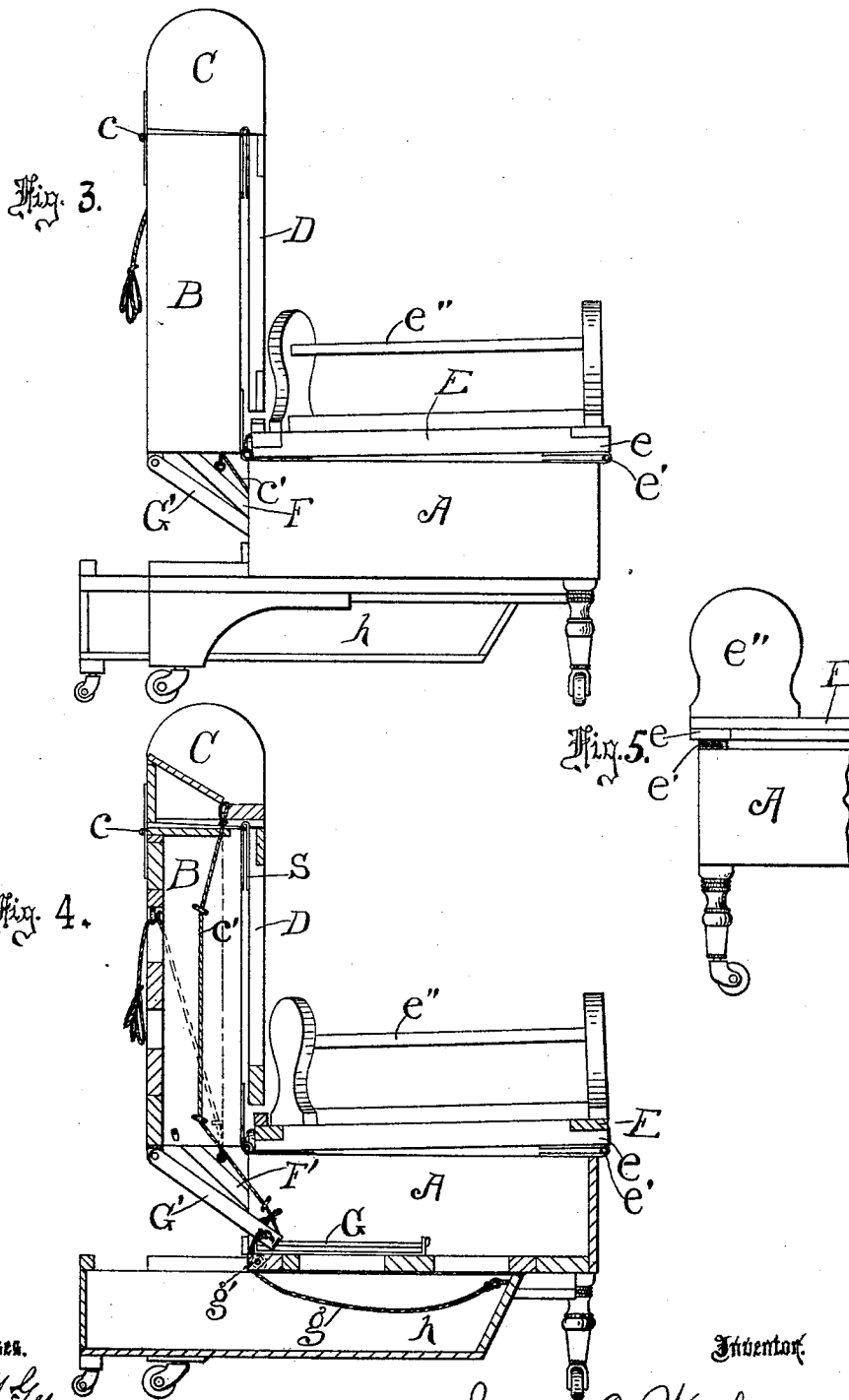


J. C. WOOD.
BED CHAIR.

No. 500,091.

Patented June 20, 1893.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES C. WOOD, OF LOS ANGELES, CALIFORNIA.

BED-CHAIR.

SPECIFICATION forming part of Letters Patent No. 500,091, dated June 20, 1893.

Application filed March 21, 1893. Serial No. 467,014. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. WOOD, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Bed-Chairs, of which the following is a specification.

Heretofore the objection to bed chairs has been that in order to provide a bed of only the ordinary length when the chair is unfolded, the back of the chair must be made so low as to practically destroy its merits as a chair. As made heretofore if the back is made of the customary height of the back of sofa chairs, when the chair is unfolded to form the bed, the bed will be too long, say eight feet or more in length. That is to say, heretofore it has been the practice to hinge the back (or supplemental section which forms the head rest of the bed) to the top of the back of the chair, for the reason that, in order to give a suitable support for the head, the top of the back of the chair must project out beyond the portion which supports the back of the person using the chair and if this projecting portion is not attached to the supplemental section, it acts as a stop when such section is unfolded from the back and prevents the said section from unfolding sufficiently far to permit the use of such section as a head rest for the bed; thus, if the back is thirty inches in height, the supplemental section will have to be of the same length, or nearly so, and when the supplemental section is unfolded from the back, the two sections alone will make a bed of about five feet in length; the seat of the chair is properly always rounded in the center, and to form a comfortable bed it is desirable to attach this rounded upholstered portion of the seat to a seat section which is hinged to the front of the base section and arranged to unfold to the front to form the foot rest for the bed; the seat should be at least eighteen inches wide, and when the seat section is unfolded from the base the base and seat section add thirty-six inches to the length of the bed which, with the back and supplemental section would form a bed of nearly eight feet in length.

Heretofore it has been the custom to make the back of the chair low enough to form a bed of the proper length when the chair is un-

folded, thus making a convenient bed, but destroying its artistic and comfortable qualities when used as a chair.

One object of my invention is to produce a folding chair which will have the desired height of back and which, when unfolded, will form a bed of only the ordinary length.

A further object of my invention is to so arrange the various parts of the chair that when folded the joints or seams between the sections will be entirely hid from view so that the chair will present the appearance of an ordinary sofa chair.

A further object of my invention is to simplify and increase the efficiency of operation of the device for pulling out the drawer beneath the chair to support the back when the back is lowered, which device is an improvement over that shown by me in application filed November 19, 1892, Serial No. 452,503.

My invention comprises the combination of the base section, a seat section hinged to the front of such base section and arranged to fold upon such base section; a main back section hinged to the rear of the base section; an auxiliary or supplemental back section hinged to the top of the main back section and arranged to fold upon such back section, and the chair head rest section hinged to the top of the main back section and arranged to project over the edge of the auxiliary section when the chair is folded to form the head rest for the chair and to swing downward and to the rear when the chair is unfolded to form the bed, thus to remove the roll out of the way of the auxiliary section when such auxiliary section is unfolded to form the head rest of the bed.

My invention also comprises various combinations and arrangements of parts hereinafter fully set forth.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective side elevation of the frame-work of the chair in the position it assumes when unfolded to form a bed. In this view the upholstering is removed to clearly show the parts. Fig. 2 is a perspective top side view of the chair unfolded. This view is the same as Fig. 2 but with the upholstering in place to form the bed. Fig. 3 is a side elevation of the framework of the

chair in its folded position. Fig. 4 is a sectional view of the same to show the arrangement of parts. Fig. 5 is a fragmental front view of a portion of the frame illustrating the projection of the seat section beyond the base section.

A is a main or base section to the top of the rear side of which is pivoted or hinged the back section B. To the top of the back section is pivoted the head rest section C by a hinge *c* arranged at the rear side of the back section. To the top of the front side of the back section is pivoted the supplemental back section D. The roll section C is hinged to the back section in order to allow it to be swung downward out of the way of the head rest section when the head rest section is unfolded from the back section; *i. e.*, the upholstering upon the roll section projects beyond the plane of the front of the head rest section, and when the head rest section is unfolded from the back section, if the roll is rigid with the back section, the upholstering on the roll section and the head rest section will engage and will prevent the head rest section from fully unfolding.

Suitable means are arranged to hold the roll section firmly upon the back section when the device is used as a chair. As shown, these means consist of a cord *c'* attached at one end to the roll section near the front edge of such roll section and passing thence through suitable guides arranged upon the back section, downward and forward to the base section and has its other end attached to the rear of the bottom of the base section below the point at which the back section is hinged to the base section. When the chair is in its folded position as shown in Figs. 2 and 4 the cord is drawn taut and the roll is bound firmly upon the top of the back section, and when the back is lowered, as shown in Figs. 2 and 3 the cord is loosened by reason of the change of angle between the main and back section and the roll is allowed to swing back on its hinges by reason of its own weight out of the way to allow the head rest section to be unfolded from the back section.

The seat section E is hinged at one edge to the front of the main or base section A and is arranged to project over the front and the side edge of such main section. This projection *e* serves to conceal the joint between the main section and the seat section at the sides of the chair and also allows more convenient and artistic upholstering of the front of the chair. By this projection upon the front of the chair I am enabled to set the hinges *e'* flush with the front of the seat section so that when the chair is upholstered the hinges are not visible from the front, and joints of the hinges do not project beyond the edge of the seat section to push out the plush, thus causing the plush to be liable to wear at the projecting portion.

The seat section is provided with the upwardly projecting arms *e'' e''* which are rigidly secured to the seat section and when the seat section is reversed to form the foot of the couch the arms are also reversed and project downward below the level of the bed out of the way of the occupant of the bed. This projection of the seat section beyond the sides of the base section while connecting the joints between the two sections also serves the purpose of forming a more artistic chair.

In many folding bed chairs and lounges of which I am aware the seat section is arranged to fold down between the arms of the chair after the back of the chair has been raised. In some lounges the backs are stationary. By reason of this, in order to form a neat joint between the back section and the seat section, the projection of the upholstering causes the seat section to strike against the back section at a point considerably above the seat of the chair when folded. The folding and unfolding of the seat section against the back section cause the plush to wear quite rapidly and after a few month's use the wear is visible. Since the object of such chairs is to conceal the real use to which they are placed, the principal object for which they are designed is defeated. A further disadvantage of this arrangement is that when the chair is moved, the seat is liable to fall outward by its own weight since there is nothing to retain it in place except the friction between the back and the seat section. I overcome this difficulty by providing a chair with the seat section hinged to the base section and arranged with its rear face substantially flush with the rear side of the base section when such seat section is folded thereupon and by providing a head rest section of suitable length to rest upon the top of the rear edge of such seat section when the chair is folded to thereby cover the joint between the seat section and the back section and at the same time hold the seat section firmly upon the base section. The arms *e''* engage with the head rest section and prevent it from opening outward; the chair is thus rigidly locked together and may be moved into any position without danger of unfolding.

The means for holding the back elevated consists of the shore-brace F pivoted to the back section at one end and arranged to engage the stop *f* (which is provided upon the main section A) when the back is elevated. My improved drawer pull comprises the combination of the guide rod G fixed to the base section by suitable means and the push lever G' having one end perforated and arranged to slide along such guide and having its other end pivotally attached to the back section B below the pivotal point of attachment between the back section and the base section; the cord *g* attached to such lever at one side of the guide rod and running from thence back over the pulley *g'* and forward to the front of the drawer *h* to which it is attached in a manner similar to that shown in my former application. The objection to my

former arrangement which I desire to obviate, is that the cord sometimes becomes tangled in the guide-way and is liable to become cut by the guide block. By attaching the cord to the push lever at one side of the guide rod I am enabled to entirely avoid this difficulty.

Other means for attaching the head rest roll to the main back section so that it may be moved downward or to the rear when it is desired to unfold the supplemental section from the main back section may be employed without departing from the spirit of my invention. For instance the cord *c'* may be attached to the supporting arms *S* instead of being attached to the bottom of the base section, so that when the supplemental section is unfolded from the main back section the roll will swing down in the same manner in which it operates in the construction hereinbefore described, but such a change may be made by any one versed in the art and further description is unnecessary.

Another feature of construction whereby I greatly increase the convenience of operation of the working parts of the chair consists in providing the base section *A* with double walls *a, a'* arranged to form a chamber upon each side of the chair to respectively chamber the shore braces or stops which support the back section in its elevated position, and having the base section *B* which is hinged to the rear of the base section provided with shore or ratchet braces *F F'* each adapted and arranged to slide forward into its respective chamber when the back of the chair is lowered.

The supplemental back section *D* is supported by the supporting arms *S* as shown and described in my former application, and these arms are arranged to slide forward into a chamber *B'* in the sides of the main back member *B* when the supplemental member is folded upon the back member. By this arrangement of the double walls the shore or ratchet braces are removed out of the way and do not interfere with the use of independent mattresses in the main back section and in the base section, and the working parts are not liable to get out of order, and cannot become displaced by any ordinary usage of the chair.

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

1. In a folding bed-chair having its back hinged to the base, the combination set forth of the main and supplemental back sections hinged together at the top, and the head rest roll hinged to the rear edge of the top of the back and adapted and arranged to fold upon the top of the back and cover the joint between the main and supplemental sections when the back is erect, and to be swung out of the way to allow the two sections of the back to be unfolded.

2. A folding bed chair comprising the combination of the base section; the seat section

pivoted or hinged to the front of such base section and adapted to fold upon such base section and provided with the upwardly projecting arms fixed to such seat section and adapted to be reversed when the seat section is unfolded from the base section to form the bed; the back section hinged to the rear of the base section; the supplemental back section hinged to the top of the front of the main back section; the chair head rest roll section pivoted or hinged to the rear of the top of the back section and adapted and arranged to cover the joint between the main and supplemental sections and to form the head rest roll for the chair when the back is raised and to swing backward and downward when the back of the chair is lowered, whereby the roll may be moved out of the way of the supplemental section when the supplemental section is unfolded from the main back section to form the head rest for the bed.

3. A folding chair comprising the combination of the base section; the seat section hinged to the front of such base section and arranged to fold upon such base section; the main back section hinged to the rear of the base section; the supplemental back section hinged to the top of the front of the main back section; the chair head rest roll section pivoted or hinged to the main back section and adapted to cover the joint between the main and supplemental sections and to form the head rest roll for the chair when the chair is in its folded position, and to swing downward and to the rear when the chair is unfolded to form a bed, whereby the roll is removed out of the way of the supplemental section when the supplemental section is unfolded from the main back section to form the bed.

4. A bed couch provided with a base section; a back section hinged to the rear of such base section; a supplemental section hinged to the top of the front of such back section; and a seat section hinged to the front of the base section and arranged to project over the sides and front of such base section when such seat section is folded upon the base section, whereby the projection covers the joint between the seat section and the base section at the sides of the chair when the seat section is folded upon the base section, and the hinges connecting the seat section to the front of the base section may be set back flush with the edge of such seat section as and for the purpose set forth.

5. In a folding bed, the combination of the base section; the back section hinged to the rear of the base section; the guide rod fixed to the bottom of the base section; the push lever having one end arranged to slide along such guide rod and having its other end pivotally attached to the back section below the pivotal point of attachment between the base section and the back section; a pulley attached to the rear of the base section; a drawer arranged to slide beneath said base section; and the cord attached to the push le-

ver at one side of the guide rod and running thence over the pulley and thence forward and attached to the front of the drawer.

5 6. A folding bed chair comprising the combination of the base section; the back section hinged to the rear of such base section; the head roll section hinged to the rear of the back section and arranged upon the top of such back section to cover the joint between
10 the main and supplemental sections and to form the head rest roll for the chair; the cord attached at one end to the head rest roll section near the front edge of such roll section and passing thence through suitable guides arranged upon the back section downward and
15 forward to the main or base section and having its other end attached to the rear of the bottom of the main section below the point at which the back section is hinged to the main section all so arranged that when the back is
20 in its elevated position, the cord will be drawn taut and will firmly hold the roll section upon the top of the back section to form the head rest for the chair, and that when the back is
25 lowered the cord will be loosened and allow the roll to swing outward and downward away from the back section.

7. A bed chair comprising the combination of the base section; the seat section pivoted to the front of the base section; the main back section pivoted or hinged to the rear of such base section; the supplemental back section pivoted or hinged to the top of the front of such main back section; the head rest roll arranged upon the top of such main back section to cover
35 the joint between the main and supplemental sections and to form the head rest for the chair, and suitable means arranged and adapted to connect the head rest roll with the main back section to hold the roll firmly in position upon the top of such main section when
40 the chair is in its folded position, and to allow the roll to be moved to the rear or downward when the chair is unfolded to form the bed, whereby the roll is removed out of the way of the supplemental back section when
45 such section is unfolded from the main back section to form the head rest for the bed.

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