(No Model.)

W. A. CLARK.

SOFA BED.

No. 294,198. Patented Feb. 26, 1884.

Fig. 1.

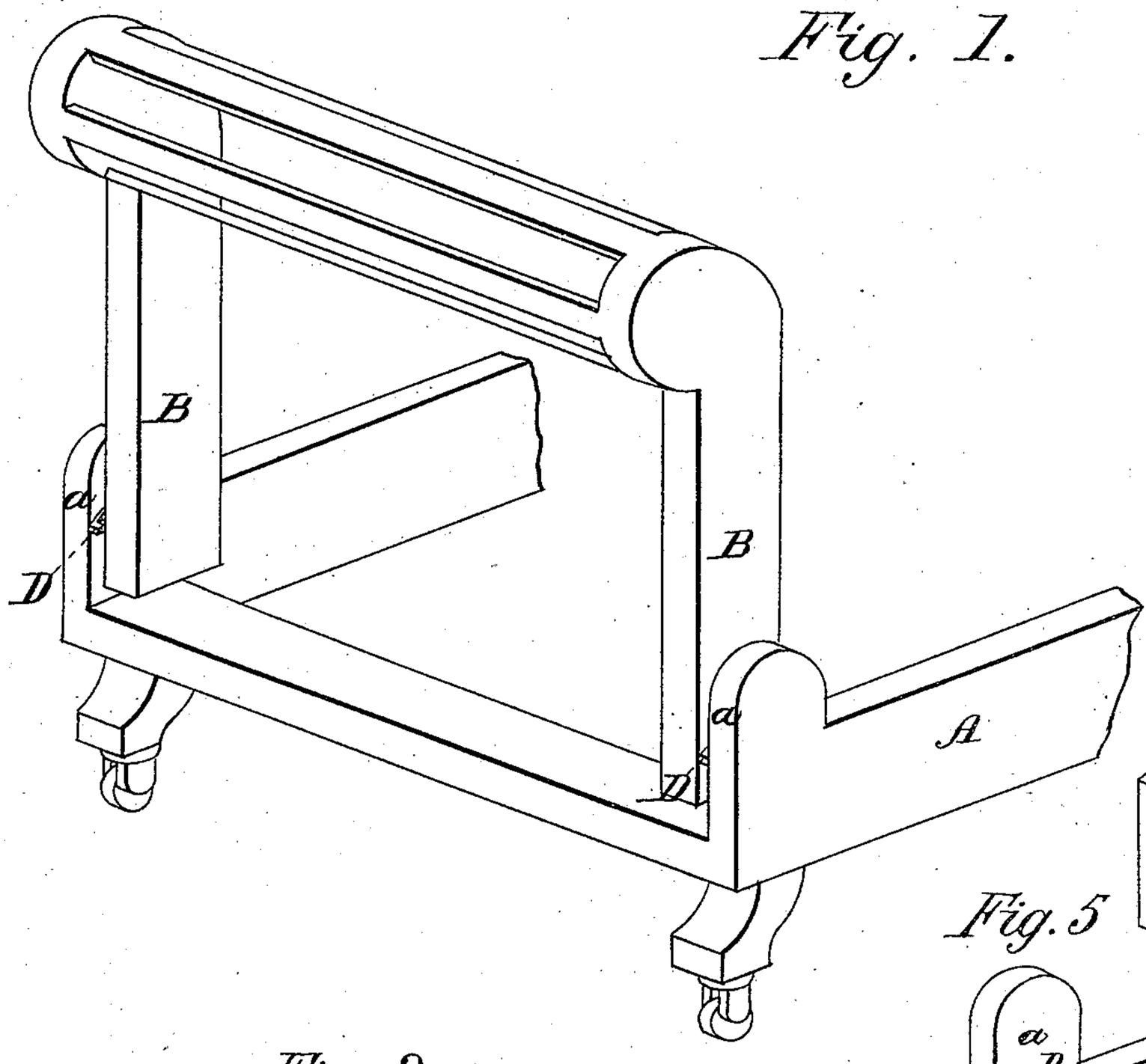


Fig. 2.

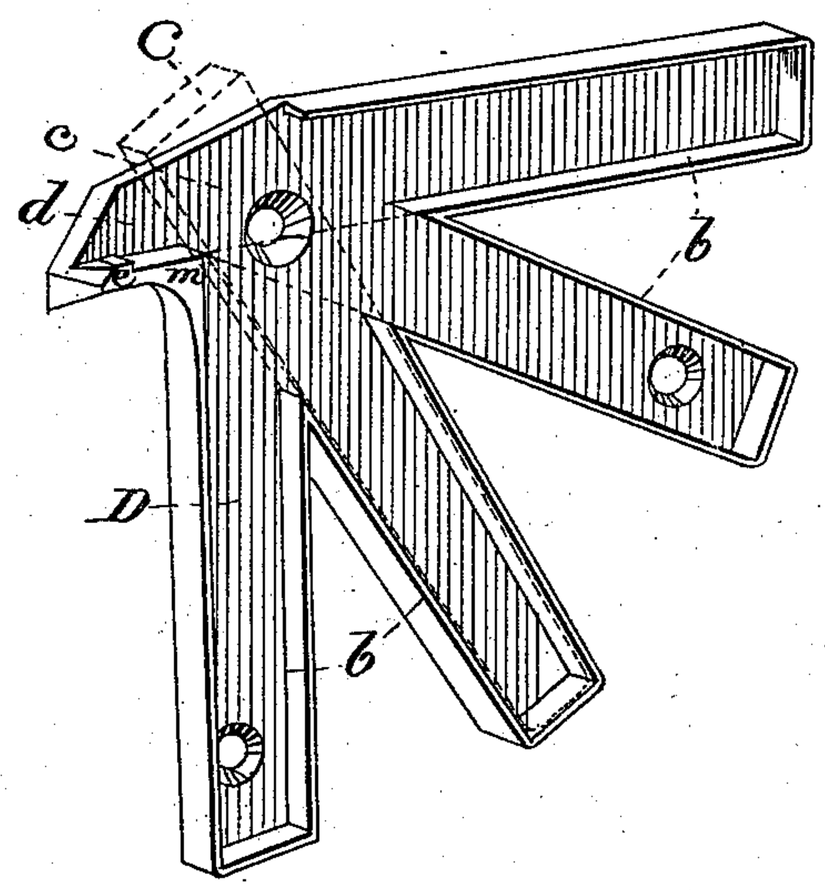


Fig. 3.

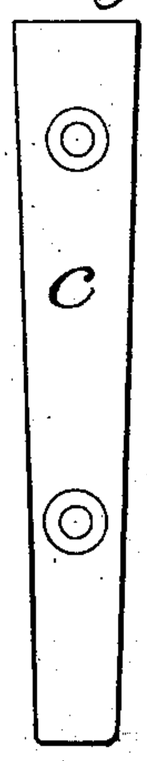


Fig 4.

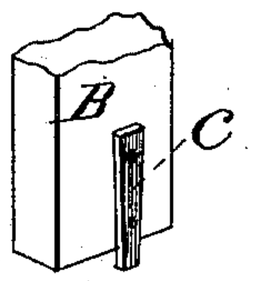


Fig. 5

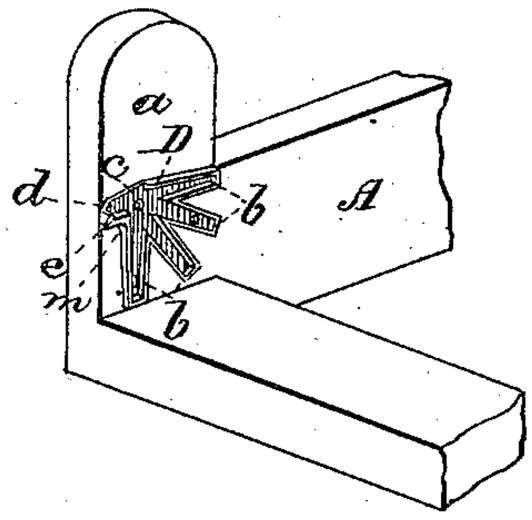
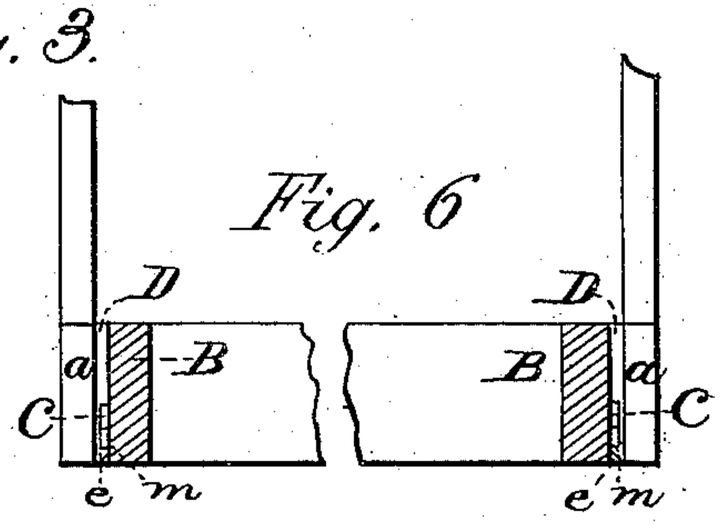


Fig. 6



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UNITED STATES PATENT OFFICE.

WILLIAM A. CLARK, OF SAN FRANCISCO, CALIFORNIA.

SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 294,198, dated February 26, 1884.

Application filed August 22, 1883. (No model.)

To all whom it may concern.

Be it known that I, WILLIAM A. CLARK, of the city and county of San Francisco, and State of California, have invented an Improvement in Sofa-Beds; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of sofa-beds in which the ends or heads which are fitted to the main body-frame are adapted to have an adjustment between a horizontal and a vertical position and intermediate inclinations.

My invention consists in the novel connection between the heads and body-frame, whereby this adjustment is effected.

The object of my invention is to provide a simple, secure, and easy-working connection between these parts, as I shall explain.

Referring to the accompanying drawings, Figure 1 is a perspective view of a portion of a sofa-bed, showing the main seat and head in position. Fig. 2 is a view of the plate D. Fig. 3 is a view of the bar C. Fig. 4 is a view showing the position of one of the bars C when fixed on one of the heads B. Fig. 5 is a view showing the position of one of the plates D on one of the guides *a* of the bed. Fig. 6 is a sectional plan view of head B and seat-frame A.

A is the body or seat frame of the sofa-bed, and *a* are the guides at its ends, in which the heads B are adapted to be fitted.

Upon the inner surfaces of the guides *a* are screwed plates D, Fig. 5. These plates are shown in Fig. 2. They have arms *b*, one of which is perpendicular and another horizontal, the remainder, as many as desirable, intervening at various angles. These arms are all grooved, as shown. The walls of the grooves of the intervening arms and the adjacent walls of the outside arms all terminate short of an intersection, leaving an open-top space, *c*, in the plate. The outside wall of the groove in the perpendicular arm is carried up to a point in line with the lower wall of the groove in the horizontal arm, and this point is also in line with the lower walls of the grooves in the intervening arms. The upper wall of the groove in the horizontal arm terminates at a point in line with the inner wall of the perpendicular groove, and the plate is extended at *d*, and has a lower wall in line with the lower wall of the groove in the horizontal arm. In this extension-wall a shoulder at *e* is made. This wall, meeting the outer wall of the perpendicular at right angles, forms the projection *m*, which acts as the fulcrum upon which the head turns.

Upon the sides or ends of the heads B is screwed a bar or pin, C, Fig. 4. One of these is shown in Fig. 3, and consists of a bar of metal long enough to lie within the horizontal groove of the plate, between its end and the shoulder *e*, extending across the space *c*. It is too long to extend between the end of the perpendicular groove and the upper edge of the plate, so that one edge of its upper end rests against the end of the upper wall of the horizontal groove when said bar is lying in the perpendicular groove. The bar is of sufficient width to fit snugly all the grooves except the horizontal one, which is made flaring at its inner or rear end to afford space enough in which to raise the rear end of the bar out of engagement with the shoulder *e*. The screws which secure these plates and bars to their respective parts are countersunk, so that they may operate together properly.

The head being fitted down to its place in a perpendicular position, the bars or pins C pass down into the perpendicular grooves, and find a bearing on one side against the outer wall of said groove, and a bearing on the other against its inner wall, and against the end of the upper wall of the horizontal groove. In this position they are held firmly and the head is steady and secure. When it is desired to adjust the head to an inclination, it is first raised up perpendicularly until the ends of the bars C clear the point at the intersection of the adjacent walls, when the head may be lowered. In this movement the bars C turn on the projection *m* as a fulcrum, until their ends are in line with any of the intervening grooves, when the head may be pushed in, the bars passing down into their grooves, and always finding a long bearing underneath by bridging the space *c* and resting on the point *m*. When the heads are lowered to a horizontal position, the bars slip into the horizontal grooves, which are long enough to allow the rear or top ends of the bars to slip down behind the shoulder *e*, and so lock themselves in position. To release them they

are lifted slightly, the width of the groove permitting, so that the bars become disengaged from the shoulders, and may be drawn back sufficiently to clear the grooves and fit into any of the others. This connection is simple, effective, and economical, giving a rigidity to the parts that a ratchet fails to give.

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

1. The plate D, having a perpendicular, a horizontal, and one or more intervening arms, *b*, and an extension, *d*, having a lower wall notched or shouldered at *e*, as shown, and in line with the lower wall of the horizontal groove, said arms having grooves, the walls of which leave a space, *c*, open on top, and a point, *m*, formed by the outer wall of the perpendicular groove and the lower wall of the extension *d*, said point being in line with the lower walls of the horizontal and inclined intervening grooves, in combination with the bar or pin C, which fits and slides within any of said grooves, changing from one to the other by fulcruming on point *m*, substantially as herein described.

2. The body or seat frame A, having end guides, *a*, and the plates D, secured to the inner surfaces of said guides, and having a perpendicular, horizontal, and one or more intervening arms, *b*, grooved as shown, to form space *c*, open on top, and fulcrum-point *m*, and having an extension, *d*, with a notched or shouldered lower wall, in combination with the head-frame B and the bars or pins C, secured to the sides or ends of said head-frame, constructed as set forth, and to fit and slide within said grooved arms, substantially as and for the purpose herein described.

3. The plate D, having a perpendicular, a horizontal, and one or more intervening arms, *b*, said arms having grooves, as shown, the walls of which are so arranged as to leave a space, *c*, open on top, and a projection, *m*, in a line with the outer and lower walls of the perpendicular and horizontal grooves, respectively, and the lower walls of the inclined intervening grooves, in combination with the bar or pin C, adapted to fit and slide within said grooves, substantially as herein shown and described.

In witness whereof I have hereunto set my hand.

WILLIAM A. CLARK.

Witnesses:
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J. H. BLOOD.