No. 650,498. Patented May 29, 1900.

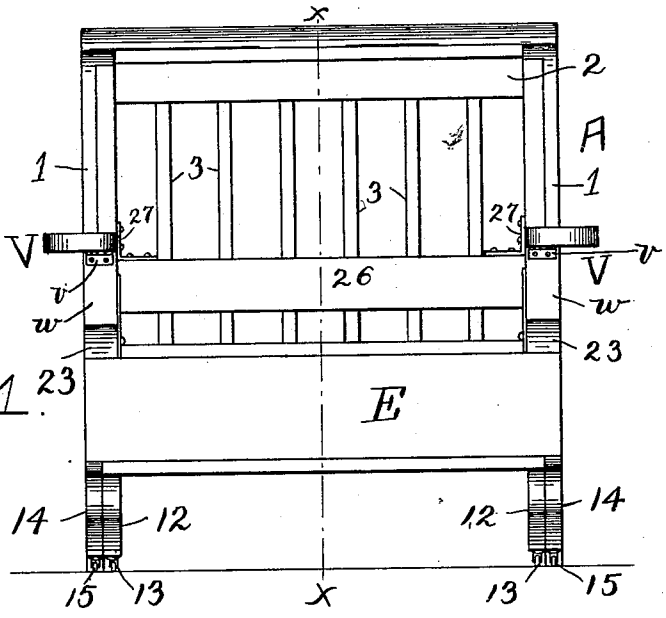
R. J. WELLES.

BED CHAIR.

(Application filed July 27, 1899.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.



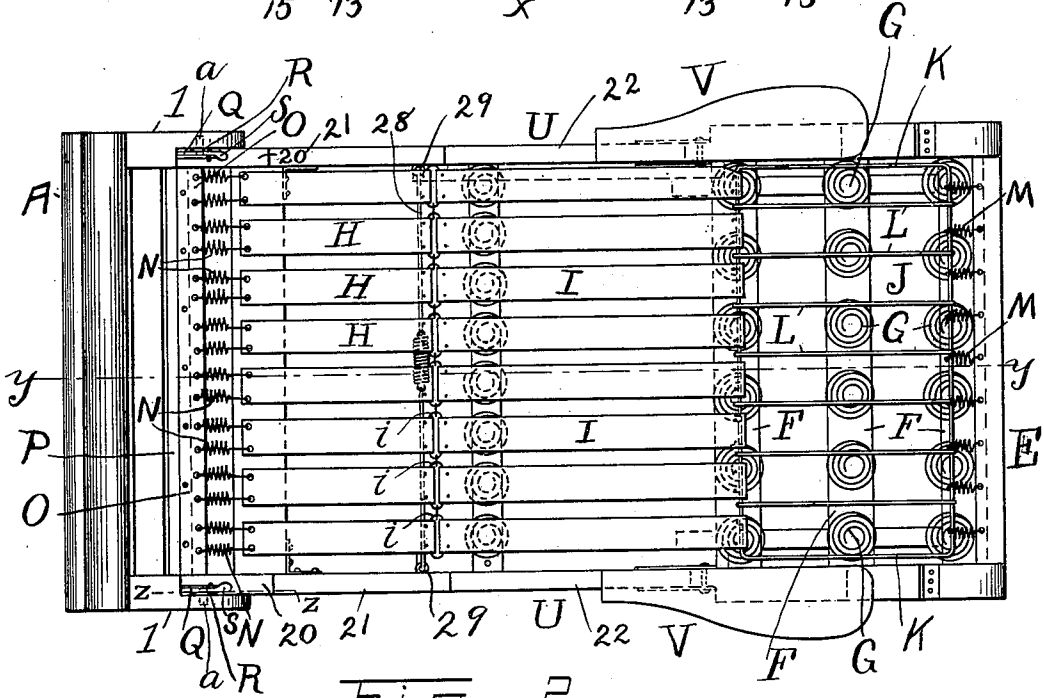


Fig. 2.

WITNESSES:

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M. L. MacLean

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Fig. 3.

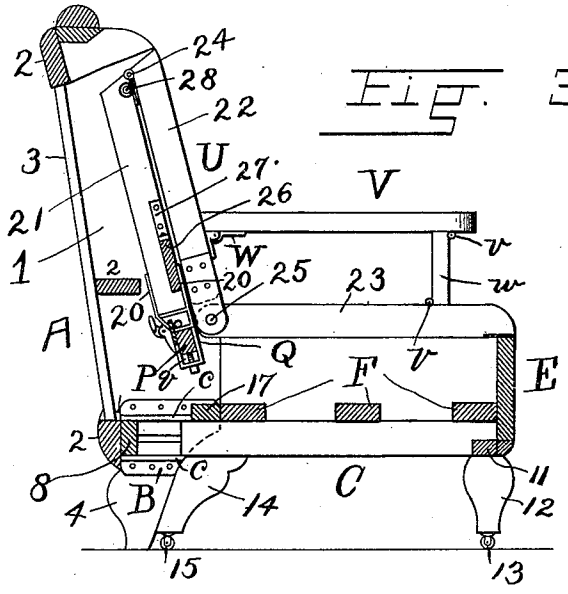
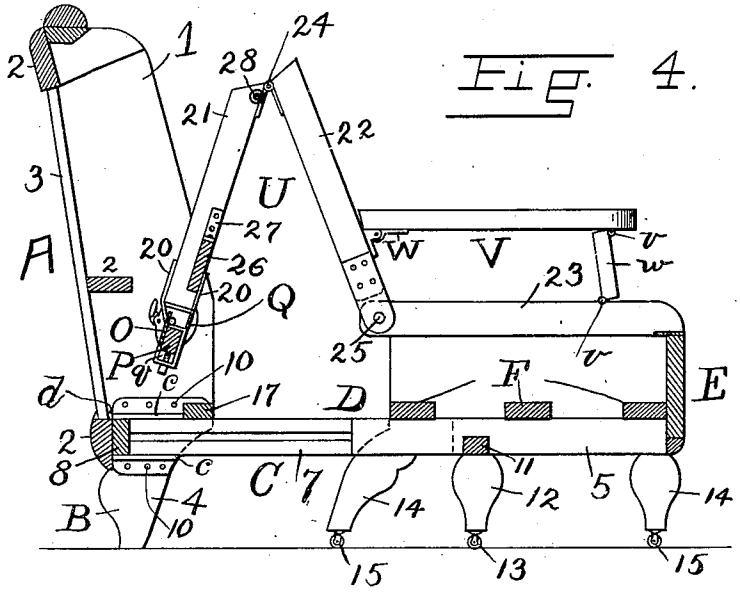


Fig. 4.



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No. 650,498. Patented May 29, 1900.

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(Application filed July 27, 1899.)

(No Model.) 3 Sheets—Sheet 3.

Fig. 5.

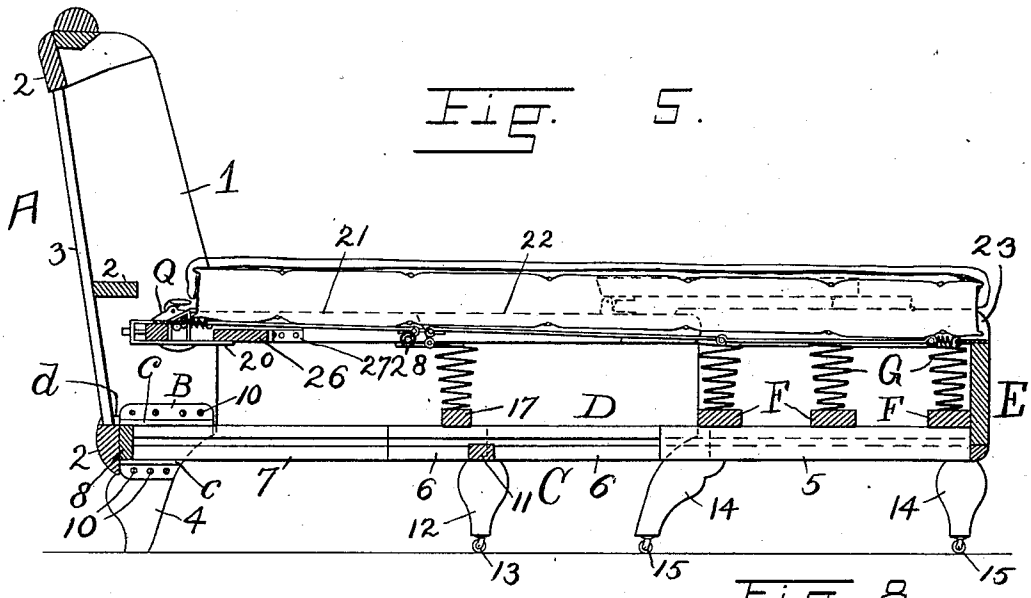


Fig. 6.

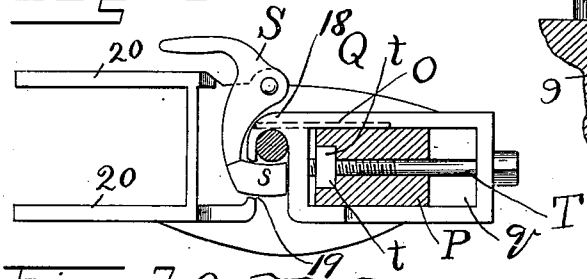


Fig. 7.

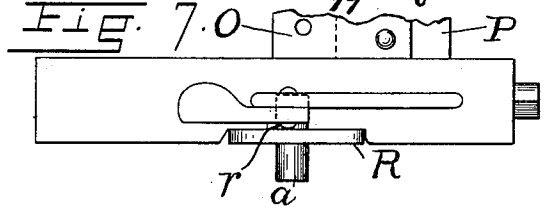


Fig. 8.

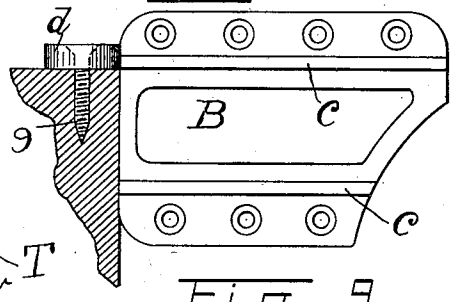


Fig. 9.

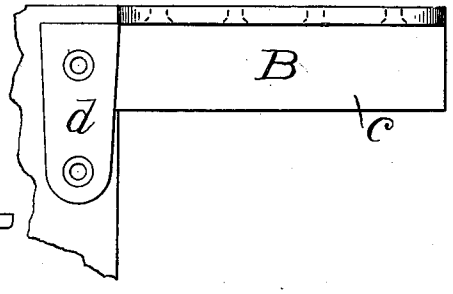
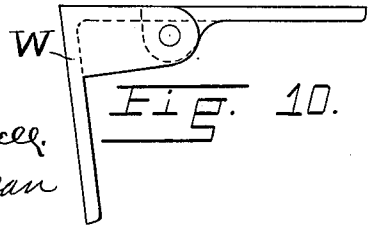


Fig. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE.

RICHARD J. WELLES, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE WELLES MANUFACTURING COMPANY, OF SAME PLACE.

BED-CHAIR.

SPECIFICATION forming part of Letters Patent No. 650,498, dated May 29, 1900.

Application filed July 27, 1899. Serial No. 725,294. (No model.)

To all whom it may concern:

Be it known that I, RICHARD J. WELLES, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Bed-Chairs, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters and figures of reference indicate corresponding parts.

This invention relates to improvements in bed-chairs, the object thereof being to provide a combined chair and bedstead which normally carries all necessary bedclothing, springs, mattress, &c., so disposed as to be equally applicable for use whether the device is employed as a chair or bed.

The construction is simple and durable, the device is susceptible of being readily knocked down and compactly folded for purposes of shipping, cleansing, &c., and it can be readily and quickly converted into its two respective forms.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of my improved bed-chair when in adjusted position for use as a chair, the bedclothing, mattress, &c., being removed; Fig. 2, a plan view in adjusted position for use as a bed; Fig. 3, a vertical sectional elevation taken on a line $x\,x$ of Fig. 1; Fig. 4, a similar view showing the structure partly extended; Fig. 5, a longitudinal sectional elevation taken on the line $y\,y$ of Fig. 2; Fig. 6, a detailed cross-section taken on the line $z\,z$ of Fig. 2, and Figs. 7, 8, 9, and 10 are detailed views of parts of the structure.

In the practice of my invention as shown by the drawings I employ, primarily, a stationary back or head A of adapted construction and comprising side uprights 1, transverse cross-beams 2, vertical bars 3, and legs 4. Connected to the upright side walls of this head by means of flanged plates B is the supporting-frame C, which comprises sectional extensible side rails D, embodying, respectively, sliding sections 5 and 6 and a stationary section 7, these sections being in adapted slidable tongue-and-groove engagement with each other, the two opposite front sections being secured to the chair-box E and the rear sections being secured between the flanges c of the plates B. A cross-beam 8 is also extended transversely between the rear sections to strengthen the structure.

The flanged plates B are respectively provided with extended lugs d, which are secured to the lower cross-beam 2 of the head A by means of screws 9, screws 10 being employed to secure the said plates to the side walls of the head A, whereby a secure structure is provided. A cross-beam 11 connects the two opposite slides 6, and they are supported by means of legs 12, which are supplied with casters 13. The box or seat portion E of the device is also supported by means of legs 14, which have casters 15 to admit of freely sliding the said box backward and forward. Extended transversely across the seat or box portion E are stationary slats F, which support ordinary furniture-springs G, a similar set of springs being supported by means of a traverse-slat 17, which connects the oppositely-located sliding sections 6 of the lower framework C. These latter springs act as a means for preventing sagging of the mattress when the device is used as a bed, said mattress being supported directly by means of a suspended folding bed-spring structure, which comprises a series of resilient metallic strips H, an adjacent similar series I, connected to the series H by means of hinges or links i, and a framework J, which embodies a rectangular metal wire frame K and wire cross-bars L, this said framework resting directly upon the springs G of the seat-section E.

The framework J is connected to the front wall of the box E by means of spiral springs M, and a similar set of spiral springs N connects the rear series of metallic strips H to a metallic plate O of an adjustable cross-bar P. This said bar is slidably mounted within rectangular boxes q of metallic hangers Q. These hangers are located upon the inner surfaces of the upright side walls of the head A, and they are respectively pivotally attached to a stud r of a plate R, one plate being secured by means of screws to each side

wall *l* and each of said plates being provided with a stud *a* on its inner surface to extend into an upright 1 of the head A to maintain secure engagement therewith. The stud *r* does not pass entirely through the body of the hanger Q, but engages an arched flange 18, forming an integral part of the said hanger, whereby the hanger and its attached parts may be readily disengaged from the stud for the purposes of knocking down or disassembling the structure.

To prevent accidental disengagement of the stud and hanger, a swinging latch S is pivotally attached to said hanger and provided with a weighted projection *s*, which passes through an opening 19 in the rear wall of the flange 18 and abuts against the opposite wall, as clearly shown by Fig. 6 of the drawings. The sliding cross-bar P is adjusted back and forth for the purpose of increasing or decreasing the tension of the springs M and N by means of bolts T, which pass through the front walls of the rectangular boxes *q* of the hanger Q and thence through the respective ends of the bar P, threading into the countersunk nuts *t* in said bar. Each hanger Q is provided with forwardly-projected integrally-formed plates 20, which respectively embrace and are secured to the rear end of a sectional side rail U, which embodies the three sections 21, 22, and 23, the sections 21 and 22 being hinged to each other, as at 24, and the sections 22 and 23 being pivotally connected, as at 25, whereby said side rails may be folded, as shown by Figs. 3 and 4 of the drawings. The sections 22 and 23 further respectively engage a folding arm V by means of hinges *v*, connecting an upright *w*, and a hinge W, whereby the arm can be folded, as shown by dotted lines in Fig. 5 of the drawings. Each front section 23 is secured to the chair-box E, and the oppositely-located sections 21 are connected to a traverse-bar 26 by means of angle-irons 27, thus providing a strong structure. A flexible rod 28, which comprises in part a spiral spring, is extended transversely across the structure and engages eyes 29, located, respectively, at the inner ends of the side sections 21 of the folding rail U. This rod is adapted to raise the hinged flat sections of the bed-spring during the operation of converting the bed into a chair.

The operation and advantages of my invention are readily understood by reason of the improved general construction and relative arrangement of the parts, as above described. When the device is used as a bed or couch, the sectional top rails are in normal horizontal position, as indicated by Figs. 2 and 5 of the drawings, the framework is extended, and the folding bed-spring is stretched taut to receive the mattress and bedclothing. To convert the device into a chair, it is simply necessary to force the rear side rails upwardly at a point near their hinged connections and push the lower extensible framework in a rearward direction until the structure assumes the position illustrated by Fig. 3 of the drawings. When the device is in this position, the rear end of the mattress rests upon the central cross-piece 2 of the head A to take all weight and strain from the folding bed-spring strips H and I, and the forward portion of said mattress acts as an upholstered back and seat portion for the chair, there being no necessity of removing or disturbing the bedclothing.

I do not confine myself to the specific details of mere mechanical construction as herein shown and described, as it is obvious that under the scope of my invention I am entitled to slight structural variations.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bed-chair, the cross-bars P, the hangers Q in which the ends of the bars extend, the screws T, and the nuts *t* by means of which the cross-bars are adjusted, combined with the plates R, provided with the studs *a*, *r*, the swinging latches S pivotally attached to the hangers and provided with weighted projections, substantially as shown.

2. A bed-chair, comprising a stationary head, an extensible lower framework, folding side rails with folding arms hinged thereto, and a folding bed-spring, embodying metallic strips arranged in adjacent series hinged to each other and a wire framework, and spiral springs supporting the said bed-spring, and hangers connecting the folding side rails to the head of the device, and flanged plates connecting the extensible lower framework to said head, substantially as shown and described.

3. A bed-chair, comprising a stationary head embodying upright sides and cross-beams, and an extensible lower framework connected to the sides of said head by means of flanged plates, and a chair-box forming part of said extensible frame, and folding side rails, having folding chair-arms attached thereto, and pivotal hangers connecting the said folding rails to the side walls of the said head, and an adjustable cross-bar attached to the said hangers, and a folding bed-spring connected to the said adjustable cross-bar and to the forward portion of the said chair-box and the spiral springs by means of which the folding bed-spring is secured in position, substantially as shown and described.

4. As a bed-chair, the combination of a stationary head embodying upright sides and cross-beams, and an extensible framework embodying sliding sections and a chair-box, and folding side rails and removable hangers, and plates with studs on each side thereof for connecting said side rails to the side walls of the said head, the hangers respectively embodying arched flanges engaging the studs projected from the said plates, swinging latches pivotally attached to the hangers, and which latches pass through openings in the rear walls of the flanges, projected plates

engaging the said folding side rails, and boxes; with an adjustable cross-bar engaging said boxes and a folding bed-spring suspended from the said bar and from the front of the chair-box, and spiral springs connecting the said bed-spring to the said cross-bar and the said front wall, substantially as shown and described.

5. In a bed-chair, the hangers Q provided with sockets 20, formed integral therewith, the side rails which have their ends to fit in the sockets, the pivoted swinging latches pivotally attached to the hangers, and provided with weighted projections which pass through openings in the rear wall of the hanger, the sliding cross-bar having its ends adjustably held in the hangers, and the screws for adjusting the cross-bar back and forth in the hangers, substantially as specified.

6. In a bed-chair, the sliding cross-bar, the hangers provided with arched flanges, and in which the ends of the cross-bar are held, the screw for adjusting the cross-bar back and forth, the plate R secured to the head A, and provided with the oppositely-extending studs *a*, *r*, and the swinging latches pivoted upon the hangers and having their lower ends to engage with the stud *r*; the hangers being provided with the socket 20, and an opening 19 through which the weighted portion of the latch passes, substantially as described.

7. A bed-chair, comprising a stationary head, an extensible lower framework, folding side rails, folding arms hinged to said rails, a suspended folding bed-spring comprising two hinged sections embodying metallic strips and a wire framework, and means for suspending the said bed-spring and for hanging the folding side rails, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of July, 1899.

RICHARD J. WELLES.

Witnesses:
M. G. MACLEAN,
GEO. E. BARRETT.