

F. BENNETT.

SOFA BED.

APPLICATION FILED FEB. 1, 1911.

1,056,773.

Patented Mar. 25, 1913.

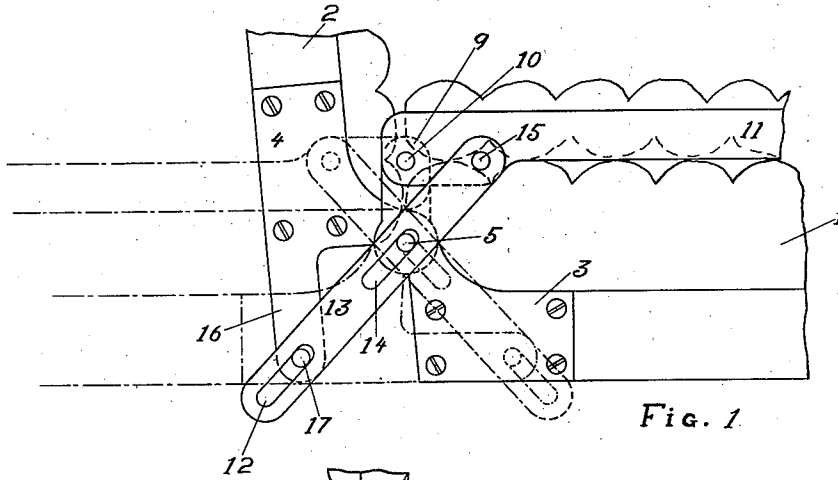


Fig. 1

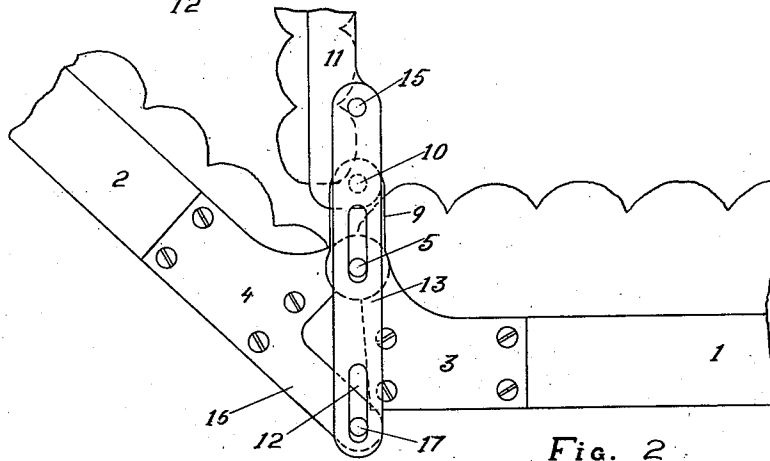


Fig. 2

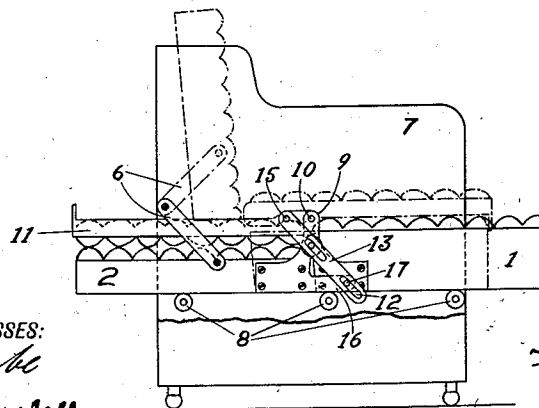


Fig. 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK BENNETT, OF RAVENSWOOD, NEW YORK, ASSIGNOR, BY HIS ASSIGNEES, TO UNITED STATES METAL PRODUCTS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF MASSACHUSETTS.

SOFA-BED.

1,056,773.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed February 1, 1911. Serial No. 606,062.

To all whom it may concern:

Be it known that I, FREDERICK BENNETT, of Ravenswood, Long Island, city of New York, county of Queens, and State of New York, have invented certain new and useful Improvements in Sofa-Beds, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that type of sofa bed in which there are relatively movable members which, when in one position, form the seat and back of a sofa, and, when in another position, form two adjacent sections of a bed body.

In my improved construction, there is provided an auxiliary member or section, which, when the main members are in sofa position, serves to cover one of said main members; and when the main members are in bed position, the auxiliary section serves to cover the other member.

The main object of my invention is to bring about the automatic positioning of this auxiliary section as the main members or sections are moved from bed position to sofa position, or vice versa.

It is also an object of my invention to connect these members in such a way that a minimum number of parts shall be employed, the members shall be positively interlocked when in normal positions, and the bed members shall be practically co-balancing in any and all intermediate positions, and all auxiliary retaining and positioning elements, such as springs, locks or the like, may be dispensed with.

These and other features of importance will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is now had to the accompanying drawings, which represent as an example one embodiment of my invention, in which drawings—

Figure 1 is an end elevation of a portion of a sofa bed with the members shown in solid lines in the sofa position, and in dotted lines in bed position, the usual end arms being removed; Fig. 2 is a similar view with the movable members intermediate of the bed and sofa position, and Fig. 3 is an end elevation of the sofa bed on a smaller scale, one of the arms being broken

away and the members being shown in solid lines in the bed position and in dotted lines in the sofa position.

My invention may be applied to various different forms of sofa beds of the character above referred to, but it is especially adapted to the sofa bed illustrated in my previous Patent No. 888,865, granted May 26, 1908. In the accompanying drawing, I have illustrated my invention as applied to the sofa bed shown in said patent and, therefore, I have not illustrated in detail the construction of the body of the sofa bed. I have merely shown the two main members, or sections 1 and 2, hinged together by butts 3 and 4 and a pin 5. The member 2 is movable so as to form either the back of a sofa or one section of a bed, and is connected by links 6 to the frame 7 of the bed. The member 1 is slidable within the frame, and may be mounted on suitable rollers 8. To this extent, the parts are substantially identical with those illustrated in said patent and operate in exactly the same manner.

The main feature of my present invention relates to an auxiliary cushion or mattress member 11, which covers the seat section when the parts are in sofa position, and covers the back section when the latter is moved from sofa position to bed position. This auxiliary section is so mounted that it automatically shifts from one position to the other upon the movement of parts from sofa to bed position or vice versa. The specific mechanism for accomplishing this automatic movement involves merely a link 13 supported and controlled by suitable pivots or stops. The butt 3 has an upward extension 9 above the pivot 5, and this extension is directly secured to the auxiliary section 11 by a pivot pin 10. The butt 4 has an extension 16 projecting from the lower end of the section 2 when the latter is in sofa position, and to this extension is pivoted the link 13 by a suitable pivot pin 17. The link 13 is fulcrumed on the pivot pin 5, and is pivoted to the section 11 by a suitable pin 15. The link 13, therefore, has its ends pivoted to the main section 2 and the auxiliary section 11, and is fulcrumed intermediate its ends upon the main section 1. To permit the parts to be moved, the link 13 must move lengthwise in respect to

one or more of the pins 5, 15 and 17. It is not material at which of these pins the sliding connection is permitted, but in the specific form illustrated, I provide the link 5 or lever 13 with slots 14 and 12, through which the fulcrum pin 5 and the pivot pin 17 extend. This prevents the lever from extending upwardly above the section 11 when the latter is in either position.

10 The rotatable bed member 2 may be of less thickness than the other member 1, so that when the device is used as a bed, the uppermost surface of the auxiliary cushion 11 will lie in the same plane as the upper surface of the normally non-rotatable bed member 1, thus offering a continuous bed mattress. This effect, however, may be accomplished in any desired manner.

In operation any movement of one member 20 is accomplished by a movement of the other two, and any one may be manually moved to move all three. For instance, when in use as a sofa, the auxiliary cushion 11 lies flat on the seat member 1, and the back member is substantially vertical, as shown in Fig. 1. To convert the sofa into a bed, the auxiliary cushion 11 is grasped at its outer edge and raised. As the pivot 15 describes an arc, pressure is exerted on the stud 17 secured to the butt 4 of the back member 2, and the lower edge of the latter is brought forward until the back section is lowered to a horizontal position and rests on the rollers 8, or upon any other suitable support. This movement is controlled by the link 6. Simultaneously, the seat member 1 slides forward with the lower end of the back section. The auxiliary cushion continues its rotation until it lies flat on 40 the member 2, as best shown in Fig. 3. Throughout this movement the members approximately balance each other and are restrained from unduly rapid reversals, by reason of the continuously changing leverages of the connecting parts and the compensating effect produced.

I do not limit myself to the precise link motion described, as all devices for securing an automatic copositioning of three or more 50 bed members are within the scope of my invention.

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

1. A sofa-bed having in combination, two 55 main sections hinged together, a movable auxiliary section, and fulcrumed levers having one end pivoted to one of the main sections, and the other end to the auxiliary section, whereby said auxiliary section is 60 adapted to automatically operate the main sections.

2. A sofa-bed having in combination, hinged seat and back-sections, a movable auxiliary section, and slotted levers ful- 65 crumed on the pintles connecting the hinged sections together, said levers having one end pivoted to the auxiliary section and the other end loosely connected to the back-section, whereby a movement of one section 70 will impart motion to the other sections.

3. A sofa-bed having in combination, seat and back sections hinged together, the back being movable to constitute a sofa back or bed section, an auxiliary section pivoted ad- 75 jacent to said hinged connections and movable to fold upon either the seat-section or the back-section, and means whereby the auxiliary section may be automatically shifted upon a relative movement of said seat 80 or back-section and the seat and back section upon a relative movement of the auxiliary section.

4. A sofa-bed having in combination, two sections hinged together, one of said sections 85 being movably-mounted to the sides of the frames, an auxiliary section, and levers having one end pivoted to said auxiliary section and the opposite end loosely-connected to the movably-connected section, said levers 90 being loosely fulcrumed on the pintles of the hinged connections, whereby the movement of either section will impart motion to the other sections.

In testimony whereof I have signed my 95 name to this specification in the presence of two subscribing witnesses.

FREDERICK BENNETT.

Witnesses:

W. C. CAMPBELL,
JEANNETTE WILLIAMS.