No. 607,182. Patented July 12, 1898.

A. MARKEL.

COMBINED BED AND SOFA.

(Application filed July 16, 1897.)

(No Model.)

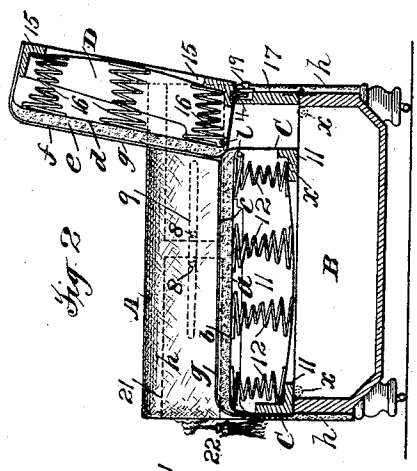


Fig. 2.

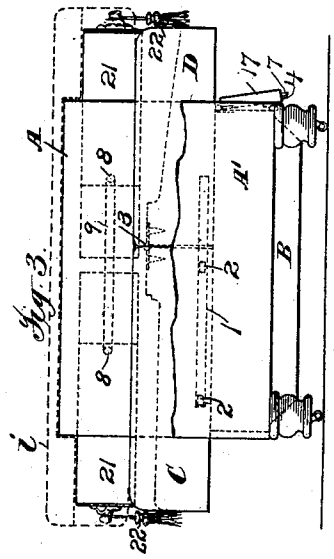


Fig. 3.

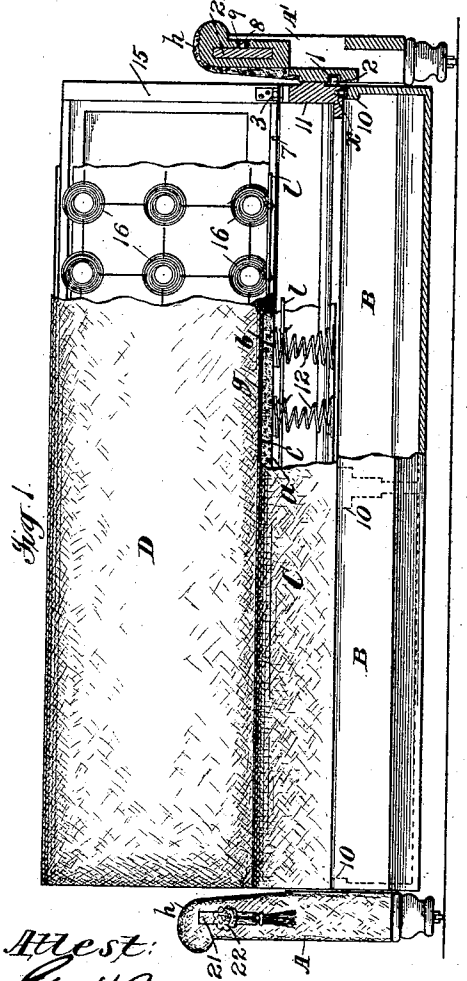


Fig. 1.

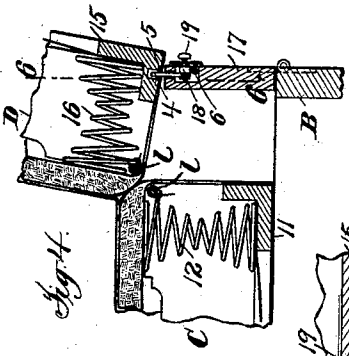


Fig. 4.

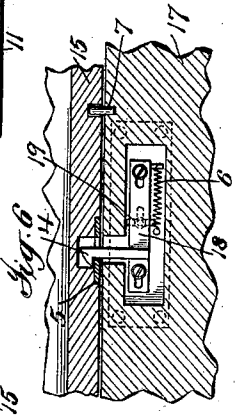


Fig. 6.

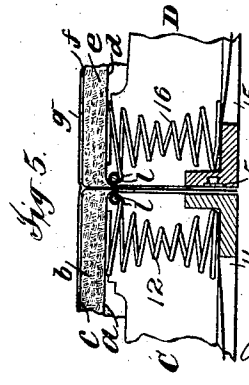


Fig. 5.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADAM MARKEL, OF NEW YORK, N. Y., ASSIGNOR TO THE POTTIER & STYMUS COMPANY, OF SAME PLACE.

COMBINED BED AND SOFA.

SPECIFICATION forming part of Letters Patent No. 607,182, dated July 12, 1898.

Application filed July 16, 1897. Serial No. 644,805. (No model.)

To all whom it may concern:

Be it known that I, ADAM MARKEL, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in a Combined Bed and Sofa, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to provide an improved combined sofa and bed construction, and especially to provide such a construction that shall secure greater comfort and convenience and present a better appearance than such constructions heretofore in use and at the same time be simple, strong, and durable and readily changed for its different uses.

As a full understanding of the invention can best be given by a detailed description of a construction embodying the same, further preliminary description will be omitted and such a detailed description now given in connection with the accompanying drawings, forming a part of this specification and showing all the features of the invention embodied in their preferred form, and the features forming the invention will then be specifically pointed out in the claims.

In the drawings, Figure 1 is a front view of the construction in use as a sofa with the back and seat cushions partly in section to show the construction. Fig. 2 is a central cross-section of the same. Fig. 3 is an end view of the construction in use as a bed with one end of the frame broken away to show the cushion-mattress and bolster. Fig. 4 is an enlarged detail cross-section of a portion of the construction in use as a sofa. Fig. 5 is a similar section of the construction in use as a bed. Fig. 6 is a detail longitudinal section on the line 6 of Fig. 4.

Referring to said drawings, A A′ are the opposite end frames, forming the arm-rests of the sofa and the head and foot boards of the bed and in which the parts are mounted, these end frames supporting and being connected by side frames constructed to form a box B, rigidly secured to the end frames and forming a tie therefor. The end frames A A′ may be tied together, so as to form the proper sofa-bed frame by side bars without a bottom or otherwise and the proper action of the construction secured; but the box B is preferably provided, as this forms a convenient and efficient receptacle for the bedclothing when the construction is in use as a sofa, or it may be used as a convenient packing-receptacle for other articles.

Mounted to slide upon the supports 10, formed by the top edges of the box B in the construction shown, or otherwise suitably formed on or secured to the end frames A A′, is the cushion C, which forms the seat-cushion of the sofa, this cushion consisting of the frame 11, of wood or similar material, upon which are mounted the springs 12, shown as of the coil form common in seat-cushions. Over these springs is the flexible cover *a*, supporting the upholstery-filling *b* and flexible cover *c*, the covers *a* and *c* being formed of cloth or any suitable similar material and being brought down over the springs 12 and secured to the bottom side bars of the frame 11. The end bars of the frame 11 extend to the top of the cushion at the inner edge, as shown, for a purpose presently to be described. The inner edge of the cushion is provided with a spring-metal rod *l*, secured to the springs and supporting the upholstery at its extreme edge, so as to form a stiffened spring edge on the cushion at this side for a purpose presently to be described.

The end frames A A′ are provided with slots 1, entered by lugs 2, projecting outwardly from the opposite ends of the cushion-frame 11, these lugs acting to guide the sliding cushion properly and secure its smooth and easy movement, and the ends of the slots 1 coacting with the lugs 2 to form stops for the cushion C and secure its proper position in adjustment of the construction for use either as a sofa or bed. Of course a single bar may form both lugs 2 instead of their being separate, as shown. Preferably one end of each slot will be cut through to the side edge of the frame for the insertion of the cushion C, and then a block inserted in the slot to close the latter and form the stop for the cushion. Other suitable means may be used for guiding the cushion and securing its proper position, but the construction shown

is preferable. Suitable rollers are preferably used to secure the easy and smooth movement of the seat and back cushions on the supports 10, rollers *x* on the seat cushion and support for this purpose being shown in the drawings.

The back-cushion D consists of the cushion-frame 15, generally similar to the frame 11 of the seat-cushion C, having its end bars extending to the top of the cushion at the inner or lower edge, so that these end bars may be hinged together by hinges 3, and thus the cushion D may be swung on the hinges 3 from its approximately vertical or sofa position into horizontal or the bed position, in which latter position it rests and slides upon the supports 10, heretofore referred to. The frame 15 supports the coil-springs 16, upon which is the cover *d*, upholstery-filling *e*, and upholstery-cover *f*. This cushion D also is provided with a spring-metal rod *l* at its inner or lower edge, as previously described in connection with the seat-cushion C, so as to stiffen the extreme inner edge of the cushion. These two spring edges secure a positive support for the adjacent edges of the seat and back cushions, which form the center of the mattress when the construction is used as a bed. The two cushions are so upholstered as to form a practically continuous level cushion-mattress when the two cushions are horizontal, and over both of the cushions C D is extended a single cover *g*, of plush, leather, or other suitable material, so that when the construction is adjusted for use as a bed, as shown in Figs. 3 and 5, a single continuous surface of the level double mattress is formed by this cover.

In its vertical position the cushion D is supported by a bar 17, which is pivoted upon the rear side edge of the box B, so as to be swung up to support the back-cushion vertically or swung down out of the way to permit the cushion to be lowered into horizontal position, this bar 17 being provided on its top edge with pins 7, entering holes in the cushion-frame, to aid in holding the latter and securing its proper position. A catch is preferably used to hold the cushion D and bar 17 together, so as to assure the retention of the proper position of the parts when the back-cushion is raised. As shown, this catch consists of a sliding plate 18, mounted on the bar 17 by a slot-and-screw connection and carrying a catch 4, which enters a notch in the cushion-frame of cushion D and engages a catch-plate 5 thereon, a spring 6 normally holding the catch in position to lock the parts together and the plate 18 being provided with a thumb piece or knob 19, projecting outside the bar 17 for use in drawing the plate 18 back to release the catch.

The end frames A A′ and the opposite sides of the box and outer side of the bar 17 are all provided with upholstery *h* of any suitable character to secure the desired appearance of the sofa. Each of the end frames A A′ is preferably slotted transversely to the sofa-bed, and in these slots move bolster-supporting bars 21, two bars in each end frame being used, so that these may be drawn out at opposite sides of the bed, as shown in Fig. 3, to support the bolster *i* at the head of the bed, which is shown in dotted lines in that figure, or the bars 21 may be pushed into the end frames out of sight and out of the way when the construction is to be used as a sofa, stop-pins 8, carried by the bars, and slots 9 in the end frames limiting their movement to secure their proper position when drawn out. These bars are shown as provided with tassels 22 for drawing them out, and the ends of the bars 21 will be suitably upholstered in the manner shown or otherwise to cover the ends of the bars and secure the desired ornamental appearance of the sofa.

The use of the construction will be understood from the drawings, in connection with a brief statement. As shown in Figs. 1, 2, and 4, the construction is adjusted for use as a sofa, the seat-cushion C being positioned with its outer edge at the edge of the seat-frame and the back-cushion D in an approximately vertical position and supported at the proper angle by the bar 17, held to the cushion by the catch 4. When the construction is to be used as a bed, the catch 4 is drawn back by the thumb-piece 19 against the tension of spring 6 and released from the catch-plate 5, and the bar 17 is then dropped from the position shown in Figs. 2 and 4 to that shown in Fig. 3. The cushion D is then turned down into horizontal position and the two cushions moved along on the supports 10 transversely to the frame until stopped by the forward stops 2 coming in contact with the front end of the slots 1, as shown in Fig. 3, when the two cushions are in proper position for use of the construction as a bed, the seat and back cushions projecting equally from opposite sides of the frame. Bars 21 at one end of the bed are then drawn out into the position shown in Fig. 3 and the bolster *i* placed over the end frame and these bars. When the seat-cushion C is pushed over into the position shown in Fig. 3, free access to the open top of the box B is given by tilting up the back-cushion D.

It will be seen that this construction provides a very simple, efficient, and durable sofa-bed, which is comfortable and handsome in appearance as a sofa and forms a full-width and comfortable bed when adjusted for such use.

The formation of the adjacent edges of the seat and back cushions with the rods *l* or similar continuous spring-edge supports forming the square edges of the cushions is important. It will be seen from Fig. 5 that when the double mattress is formed by the two cushions C D in the use of the construction as a bed these two adjacent spring edges of the cushions are well and uniformly supported throughout the length of the bed, so

as to form a level surface without any depression between the edges, thus avoiding the serious difficulties heretofore existing in sofa-bed constructions that a depression is formed in the middle of the bed-mattress between the back and seat cushions and that the adjacent edges of these cushions sag under the weight of the occupant of the bed and form an uncomfortable central hollow in the bed, this desirable result of a comfortable bed being also aided by the single cover *g*, extending over both cushions.

It will be understood that the invention is not to be limited to the exact details of the constructions shown, but that modifications may be made therein by those skilled in the art without departing from the invention.

What I claim is—

1. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion adapted to be moved into horizontal position to form a bed, and a support on the frame beneath the back-cushion for supporting the back-cushion in vertical position and movable out of supporting position to permit the back-cushion to be moved into horizontal position, substantially as described.

2. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion adapted to be moved into horizontal position to form a bed, means for limiting the movement of the seat-cushion, a support on the frame beneath the back-cushion for supporting the back-cushion in vertical position and movable out of supporting position to permit the back-cushion to be moved into horizontal position, substantially as described.

3. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion adapted to be moved into horizontal position to form a bed, a support on the frame beneath the back-cushion for supporting the back-cushion in a vertical position and movable out of supporting position to permit the back-cushion to be moved into horizontal position, and a box in the frame below said seat-cushion and adapted to be uncovered by the movement of the sliding seat-cushion and raising of the back-cushion for access to its contents, substantially as described.

4. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion hinged to said seat-cushion and adapted to be moved into horizontal position to form a bed, a support on the frame beneath the back-cushion for supporting the back-cushion in vertical position and movable out of supporting position to permit the back-cushion to be moved into horizontal position, and bolster-supporting bars adapted to be withdrawn from the frame for use of the construction as a bed and moved into the frame for use of the construction as a sofa, substantially as described.

5. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion hinged to said seat-cushion and adapted to be moved into horizontal position to form a bed, means for supporting the back-cushion in a vertical position, bolster-supporting bars at opposite sides of one or both of the sofa-arms adapted to be withdrawn from the arms for use of the construction as a bed and moved into the arms for use of the construction as a sofa, substantially as described.

6. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion hinged to said seat-cushion and adapted to be moved into horizontal position to form a bed, and means for supporting the back-cushion in a vertical position, said seat and back cushions having their adjacent edges provided with parallel bars forming adjacent spring edges, substantially as described.

7. In a sofa-bed, the combination with the frame, of a seat-cushion mounted to slide on said frame transversely to the sofa, a back-cushion hinged to said seat-cushion and adapted to be moved into horizontal position to form a bed, means for supporting the back-cushion in a vertical position, said seat and back cushions having their adjacent edges provided with parallel bars forming adjacent spring edges, and a single cover extending over both of said cushions, substantially as described.

8. The combination with end frames A, A′, and sliding cushion C, of lugs 2 on the cushion entering slots 1 in said frames and forming guides and stops for the cushion, back-cushion D hinged to the seat-cushion C, and bar 17 for supporting the back-cushion D in vertical position, substantially as described.

9. The combination with end frames A, A′ and sliding seat-cushion C, of back-cushion D hinged to seat-cushion C, hinged bar 17 on the frame for supporting the back-cushion D in vertical position, and a catch for locking the back-cushion D to the bar 17, substantially as described.

10. The combination with end frames A, A′ and sliding seat-cushion C, of back-cushion D hinged to seat-cushion C, hinged bar 17 on the frame for supporting the back-cushion D in vertical position, a catch for locking the back-cushion D to the bar 17, and sliding bolster-supporting bars 21 in one or both of the end frames, substantially as described.

11. The combination with a frame and a sliding seat-cushion C, of back-cushion D hinged to cushion C, and bar 17 hinged on the frame beneath the back-cushion for supporting the back-cushion D in vertical position and extending the full length of the

cushion to close the rear side of the space between the back-cushion and frame when the back-cushion is in vertical position, substantially as described.

12. The combination with an end frame, of seat and back cushions adapted to be moved into position side by side to form a bed, and sliding bolster-supporting bars 21 moving in said frame and adapted to be drawn out at opposite sides of the bed, substantially as described.

13. A sofa-bed having separate seat and back cushions C, D adapted to be moved into position side by side to form a bed-mattress by the upholstery of the seat-cushion abutting against the upholstery of the back-cushion, and having the adjacent top edges of the upholstery of the seat and back cushions provided with parallel bars forming spring edges meeting to form a continuous level top of the bed-mattress, substantially as described.

14. The combination with seat-cushion C, of separate back-cushion D hinged thereto and adapted to be moved into horizontal position to form a bed by the upholstery of the seat-cushion abutting against the upholstery of the back-cushion, said cushions having springs supporting the upholstery and having their adjacent top edges provided with parallel supporting-rods *l* forming spring edges meeting to form a continuous level top of the bed-mattress, substantially as described.

15. The combination with seat-cushion C, of separate back-cushion D hinged thereto and adapted to be moved into horizontal position to form a bed by the upholstery of the seat-cushion abutting against the upholstery of the back-cushion, said cushions having springs supporting the upholstery and having their adjacent top edges provided with parallel supporting-rods *l* forming spring edges meeting to form a continuous level top of the bed-mattress, and a single cover *g* extending over both cushions to form a continuous cover of the bed-mattress, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ADAM MARKEL.

Witnesses:
P. W. O'MALLEY,
FRANK FRIEDLEBEN.