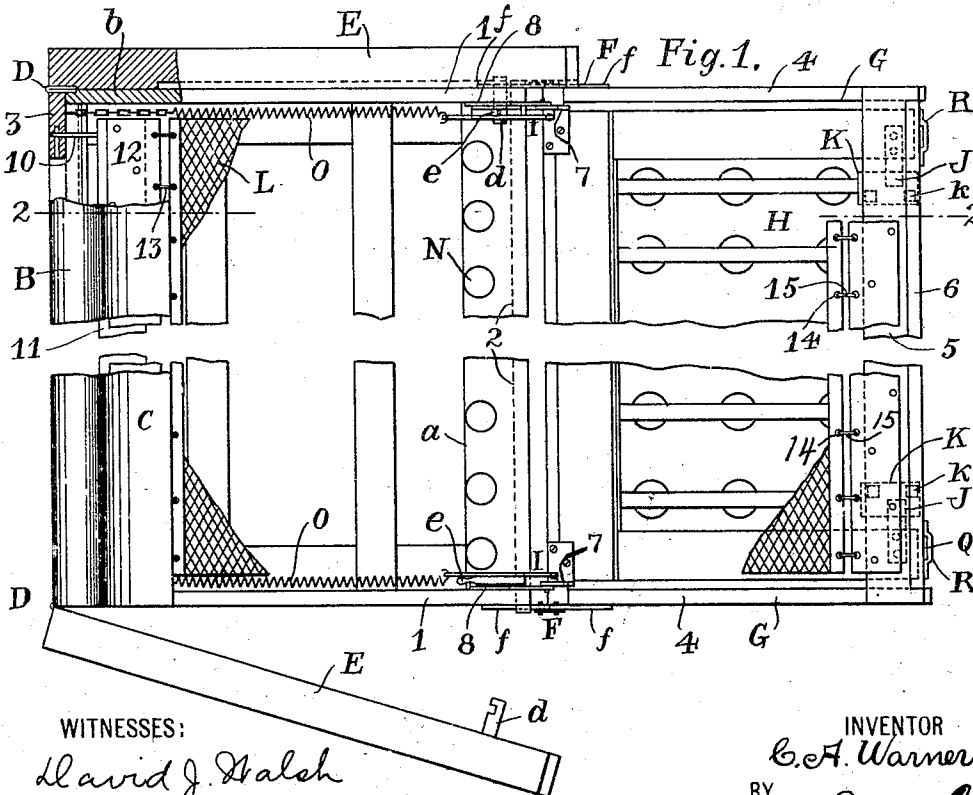
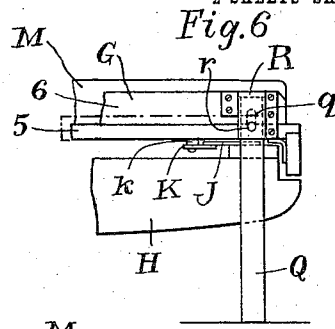
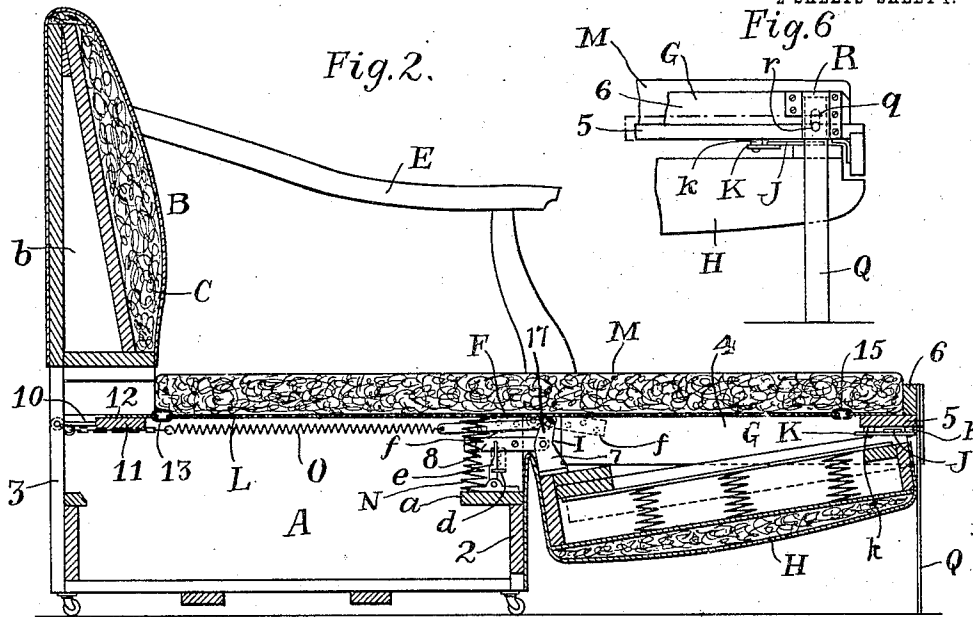


C. A. WARNER.
SOFA BEDSTEAD.
APPLICATION FILED AUG. 1, 1910.

977,350

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.



WITNESSES:
David J. Walsh
L. Brown.

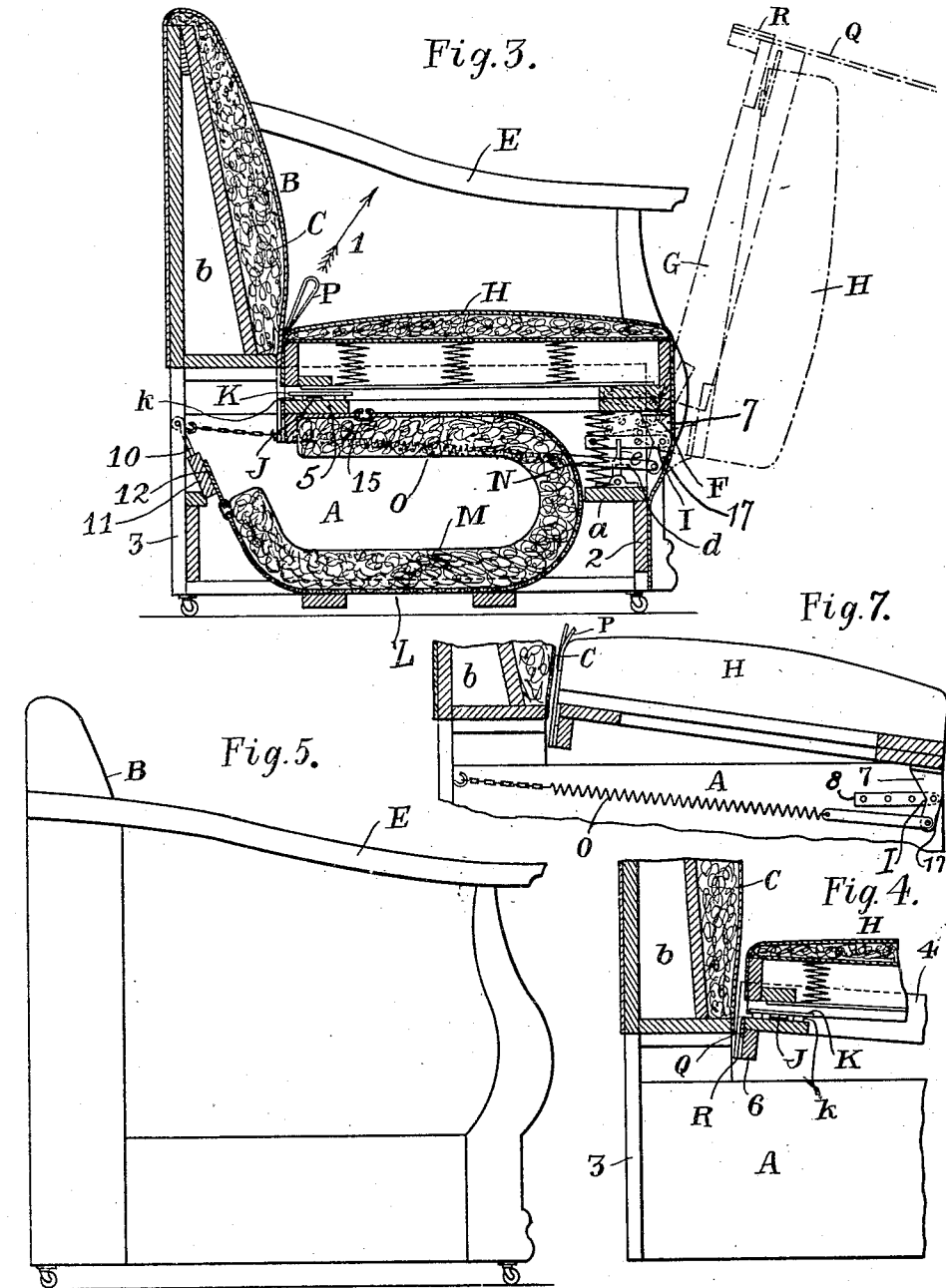
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES A. WARNER, OF NEW YORK, N. Y.

SOFA-BEDSTEAD.

977,350.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed August 1, 1910. Serial No. 574,877.

To all whom it may concern:

Be it known that I, CHARLES A. WARNER, a citizen of the United States, and resident of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Sofa-Bedsteads, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to sofa-bedsteads of the class adaptable for alternate use either as a bedstead or sofa; the object thereof being to provide an ornamental and useful article of furniture which embodies novel features of construction so assembled that the parts comprising the structure may be maintained in proper relative arrangement necessary to produce said two articles of furniture, the parts being arranged to move and swing correlatively with each other in such a manner that the proper positions necessary to comfort and stability may be maintained while the device is in use in either of its positions; a further object is to provide a structure which in its normal or initial sofa-shape has a tight joint between the seat and back at their abutting edges, the seat being so mounted and arranged as to move forwardly and automatically away from contact with the back at the commencement of its operation, whereby the abutting parts are not susceptible of being worn by friction.

The invention will be hereinafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings forming part of this specification, Figure 1, is a plan view of my improved article of furniture shown extended in the form of a bedstead; Fig. 2, a longitudinal sectional elevation taken on the line 2—2, of Fig. 1; Fig. 3, a similar sectional elevation of the device showing the parts in position forming a sofa; Fig. 4, a part of a sectional view illustrating the action of the parts; Fig. 5, an end view; Fig. 6, a part of a front view of the structure shown in position as a bed; and Fig. 7, is a sectional view of part of the device and illustrating the operation.

In the practice of my invention, I employ primarily a framework embodying a box A, having end walls 1, a front wall 2, and a rear wall 3. Secured to the upper part of

the said box A, is a sofa back B, having a fixed upholstered or cushioned part C, located between its end walls *b*, whereby a comfortable sofa back is provided. Hinged to each end wall of the back B, by means of hinges D, is an arm E, having an inwardly extended latch *d*, which engages a lever *e*, to hold the arm normally in place, but which may be readily disconnected whereby the arm E, may be swung outwardly to allow of free ingress and egress to and from the bed. Hinged to the end walls of the box A, by means of the three-part hinges F, is a framework G, which embodies the end walls 4, and a connecting beam 5, having a projecting ledge 6. The arms *f*, of the said hinges F, are respectively secured to the end walls 1, of the box A, and the end walls *g*, of the frame G, whereby said frame may be readily swung into either of the positions shown respectively by Figs. 1 and 3 of the drawings.

The seat of the device embodies the spring-cushioned frame H, which is hinged to the box A, by means of hinges I, which respectively comprise a two-armed plate 7, extended downwardly from the forward bottom part of the frame H and a plate 8, extended horizontally and forwardly from the box A; the latter named plate being fixed and the former named plate fulcrumed to the extended end thereof. Extended inwardly and laterally from the bottom of the seat frame at the edge part opposite the hinges I, are plates J. These said plates engage rails K, which are mounted on studs *k*, secured to the bottom of the cross beam 5, of the frame G, the plates J, extended within a space between the said studs, whereby when the seat frame is swung in the direction of the arrow 1, the inner edge thereof (owing to the low relative position of the fulcrum points of the hinges I) moves quickly away from contact with the seat back, as shown by Figs. 4 and 7, of the drawings.

Extended horizontally and located when the device is used as a bed, between the wall 3 of the box A and the beam 5, of the frame G, is a woven wire spring L, which is attached at one end to the said wall 3, by means of swinging eye-bolts 10, which are connected to a cross beam 11, having an overhanging plate 12 and links 13, which are directly attached to the said spring L; the other end of said spring is attached to

the beam 5, of the frame G, by means of eyes 14 and links 15. The said spring L, acts as a means for supporting a mattress M, used when the device is employed as a bed. As an auxiliary support I employ a plurality of spiral springs N, which are mounted on the beam a, of the box A, these prevent sagging of the spring L and mattress M, when persons are reclining on said mattress, the device being used as a bed.

As a means for balancing the parts and assisting in the operation of swinging the seat from its initial position, I employ spiral springs O, which are respectively connected at one end to the wall 3, of the box A, and at the other end to the arm 17, of the plate 7. To support and maintain the frame G in horizontal alinement when it is extended to form a bed, I provide swinging legs Q, these have slots q, at their upper ends which engage pins r, extended through sockets R, mounted on the front of the frame G. When the frame is folded into sofa-shape the legs Q, are swung into horizontal position, as shown by dotted lines Fig. 6, of the drawings.

In the operation and use of the invention, when it is desired to convert the same from its initial or sofa-shape to a bed, it is simply necessary to grasp the loop P, and swing the frames G and H, upwardly and then downwardly until they assume the position shown by Fig. 2, of the drawings; during this operation the seat frame H, automatically drops into position shown and the spring L is opened out and maintained on a perfectly horizontal line. To reconvert the device into a sofa it is simply necessary to swing the frames G and H in an opposite direction till they assume the positions illustrated by Fig. 3, of the drawings.

It will be noted that owing to the relative positions of the hinges F and I, the initial swinging movement of the frames G and H, causes the upholstered seat of the frame H, to quickly move out of contact with the seat back whereby abrasion of the abutting parts is obviated, and the springs O, being under tension and attached to the arms 17, of the plate 7, assist in the initial movements of swinging the seat and also act as balancing agents. The springs O, not only assist in the initial movements but they also, being always under tension, materially assist in all the movements incident to converting the structure from one form of furniture to the other.

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

1. In a sofa-bedstead, the combination,

with a box, and a frame-work hinged to said box, and a mattress-supporting spring connected between and within the said box and frame-work and adapted to be folded within the said box; of a seat embodying an upholstered frame, and hinges comprising two plates fulcrumed together and normally at right angles to each other and connecting the said box to the said frame, one of said plates having an extended arm, and a spiral spring connected to said arm at one end and to an interior wall of the said box at the other end, the said upholstered frame slidably mounted on the said frame-work, substantially as shown and described.

2. In a sofa-bedstead, the combination, with a box having an upholstered back and swinging side arms, and means for locking said arms in closed position, and a swinging framework, and hinges connecting said framework to the said box, and a mattress-supporting spring connected within and between the said box and the said framework, and folding legs connected to the said framework for supporting it at its free end when it is extended; of a seat embodying an upholstered frame, and hinges comprising two plates fulcrumed together and normally at right angles to each other and connecting the said box to the said frame, one of said plates having an extended arm, and a spring connected to said arm, and sliding plates extended laterally from the bottom of said seat, and rails mounted on the said swinging framework and engaging said plates, whereby the seat may slide on the said swinging frame, substantially as shown and described.

3. In a sofa-bedstead, the combination, with a box, and a framework hinged to said box, and a mattress-supporting spring connected between and within said box and framework and adapted to be folded within said box, of a seat embodying an upholstered frame, and hinges comprising two plates fulcrumed together and normally at right angles to each other, one attached to the seat and the other to the said box, one of said plates having an extended arm, and a spiral spring connected at one end to said extended arm and at the other end to the rear wall of the said box, substantially as shown and described.

In testimony that, I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 28th day of July, 1910.

CHARLES A. WARNER.

Witnesses:

ALFRED H. NEDWIDEK,
G. D. WEEKS.