

W. S. BOWIE.
COUCH BED.

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INVENTOR
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UNITED STATES PATENT OFFICE.

WILLIAM S. BOWIE, OF BOSTON, MASSACHUSETTS.

COUCH-BED.

SPECIFICATION forming part of Letters Patent No. 523,619, dated July 24, 1894.

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To all whom it may concern:

Be it known that I, WILLIAM S. BOWIE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Couch-Beds, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve the construction of lounge or couch beds, and consists in several details of construction to be hereinafter more fully set forth and claimed.

Figure 1, shows in plan view a lounge or couch bed embodying this invention, the mattress being removed; Fig. 2, a longitudinal section of the couch bed shown in Fig. 1, taken on the dotted line $x-x$; Fig. 3, a cross section of the couch bed shown in Fig. 1, taken on the dotted line $y-y$; Fig. 4, an end view of the couch bed, and Figs. 5 and 6, details to be referred to.

The foot board a of a width desired for the closed up couch, has secured to it two parallel side rails a' , a'' , preferably composed of two narrow strips of board placed at right angles with relation to each other, the opposite ends of said side rails being secured to a head board b of a width substantially equal to the width of the foot board. Corner cleats or blocks c , are preferably secured to the side rails a' , a'' , for strength and durability. The foot board a , and head board b are each provided with two legs 2, which may be supplied with casters. A series of cross slats b' are secured to the side rails a' , a'' , at desirable distances apart, upon which are erected the springs b^2 . A rigid framework is thus provided of substantially the width desired for the closed up couch.

At the head of the bed two short parallel strips b^3 , are arranged in alignment with the side rails a' , a'' , being hinged thereto at b^4 , and occupying recesses formed in the upper sides thereof, when laid flat, said strips however being adapted to be raised on their hinge connections to elevate the head of the bed. Cross slats b^5 are secured to these hinged strips b^3 , substantially similar to the slats b' , and likewise provided with springs b^2 , and if desired a middle strip b^6 , extending parallel

with the strips b^3 , b^3 may be secured to the cross slats b^5 .

A ratchet toothed bar c is secured to the head board, or legs thereof, preferably one at each end, engaged by a pawl-like brace or support c' , which is pivotally connected with the rear or outer end of the pivoted head.

The pawl-like support, as herein shown, consists of short bars 7, 7, hinged to the head, and connected together by cross bars 8, 8, and said cross bars are joined at points between the bars 7, 7, by bars 9, 9.

At each side of the narrow slatted framework which forms the middle section of the bed, a transverse movable side section is provided, and as they are made alike or substantially so, but one will be described.

A side rail d , similar to the side rail a' , is arranged in parallelism therewith, extending from end to end of the bed, and provided with suitable legs or supports d^3 , and also provided at the head with a strip d^2 , similar to the strips b^3 , which is hinged to the side rail d , and to this side rail d , and pivoted strip d^2 , short transverse slats d' are secured, which are arranged alternately with relation to the rigidly supported cross slats b' , the ends of said cross slats d' , bearing upon the side rail a' , when the bed is extended as shown in Fig. 1, and moving between the cross slats b' , as the bed is closed up. Springs d^{10} , are erected upon the cross slats d' .

To the inner face of the side rail d about midway its length, a transverse bar d^4 is secured which passes beneath the side rail a' , or through a recess therein, the inner extremity of which is provided with a recess d^{12} through which a long lever e passes, see detail Fig. 6 said lever being pivoted at one end as at e' , to a block on the under side of one of the cross bars at or near the head of the bed, while its opposite end projects a short distance beyond the foot of the bed to be easily accessible. The side walls of the recess d^{12} in the bar d^4 , are chamfered or formed as knife edges, to reduce the friction.

By swinging the lever e on its pivot, it will be seen that the side section, with its hinged head portion, will be moved toward and from the middle section, and its hinged head portion regardless of the elevations of said head

portions. A similar lever *e* is provided for the opposite side section which is constructed and operated in the same manner. The levers *e*, *e*, are slotted at the rear ends, as at *e*², and the pivot bolts pass through said slots, thereby permitting longitudinal movement of said levers, for a distance substantially equal to the distance that they project beyond the foot of the bed, so that when it is not desired to operate said levers they may be pushed rearwardly or toward the head of the bed, and concealed from view.

At the head of the side sections, pawl-like braces or supports are provided movable telescopically with relation to the brace *c'*, said braces being herein shown as composed each of a short bar 10, hinged at 12, to the extremity of the hinged side piece *d*², and a horizontal bar 13, secured to the lower end of the bar 10, and extending by the short bar 7, and entering and adapted to slide freely in a recess formed in the bar 9. This recess serves as a guide for the bar 13, so that when the side section is drawn toward the middle section, this pawl-like brace or support will be moved with it.

Ratchet toothed bars 14, are secured to the legs at the outer sides of the side sections, or they may be otherwise supported, with which the pawl-like braces on the side sections cooperate.

It will be seen that by connecting the pawl-like braces of the side sections with the pawl-like braces of the middle section, and arranging them to move telescopically therewith, they will be moved in unison to raise and lower the head.

A railing *f* is attached to each side section along and above the side rails, substantially flush with the tops of the springs, being connected with said springs by twine or wires or otherwise, and suitable friction rolls *f'* are or may be placed upon said railing at desirable points to facilitate the side sections passing beneath the mattress, while the bed is being closed up.

The mattress, made full width, is placed between two pieces of cloth *n*, *n'*, see Fig. 5, the side edges of which are provided with hooks and eyes, or other suitable fastenings by which they may be joined together, thereby inclosing the mattress, and cords or equivalents *n*², are connected with said mattress covering, at each side, as to the piece *n* for instance, which pass down beneath the side rails *d*, and *a'*, and around the levers *e*, *e*, and thence up to the top of the side rails *a'*, to which they are attached at points 15. As the levers *e*, *e*, are moved toward each other to close up the bed, the sides of the mattress will be drawn down by said cords *n*², and held securely in place.

I do not herein broadly claim a sliding bed frame, operated by a lever connected to said frame.

I claim—

1. In a couch bed, the combination of a middle section, extending lengthwise the bed, and

two side sections movable toward and from said middle section, slats supported by all of said sections and springs thereon, and two independent levers *e*, *e*, pivoted to one end of said middle section, and accessible at the other end thereof, said levers being slotted at the ends as at *e*², to permit longitudinal movement thereof, and connections as *d*⁴, connecting said levers *e*, *e*, with said side sections, whereby said levers may be used as operating levers for said side sections, substantially as described.

2. In a couch bed, the combination of a middle section comprising two side rails, cross slats secured thereto, head and foot pieces, and supporting legs, side sections each comprising a side rail, short transverse slats secured thereto, arranged to move between the slats of the middle section, and supporting legs therefor, springs erected upon said slats, and two levers *e*, *e*, pivoted to the middle section at or near one end, and projecting beyond the other end, and cross pieces *d*⁴, secured to the side sections having recesses with chamfered edges to receive said levers *e*, *e*, at points between their ends, substantially as described.

3. In a couch bed, a transversely extensible sectional bed bottom, and means for moving the sections thereof to widen or narrow the bed, combined with a transversely extensible sectional head portion, the sections of which are pivotally connected to and movable transversely with the corresponding sections of said bed bottom, and means substantially as described for holding said pivoted sectional head portion at different elevations yet permitting transverse movement of the sections thereof, substantially as described.

4. In a couch bed, a middle section composed of two side rails *a'*, *a'*, cross slats secured thereto, and supporting legs, and a head portion composed of side pieces *b*³, hinged to the side rails *a'*, cross slats secured thereto, and means for holding said head portion at different elevations, combined with two laterally movable side sections, each composed of side rails *d*, cross slats secured thereto which overlap the side rails *a'* and supporting legs, and each having a head portion composed of a side rail *d*², hinged to the side rail *d*, cross slats secured thereto which overlap the hinged side pieces *b*³, and means for holding said head portions at different elevations, substantially as described.

5. In a couch bed, a middle section and two side sections, with relation to the middle section, combined with a head portion pivotally connected with the middle section, and a head portion pivotally connected with each side section, and movable therewith toward and from the middle section, ratchet toothed bars, and pawl-like braces for the head portions of the middle and side sections which are movable telescopically with relation to each other, substantially as described.

6. In a couch bed, a middle section, and two
side sections, and means for moving said side
sections toward and from the middle section,
slats supported by said sections, and springs
5 thereon, and a mattress supported on said
springs, combined with cords connected to
the sides of said mattress, and also with the
means employed for moving the side sections,
whereby the sides of said mattress are drawn

down as the bed is narrowed, substantially as is
described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

WILLIAM S. BOWIE.

Witnesses:

THOMAS J. MORRISON,
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