

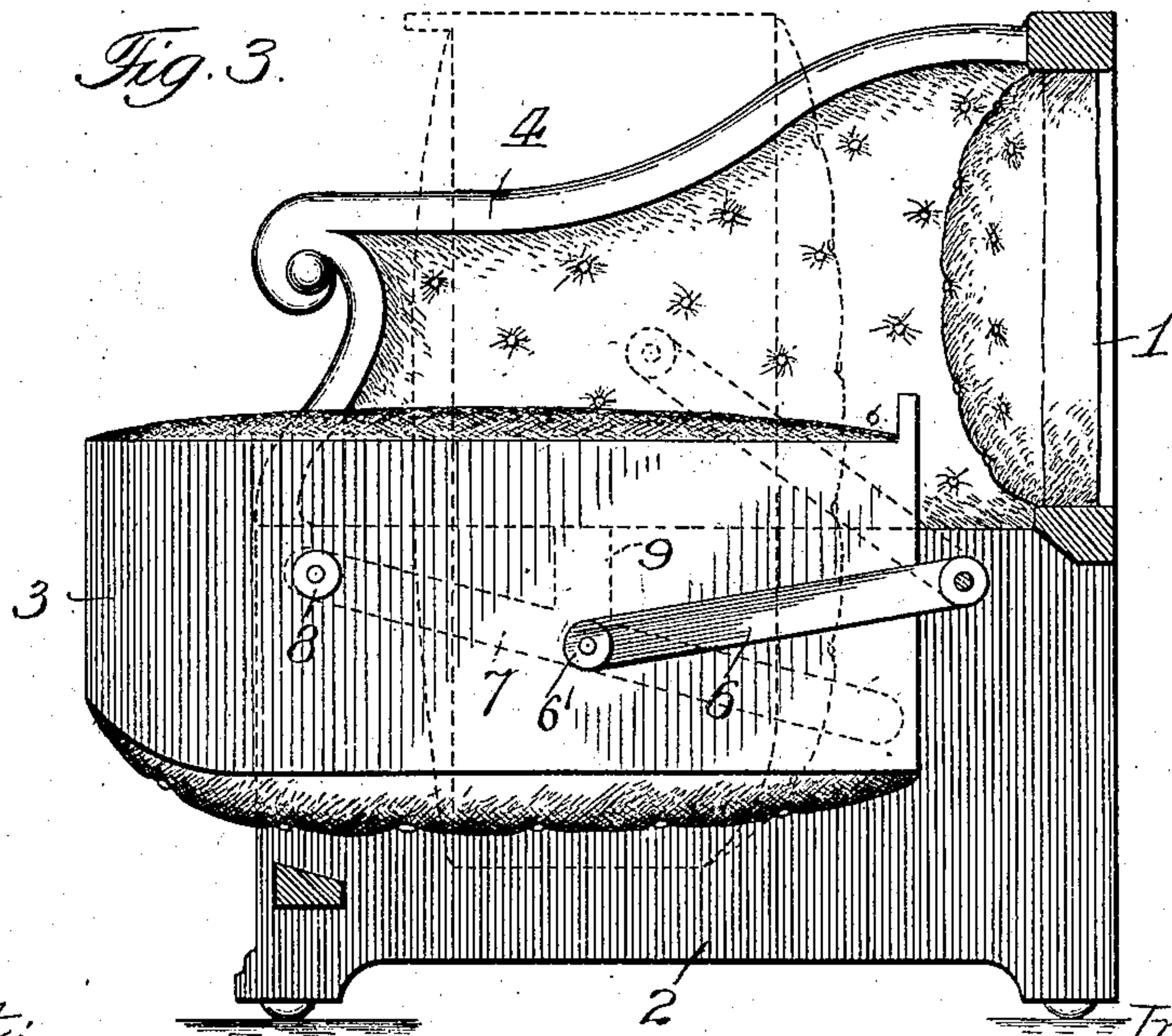
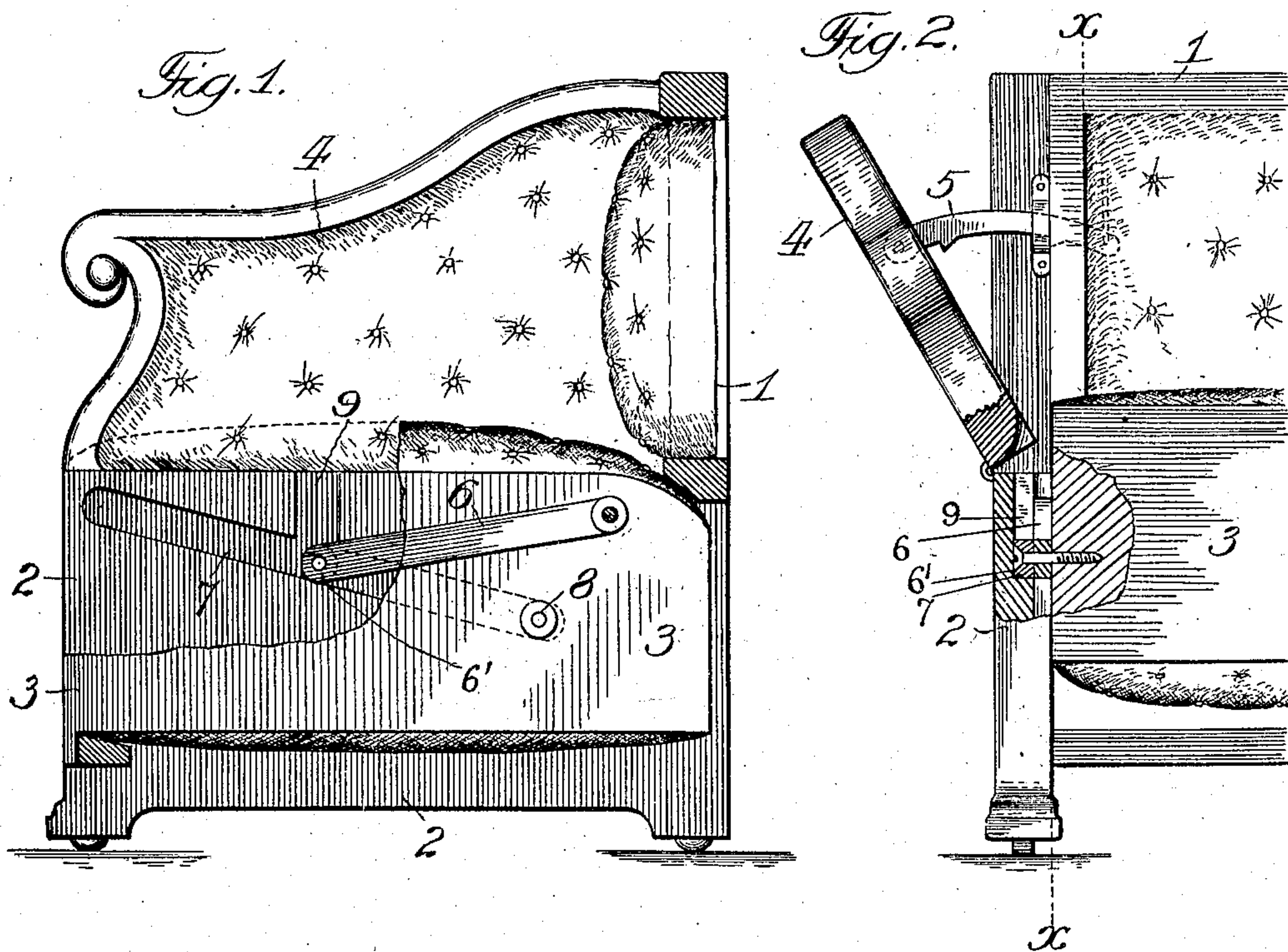
No. 816,134.

PATENTED MAR. 27, 1906.

J. B. STRAND & J. H. HAUGEN.

SOFA BED.

APPLICATION FILED AUG. 21, 1905.



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# UNITED STATES PATENT OFFICE.

JOHN B. STRAND AND JOHN H. HAUGEN, OF CHICAGO, ILLINOIS.

## SOFA-BED.

No. 816,134.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed August 21, 1905. Serial No. 275,051.

*To all whom it may concern:*

Be it known that we, JOHN B. STRAND and JOHN H. HAUGEN, citizens of the United States of America, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sofa-Beds, of which the following is a specification.

This invention relates to that class of sofa-beds which in an unfolded condition has all the appearances of a Davenport sofa; and the object of the present improvement is to provide a simple and efficient structural arrangement and combination of parts adapted to afford a convenient and substantial attachment of the reversible horizontal portion of the sofa-bed, so that when in one position such portion will afford a single bed of ample width and in the other position will provide a sofa of the usual appearance and dimensions, all as will hereinafter more fully appear and be more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional elevation on line  $x x$ , Fig. 2, illustrating the article in a sofa form, parts being broken away for the better illustration of the mechanism. Fig. 2 is a fragmentary front elevation, partly broken away, of one end of the article in its bed form. Fig. 3 is a companion sectional elevation to Fig. 1, showing the article in a bed form.

Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 is the usual upright back member, and 2 the upright end members connected permanently to said back member to constitute the main supporting-frame of the sofa-bed. To such frame is connected in the pivotal and adjustable manner hereinafter described the reversible horizontal seat and bed member 3, which in one of its positions constitutes the seat portion of a sofa and which in its other position constitutes a horizontal surface of ample width, adapting it for convenient use as a bed for a single person.

4 represents arm members secured on the top edges of the end members 2 in the pivotal manner shown and provided with adjusting sector-bars 5, by which said arm members are secured in an inclined position to constitute pillow-rests in the use of the article as a bed and in a vertical position to consti-

tute arm-rests in the use of the article as a sofa.

6 represents radius-links pivotally secured at their rear ends to the inner faces of the upright end members 2 adjacent to the rear ends of said members, as shown. Such radius-links at their forward ends have outward lateral projections 6' in line with the pivot-pins and are pivotally secured to the respective ends of the reversible member 3 midway the width of said member, and such forward ends are adapted to rest upon the tracks hereinafter described to aid in the support of the reversible member aforesaid.

7 represents tracks or slideways formed in or arranged upon the inner faces of the upright end members 2 in planes below the points of pivotal attachment of the radius-links 6 to said end members. Such tracks or slideways are preferably inclined from the horizontal and in a downward direction toward the rear of the article, as shown in Figs. 1 and 3, with a view to attain a low position of the reversible member when the article is arranged as a sofa and a raised position of said member when the article is arranged as a bed.

8 represents track-wheels having engagement with the tracks or slideways 7 and secured to the respective ends of the reversible member 3 at points removed from the points of attachment of the radius-links 6 to said reversible member.

9 represents vertical grooves or ways formed in the end members 2 for the free travel of the lateral projections 6' of the radius-links as the same have movement in the operation of reversing the reversible member 3. The provision of such vertical ways 9 is necessary in our preferred construction in which the tracks or slideways 7 are formed in the end members 2 instead of projecting from the surfaces of the same.

The operation of the parts in changing from a sofa to a bed form of the article is as follows: The arm members 4 are initially released and moved into the inclined position shown in Fig. 2, after which by an upward pull on the lower and forward edge of the reversible member 3 the same is tilted upward with the track-wheels 8 as a fulcrum and the radius-links 6 acting as a restraining means to prevent any independent movement of the ends of the reversible member. With the



progress of such tilting movement the track-wheels 8 move forward on the tracks 7, the forward ends of the radius-links moving upward in the ways 9 in consonance with such forward movement of the track-wheels. Such forward movement of the track-wheels continues until a full half-turn has been imparted to the reversible member. With the attainment of such half-turn the track-wheels are at the forward ends of the tracks and the radius-links have returned to their original position and in contact with the tracks to constitute in connection with the track-wheels the entire supporting connection between the reversible member and the supporting body or frame. In changing the article back again from a bed to a sofa form the reverse of the above-described operations will take place.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a sofa-bed, the combination of a back, end members having tracks or slideways formed in their opposed faces and provided with vertical ways communicating with said tracks, a reversible member provided with track-wheels engaging the tracks, and radius-links provided with lateral projections in line

with the pivotal connections of said links to the reversible member, such projections having movement in the aforesaid vertical ways and bearing upon the aforesaid tracks and adapted in conjunction with the track-wheels to afford the entire supporting connection between the reversible and end members, substantially as set forth.

2. In a sofa-bed, the combination of a back, end members having inclined tracks or slide-ways formed in their opposed faces and provided with vertical ways communicating with said tracks, a reversible member provided with track-wheels engaging the tracks, and radius-links provided with lateral projections in line with the pivotal connections of said links to the reversible member, such projections having movement in the aforesaid vertical ways and bearing upon the aforesaid tracks and adapted in conjunction with the track-wheels to afford the entire supporting connection between the reversible and end members, substantially as set forth.

JOHN B. STRAND.  
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In presence of—  
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