

No. 624,591.

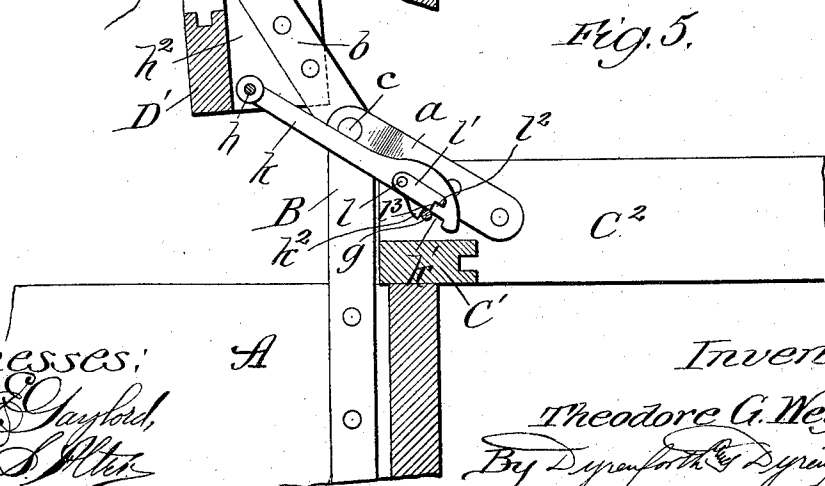
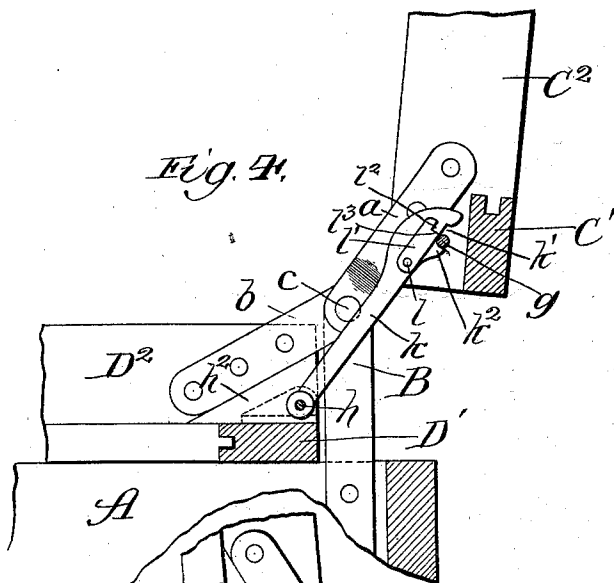
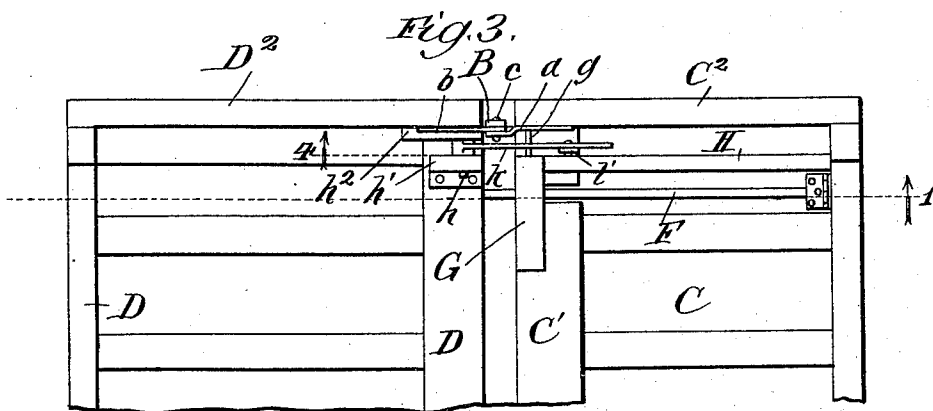
Patented May 9, 1899.

T. G. WEYER.
SOFA BED.

(Application filed Dec. 10, 1898.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 624,591, dated May 9, 1899.

Application filed December 10, 1898. Serial No. 698,859. (No model.)

To all whom it may concern:

Be it known that I, THEODORE G. WEYER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sofa-Beds, of which the following is a specification.

My invention relates particularly to an improvement in sofa-beds of the class employing a folding portion capable of occupying a vertical position to afford a back for the sofa or a horizontal position to give the required width for a bed.

My primary object is to provide mechanism whereby the folding half of the sofa-bed (the sofa-back) may be raised or lowered conveniently from the front as well as from the rear.

A further object is to provide improved means for securely supporting the folding half in its lowered position.

In the preferred construction use is made of a pivoted sofa-seat frame which coöperates with the pivoted sofa-back frame and serves as a medium for raising and lowering said back when the operator is standing in front.

In the accompanying drawings, illustrating a sofa-bed embodying my improvements, Figure 1 is a transverse vertical section taken at line 1 of Fig. 3, showing the folding half raised, however, for use as a sofa-back; Fig. 2, a similar section showing the sofa-back lowered through the medium of said coacting sofa-seat frame and the latter not yet returned to its normal position; Fig. 3, a broken plan view of the parts in position for use as a bed; and Figs. 4, 5, 6, and 7, enlarged broken sections on line 4 of Fig. 3, showing the parts in different relative positions to illustrate the manner in which said seat-frame serves to raise and lower the sofa-back and is locked at an angular position with reference to said back or released therefrom, as occasion may require.

A is the stationary part or base of the sofa, preferably of the common box-form construction. Adjacent to the rear corners of the box, on the inner surfaces of the ends, are fixed metallic uprights B, which project some distance above the upper edge of the box. The uprights B afford supports for the pivotal mountings of the flanking sofa-back frame C and coacting sofa-seat frame D, the latter in

its normal position resting upon and forming an extension of the stationary part A. The parts C and D are shown as rectangular frames provided with depressed cross-slats for receiving mattresses or cushions. In the manufacture suitable upholstery will be added. At their adjacent corners the frames C and D are provided on the inner surfaces of their respective end rails C² D² with fixedly-secured metallic arms or links *ab*, preferably inclined, as shown, and projecting over the meeting, or rather adjacent, side rails C' D'. The links *a* and *b* are pivotally attached at their projecting ends to studs *c*, carried by the uprights B.

At its outer corners the frame C is provided with legs E, hinged to the inner surface of the outer rail and provided with recesses *d* for receiving said outer rail. Thus the legs from their manner of attachment are capable of swinging inward, but not outward. To prevent them from being swung inwardly accidentally, I provide links F, pivoted at their outer ends to the legs in slots (shown in dotted lines in Fig. 2) and provided at their inner ends with slots *e*, engaging pins *e'*, fixed at their ends in the sides of slots *e''* at the upper margin of the rear side of the box A. As clearly shown in Fig. 2, the pins engage the outer ends of the slots when the part C is down, thus holding the legs securely in their extended position. When the sofa-back is raised, as in Fig. 1, the legs drop under their own weight and are sheathed in the back, the inner rail C' being slotted at the points *f* to receive the links F in this movement. I have shown the slots *f* as completely severing the rail C' and extending into bridge-pieces G, which secure the parts of the rail together. At their ends adjacent to the end rails the bridge-pieces are joined to the inner ends of cross-pieces H, shown of the same height as the side rails and of less height than the end rails, (lettered C³.)

For the purpose of rendering it possible to raise and lower the sofa-back readily from a position in front as well as from a position in the rear I provide means for automatically locking the frames C and D together in an angular position and of again unlocking them, as desired. On the frame C and slightly above the inner rail C' are pins or small rods

g, one at each end of the frame and extending across the space between an end rail and a cross-piece H. On the frame D are pivoted, one at each end thereof, at points h between blocks h' h², pawls k, provided on their under edges, near their free ends, with elongated recesses or notches k', which engage the pins g on the frame C and afford shoulders k² k³, which limit the relative movements of the parts. Pivotaly secured to the pawls k, adjacent to the recesses k', at points l, are small links or dogs l', provided at their free ends, on their under edges, with notches l², affording engaging shoulders l³.

Referring to Fig. 4, it will be observed that when the sofa-back is raised the shoulders k² of the pawls k engage the pins g and lock the parts together, the weight of the sofa-back, which leans very slightly to the rearward, tending to maintain the parts in this position. If now a person standing at the front of the sofa swings the seat-frame D upward about the pivotal points c, the back C is lowered through the same angle till the position shown in Fig. 2 is reached. If the frame D be swung still farther, the angle between the parts C and D is lessened and the shoulders k² recede from the pins g till the notches l² of the links l' engage the pins, as shown in Fig. 6, when a reverse movement of the frame D causes the pivotal points h to again approach the pins g and the pawls l' to raise the free ends of the pawls k clear of the pins g, as shown in Fig. 7, when the frame D may be dropped upon the base A. In this final movement the links l' drop clear of the pins g, as shown in Fig. 3. At the conclusion of these movements the parts are in such relative positions that when the frame D is again raised (by a person standing in front) to a vertical position the shoulders k² again engage the pins g, and a reverse movement of the frame D causes the sofa-back to rise to the position of Fig. 4. If it be desired to lower the sofa-back from the rear, it is necessary only to swing the back forward about the pivotal points c, when the pins g move away from the shoulders k² till the notches of the links l' engage the pins, when a reverse movement of the back causes the free ends of the links k to be again raised clear of the pins, thus permitting the back to be lowered.

My construction obviates the use of cords and pulleys, which are objectionable. The frames C and D are automatically locked together and freed from each other, thus rendering it unnecessary to search for hidden parts, and, finally, the back can be raised and lowered with ease from either the front or rear.

Changes in the details of construction within the spirit of my invention may be made by those skilled in the art. Hence I wish to be understood as intending no limitation by the minute description given above otherwise than shall appear from the appended claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a sofa-bed, the combination of a stationary support provided adjacent to its rear corners with uprights, frames flanking said uprights, constituting respectively, a seat for the sofa and a back for the sofa, both being pivoted to said uprights, and means dependent for action on the position of the seat-frame alone for automatically locking said frames together at a given angle and releasing them, at will, substantially as and for the purpose set forth.

2. In a sofa-bed, the combination of a stationary support provided adjacent to its rear corners with uprights, frames flanking said uprights, constituting respectively, a seat for the sofa and a back for the sofa, both being pivoted to said uprights, and means for automatically locking said frames together at a given angle and of releasing them, comprising a pivoted pawl on one frame, means on the other frame for engaging said pawl, and means for automatically raising said pawl to cause it to clear said engaging means, substantially as and for the purpose set forth.

3. In a sofa-bed, the combination of a stationary support provided adjacent to its rear corners with uprights, frames flanking said uprights, constituting respectively, a seat for the sofa and a back for the sofa, both being pivoted to said uprights, and means for automatically locking the frames together at a given angle and of releasing them, comprising a pawl pivoted on one frame, a pin, or the like, on the other frame to engage said pawl, and a short link pivoted to said pawl provided with a notch for engaging said pin when said pawl is retracted whereby the pawl is raised clear from engagement with the pin when the direction of the movement is reversed, substantially as and for the purpose set forth.

4. In a sofa-bed, the combination of a stationary support, a folding back pivoted to the rear upper portion of said support, a pivoted member projecting across the top of said stationary support, pawls k pivoted thereto provided toward their free ends with recesses k', pins g, or the like, on said back engaging said recesses, and links l' pivoted to the pawls k and provided with notches l² for engaging said pins, thereby to lift the pawls free from engagement with the pins, at will, substantially as and for the purpose set forth.

5. The combination of support A, fixed uprights B, frames C and D, links a and b fixed to said frames and pivoted on studs carried by said uprights, pawls k provided with recesses k', pins g, and notched links l' pivoted to the pawls k between said recesses and the pivotal points of the pawls, substantially as and for the purpose set forth.

THEODORE G. WEYER.

In presence of—

D. W. LEE,

R. T. SPENCER.