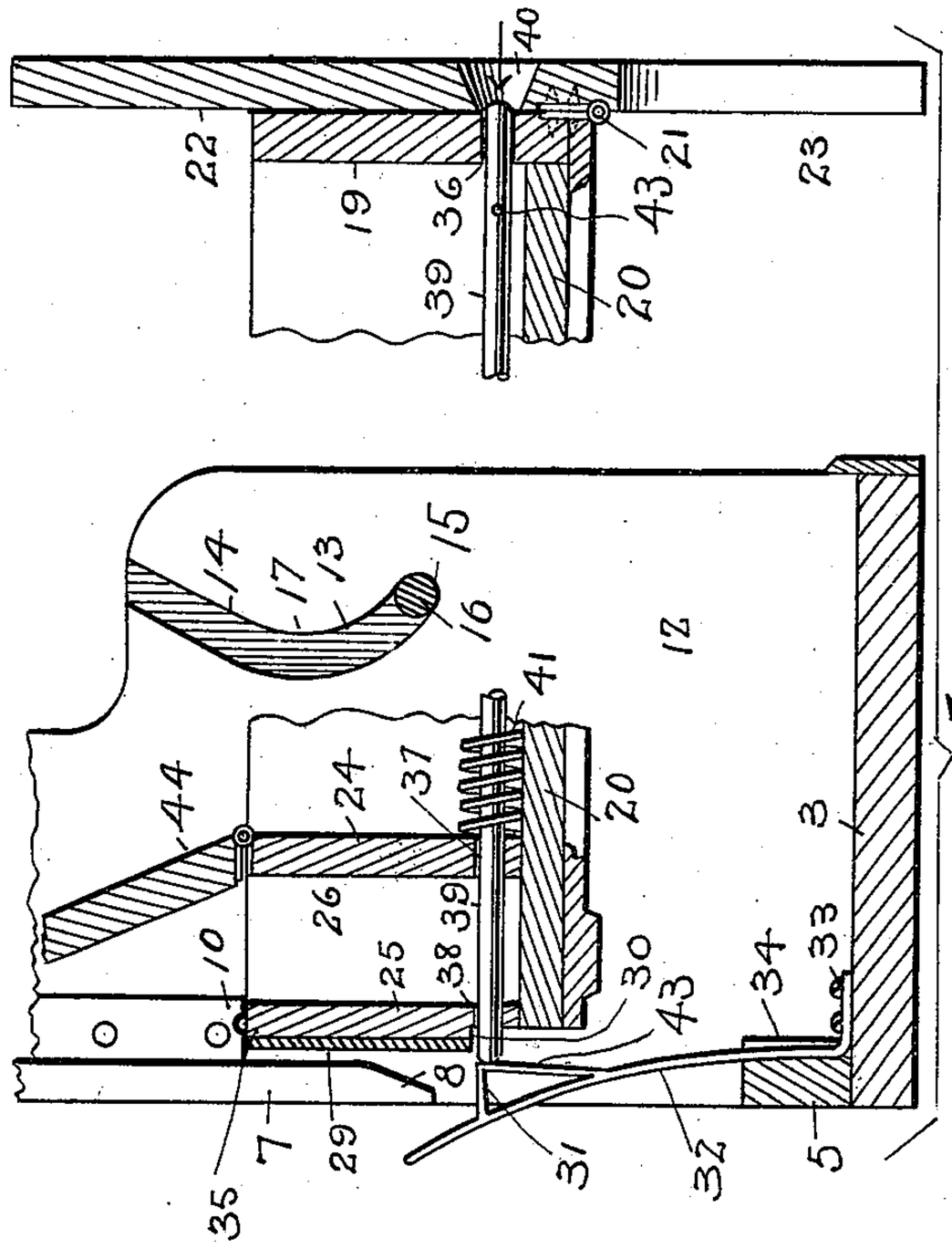

Fig 5

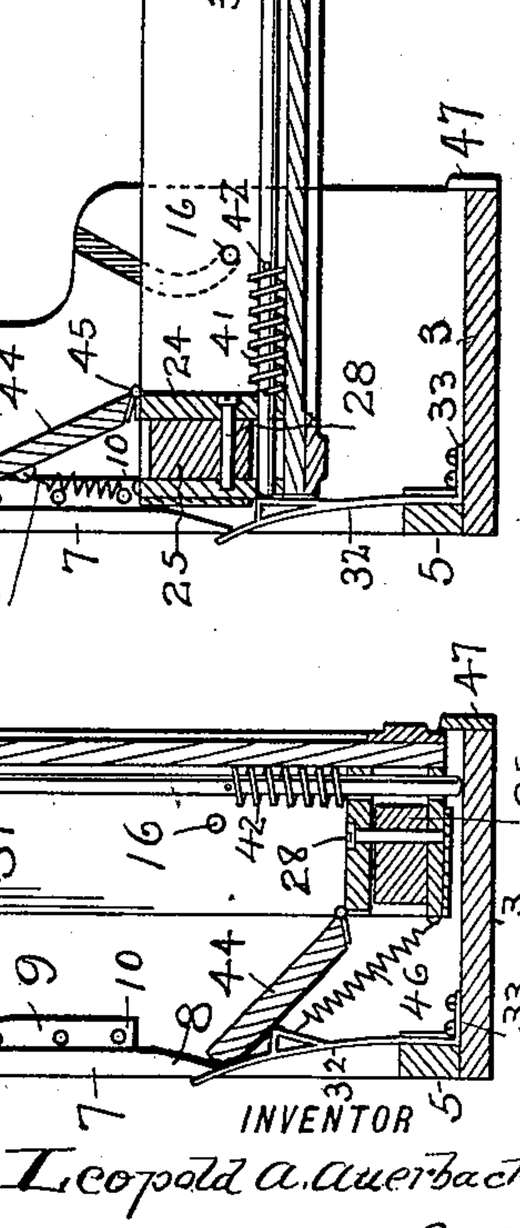

Fig 4.

Fig 3.

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UNITED STATES PATENT OFFICE.

LEOPOLD A. AUERBACH, OF NEW YORK, N. Y.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 562,269, dated June 16, 1896.

Application filed September 4, 1895. Serial No. 561,390. (No model.)

To all whom it may concern:

Be it known that I, LEOPOLD A. AUERBACH, a citizen of the United States, residing in the city, county, and State of New York, have made certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to improvements in folding beds, and the object of said improvements is to provide means for automatically locking the side bars or the movable portion of the bed in position, when lowered, so as to prevent it from accidentally rising, and to provide means for readily disengaging the locking means to allow of the movable portion of the bed being raised.

My invention further consists in the details of construction and combination of parts hereinafter described, and further set forth in the claims.

In the drawings forming part of this specification, Figure 1 illustrates a front elevation of the bed closed; Fig. 2, a rear elevation of the same. Fig. 3 represents a vertical sectional elevation on the line *x x*, Fig. 1, the bed being closed; Fig. 4, a like view, the bed being lowered; Fig. 5, an enlarged sectional elevation of the lower part of the bed-cabinet and the inner end of the folding portion of the bed, and a fragmentary sectional elevation of the end of the folding portion of the bed, illustrating the operation of the parts when freeing the locking mechanism.

Similar numerals of reference indicate corresponding parts throughout the several views.

In the drawings, 1 are the side frames, 2 the top board, and 3 the bottom board, constituting the skeleton of a suitable cabinet for supporting and containing the movable portion of the bed, corner-pieces 4, bottom strip 5, and back strip 6 bracing the same.

To the sides 1 and below the back strip 6 is secured a deflecting-board 7, the lower portion of which has an angular finger 8 and from which extends inwardly parallel to the sides 1 a flange 9, by which the deflecting-board is secured to the sides, said flange having a shoulder 10 and rounded guide-surface 11 for a purpose hereinafter described.

The lower portion of the sides 1, which is enlarged, as at 12, is provided with an irregularly-shaped groove 13, segmental for a portion of its length and straight at 14, where it emerges from the top of the enlargement 12, the end 15 of the grooves forming bearings for a pivot-pin 16. The lower end of the groove is substantially on the same vertical plane as the top of the groove, which forms a curved shoulder 17, which prevents the pivot-pin 16 from rising vertically in the groove.

The folding portion of the bed comprises the side portions 18, end board 19 and bottom board 20, which may be suitably embellished or ornamented so as to present an artistic exterior, and to the end board 19 is secured, by means of a hinged plate 21, the foot-board 22, the foot-board being provided with legs 23 to properly support the outer end of the folding section, the hinge being secured to the foot-board at the bottom of the end board and adjacent the legs 23, so that when the folding section is elevated, as in Fig. 3, it will have a tendency to move rearwardly, which will be restrained by the top board 2 of the cabinet, and thus maintain the foot-board in a vertical position and ornamenting the exterior of the same, as shown in Fig. 1, besides facilitating the raising and lowering of the bed.

Adjacent the inner end of the folding section and secured to the outside of the boards 18 is the pivot-pin 16, previously referred to, which pivotally supports the folding section upon the side boards 1 of the cabinet.

The head of the folding section is formed by two transverse boards 24 25, secured at their ends to the side boards 18, and which form a pocket 26, in which weights 27 may be secured for counterbalancing the weight of the folding section beyond the pivot 16, and to secure said weights in the pocket bolts 28 may be employed.

To the transverse board 25 is secured a striker-plate 29, and the lower corner of the bed-section is cut away to form a shoulder 30, both of which are adapted to engage the tooth 31, formed on a spring-plate 32, the lower end of which has a flange 33, by means of which

the spring-plate is secured to the bottom board 3, the lower portion of the plate lying within a recess 34, formed in the cross-bar 5 to restrain the outward movement of the spring-plate, the inward movement of the spring-plate and its dog 31 being sufficient to allow it to engage the shoulder 30 to prevent the downward vibration of the inner end of the folding section of the bed, the shoulder 10 on the flange 9 being engaged by the upper corner 35 of the folding section to prevent outward movement of the bed at this point, the spring-plate and dog acting as means for locking the bed in its lowered position, and the shoulder 10 acting as a stop to limit the downward movement of the folding portion of the bed.

Fig. 4 represents the spring-plate as having engaged the shoulder 30 and the corner 35 as having impinged against the shoulder 10, both of which, as before described, act to maintain the bed in its lowered position free from inadvertent raising.

The means for unlocking the bed, or, in other words, freeing the spring-plate and dog, will now be described.

Apertures 36 in the end board 19 and 37 and 38 in the transverse boards 24 25, respectively, form bearings for an inflexible rod or bar 39, lying closely adjacent to the bottom board 20. This bar is adapted to be moved inwardly in the direction of the arrow, Fig. 5, by pressure of the finger or other suitable instrument passed through an aperture 40, so formed in the foot-board 22 that when the same is raised said opening or aperture will aline with the end of the push-rod 39, which inward movement of the push-rod is resisted by a spring 41, encircling the rod and abutting at one end against the transverse board 24 and at the other end against a pin 42, passing through the rod, which movement impinges the inner end of the rod against the vertical face 43 of the dog 31, forcing it out of contact with the shoulder 30, thus freeing the locking means, or, in other words, disengaging the dog from the shoulder and permitting the bed-section to be vibrated upwardly on the pivot 16; and when the outer end of the bed-section has been sufficiently elevated to free the dog from the shoulder, the pressure on the dog 31 can be released, which will allow the dog to spring back against the striker-plate 29, and the spring 41 will force the push-rod back, this movement being limited by a pin 43 on the rod engaging the end board 19.

It will be noticed by reference to Fig. 4 that when the bed is in its locked position the hinge or pivot-pin 16 cannot be disengaged from the cabinet, nor its bearings, by reason of the presence of the shoulder 17, as before described.

In order to provide a suitable support for a bolster or pillow, and at the same time provide a cover for the pocket 26 and weights 27, I provide a board 44, hinged to the transverse bar 24 by a hinged plate 45, the upper portion of the hinged head-board being connected to the transverse board 25 by means of a spring 46.

When the bed is raised, as shown in Fig. 3, the head-board 44 is held by means of the spring 46 onto the deflecting-surface 8 of the board 7, thus providing a closure against the entrance of dust and the like, and when the bed is lowered the head-board will rise up on the surface 8 and be supported on the shoulder 11, thus performing a double function, the spring causing it to remain in contact with the various parts described during all of its evolutions, and preventing it from inadvertently becoming disarranged.

The upper corner of the top board and a transverse strip 47, secured to the front of the bottom board 3, prevent the foot-board striking against the front of the top board and the lower and inner portion of the bed-bottom striking against the strip 47 from further inward movement.

It will be apparent from the foregoing that I provide a construction economical, easily operated, and by reason of its simplicity very unlikely to become deranged.

Having described my invention, I claim—

1. In a folding bed, the combination with the stationary element, of the bed-section pivoted to said element, a spring-plate, carrying a dog, secured to said element, a shoulder on the bed-section arranged to be engaged by the dog, and a rod, sliding in bearings on the bed-section and arranged to aline with said shoulder when the bed-section is extended horizontally for disengaging the dog from the shoulder to allow vibration of the bed-section, substantially as described.

2. In a folding bed, the combination with the stationary element, of the bed-section pivoted to said element, a spring-plate, carrying a dog, secured to said element, a shoulder on the bed-section to be engaged by the dog, and a movable rod on the bed-section adapted to be moved to free the dog from the shoulder to allow vibration of the bed-section, a spring to resist movement of the rod in one direction, and a stop to limit its movement in the reverse direction.

3. In a folding bed, the combination with the stationary element, of the bed-section pivoted to said element, a spring-plate, carrying a dog, secured to said element, a stop on said element limiting the spring-actuated movement of said plate, a shoulder on the bed-section arranged to be engaged by the dog, and a rod, sliding in bearings in the bed-section, and arranged to aline with said shoulder when the bed-section is extended horizontally for disengaging the dog from the shoulder to allow vibration of the bed-section, substantially as described.

4. In a folding bed, the combination with the stationary element, of the bed-section piv-

oted to said element, a spring-plate, carrying a dog, secured to said element, a shoulder on the bed-section arranged to be engaged by the dog, and a rod, sliding in bearings in the bed-section and accessible from the outer end, and arranged to aline with said shoulder when the section is extended horizontally, for disengaging the dog from the shoulder to allow vibration of the bed-section, substantially as described.

LEOPOLD A. AUERBACH.

Witnesses:
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JOSEPH L. LEVY.